MatchWare Mediator 9 Documentation

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Introduction

Welcome

First of all, thank you for choosing Mediator.

Mediator 9 is our most powerful, user-friendly version to date. All features previously reserved for Mediator Exp have now been integrated into Mediator 9, vastly expanding its capabilities. Our latest upgrade includes a brand new Windows 2007 interface, text object, enhanced HTML editing, SCORM compliance, Unicode and much more.

This documentation, provided both as PDF manual and online help, will give you an overview of the functionality and possibilities of Mediator:

- The **Quick Start** will show you the basic principles of Mediator and teach you how to use its most important functions in a few short steps.

- The **User Guide** section describes all the main operations you can perform in Mediator, from setting up your project, to designing it, testing it and exporting it.

- The **Reference** section gives you a complete definition of each object, event and action and lists all the system variables and functions available.

- The **Appendixes** contain various lists: shortcuts, object properties, methods to be used in script and so on.

Getting started

Before you start designing your own projects, you are advised to follow the "Quick Start".

You should then go through the "Setting up your project" section, paying particular attention to the topic "Planning your project".

You might also find it useful to study the examples provided with Mediator. Each example consists of basic pages aimed at novice users or newcomers to Mediator, as well as advanced pages demonstrating the extent of the possibilities offered by the feature in question. A comprehensive set of notes is included in each example. After installation, these examples are located in the "Examples" sub-folder of the Mediator program folder, generally C:\Program Files\MatchWare\Mediator 9.0. The Quick Start project is also located in this folder.

What's new in Mediator 9

Here is a brief description of the main new Mediator 9 features. Mediator 9 also includes a number of other enhancements, which are all described in detail in this documentation.

You will also find a comprehensive description of the new features on the MatchWare web site:

http://www.matchware.com/en/products/mediator9

New interface: Mediator 9 has a brand new user interface based on the Microsoft Office Fluent™ interface used in Microsoft Office 2007 (also referred to as the Ribbon), which helps you create impressive presentations much more efficiently than you could in earlier versions of Mediator. This new interface has several major advantages:

- Its features and commands are organized in task-oriented tabs and groups of related options, enabling you to find what you need quickly, using an intuitive and visual approach.

- Rather than applying single properties one by one, you can select predefined styles for your objects from easily accessible galleries, making it much easier and much faster to create great-looking presentations.

- The live preview feature lets you review the effect of the various formatting options before you commit to them, resulting in a significant time gain.

For more information on this new interface, see "Setting up your workspace".

New formatting options: Mediator offers new styles, new effects and enhanced formatting options. You can now preview a whole variety of effects like shadow, glow, soft edges, patterns, textures, gradients, warp and rotation and apply them to your objects with a simple click.

Multimedia Catalog: The Multimedia Catalog has been expanded with new contents. It includes a collection of 1500 high quality clipart, navigation bars, different types of backgrounds and photos, a broad range of sounds and various other elements that you can drag freely onto your pages. For more information, see "Using the Multimedia Catalog".

New examples: Mediator comes with a brand new set of examples designed to showcase its main features. Each example consists of basic pages aimed at novice users or newcomers to Mediator, as well as advanced pages demonstrating the extent of the possibilities offered by the feature in question. A comprehensive set of notes is included in each example. After installation, these examples are located in the "Examples" sub-folder of the Mediator program folder.

Wizards: The choice of wizards on which to base your projects has been extended to include wizards for HTML and Flash export.

Unicode: Mediator 9 is now Unicode enabled, allowing users to enter text in objects that accept user input (such as text objects or input objects) in many different languages, including non- western languages. (Please note, however, that Mediator only supports left-to-right character entry.)

Merging of Exp and Pro versions: All the features previously reserved to Mediator Exp have now been integrated in Mediator 9, vastly extending its potential.

The Exp features that are now part of Mediator 9 include:

- **Script and Macros:** Add runtime script (VB or Java) or macro script to your pages. See "Using runtime script" and "Using macro script".

- **Animation Track action:** Gain total control over object position, size, rotation, opacity and speed. See "Animation Track".

- **ActiveX object:** Use any existing ActiveX object or create your own. See "The ActiveX object".

- **HTTP request:** Use the HTTP request in your HTML or Flash export to communicate with web servers. See "The HTTP Request resource".

Text object: Mediator's text object has been completely redesigned, giving you access to all the features you would expect from a standard word processor, such as a broad range of text formatting options including indents and justification, the ability to create and format tables or insert pictures, spellchecking options and so on.

For more information, see "The Text object".

Smooth 3D transition effects: Mediator 9 includes some impressive real 3D effects for use in page transitions. These Direct 3D page transitions work on any computer with a graphic card that supports Direct 3D 9.0 (standard for most of today's PC's). If a Mediator 9 project is shown on a computer without Direct 3D 9.0, a normal transition is used.

Sound and actions: Sounds are now represented by a "wave" in the Timeline action, making it much easier to synchronize actions with sound. For more information, see "Timeline".

SCORM: With Mediator 9, it is now possible to create a SCORM-compliant course for export to Flash or HTML and upload to a Learning Management System (LMS) or Virtual Learning Environment (VLE). Exchange of data between the course and the LMS takes place via two specific SCORM actions, Set SCORM Variable and Get SCORM Variable.

For more information, see "Using SCORM".

HTML object: The new HTML object lets you embed HTML code into your Mediator page. If you are working on an HTML project, the object can include any code, including server-side scripting such as ASP or PHP. The HTML object also contains some predefined HTML code samples that you can use as is or adapt for your individual projects.

For more information, see "The HTML object".

Scrolling HTML pages: In earlier versions of Mediator, HTML pages could only be designed in a preset screen resolution. Mediator 9 allows you to choose different page heights for your HTML project and lets you adapt dimensions to individual page content, as you would with an HTML editor.

Improved HTML support: The Bump Map, Drawing and Headline objects, as well as the Loop/Break action and the HTTP Request resource, are now supported in HTML export.

XML site map: Mediator 9 also allows you to generate an XML site map for your web site automatically, thus improving the visibility of your web pages by search engines.

Validation of HTML code: All the HTML code produced by Mediator when exporting to HTML is now validated according to the W3C HTML 4.01 standard. This ensures that all the common browsers will render the page content as expected.

Improved Flash support: Video files (.flv) and List Box objects are now supported in Flash export. You can also export the Flash project as a single Flash file, for easier management and faster page transitions.

Improved interactivity: Mediator 9 includes two new double-click events, a sub-procedure action, array variables, and a number of other enhancements designed to make it easier to create interactivity.

Important terms

Most of the terms used in Mediator belong to the familiar Windows® environment. Some terms however represent important concepts in Mediator. They are defined below.

Data files

All the files that you attach to your project, such as pictures, videos and sounds, are referred to as data files.

Design mode

Mediator can operate in three modes, design mode, test mode and runtime mode:

- **Design mode** is the mode you spend most of the time in while creating your project.

- **Test mode** is the mode you use to test that it works properly before you export it. Testing your project allows you to check how it will look and behave once exported, without having to go through the actual export procedure.

- **Runtime mode** is the mode used when you or your end users view the exported version of your project.

Display profiler

Because it is not possible to define a single method for displaying data that is guaranteed to be the fastest regardless of the computer used, Mediator profiles the computer the first time it is run, and selects the fastest options for that particular system. This ensures that your projects will run with maximum speed on all computers.

Document type

Mediator allows you to create projects of different types, namely Standard, HTML and Flash. Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose. See "Mediator 9 feature list" for more information.

Exporting

Mediator lets you export your projects to create CD-ROM versions, HTML web sites, Flash files and so on.

You can distribute the exported version of your project to end users that do not have Mediator installed on their computer. End users are able to run your exported projects, but not to edit them. See the section "Exporting: Introduction" for more information.

End users

These are the users to whom you distribute the exported version of your project.

Mediator Viewer

The Mediator Viewer is the cut-down version of Mediator that allows your end users to view your project once exported. It is automatically packaged with your project when you export it to any format other than HTML or Flash®. When exporting to HTML or Flash, the Mediator Viewer is not needed as the project is viewed via the Internet browser.

Objects

This is the word used to refer to all the items that you can place on your page, such as backgrounds, text, pictures, videos and so on.

Presentation - Project - Document

All these terms are synonyms. They refer to the Mediator project that you create with Mediator and then export for distribution to your end users. See "Exporting" above.

Runtime mode and Test mode

See "Design mode".

Mediator 9 feature list

Mediator allows you to create projects of different types. When you create a new document, you can choose between:

- **Standard** to create a multimedia presentation to be stored on CD-ROM or other removable storage medium (DVD-ROM, USB stick etc.)

- **HTML** to create an HTML presentation or HTML web site

- **Flash** to create a Flash banner or Flash web site

Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose, and only shows the features, options and export formats that are relevant to it. Projects of type HTML or Flash do not have as many tools, effects, events and actions available as projects of type Standard.

For more information about document types, see "Planning your project" and "Creating a document".

The following tables give you a complete list of all objects, events and actions available for each document type.

You will also find a complete list of the restrictions applicable to HTML and Flash documents in the topics "HTML restrictions" and "Flash restrictions".

Objects	Standard	HTML	FLASH
Picture	●	●	●
Hotspot	●		
Rectangle	●	●	●
Polygon	●	●	●
Drawing	●	new	●
Bump Map	●	new	●
Text	●	●	●
Hypertext	●	●	●
Headline	●	new	●
Media Player	●	●	
Video	●		new
Animated GIF	●	●	●
Flash	●	●	●
Button	●	●	●
Animation Path	●	●	●
Embedded Document	●		
HTML Object	new	new	
Input/Output Object	●	●	●
List Box	●		new
ActiveX	●		

Events	Standard	HTML	FLASH
Mouse Click	●	●	●
Mouse Down	●	●	●
Mouse Up	●	●	●
Right Click	●		
Right Down	●		
Right Up	●		
Mouse Double Click	new		
Right Double Click	new		
On Page Ready	●	●	●
On Mouse Move	●		●
On Key Down	●		●
On Key Up	●		●
Move Into	●	●	●
Move Out	●	●	●
On Show	●		●
On Hide	●		●
Drop On	●		●
On Start	●		●
On Stop	●	●	●
Collision	●		
Marker Hit	●		
Document Complete	●		
On Select	●		
On Change	●		●
On Ready State (Flash)	●		●
ActiveX	●		

Actions/Resources	Standard	HTML	FLASH
Go to Page	●	●	●
Show Object	●	●	●
Hide Object	●	●	●
Timeline	●	●	●
Set Cursor	●	●	●
Move Cursor	●		
Exit	●		
Set Property	●	●	●
Animate	●	●	●
Animation Effect	●		
Animation Track	●		●
Sound	●	●	●
Sound Volume	●		●
Start	●		●
Stop	●		●
Pause	●		●
Wind	●		
Drag & Drop	●		●
CD Audio	●		
Execute	●		
Web Link	●	●	●
INI File	●		
Open Doc	●		
Email	●	●	●
Open MD8 Doc	●		
Report	●		
Assign File	●		
Read File	●		
Write File	●		
Delete File	●		
Assign	●	●	●
If-Then-Else	●	●	●

Loop	●	new	new
Break	●	new	new
Sub Procedure	new	new	new
Script	●		
Set List Box Data	●		
Message Box	●	●	
DB Pointer	●		
DB SQL	●		
Set SCORM Variable		new	new
Get SCORM Variable		new	new
Click Here Cursor	●	●	●
Print Page	●		
Standard Drag & Drop	●		●
Database resource	●		
HTTP Request resource	●	new	●

Installation

Stand-alone installation

➢ Insert the CD-ROM in the CD-ROM drive.

➢ Follow the instructions on the screen when the Mediator Install program starts.

If the Mediator Install program does not start automatically:

➢ Choose Start - Run.

➢ Type the following:

    X:\start.exe

where X represents the CD-ROM drive letter.

Administrative installation (system administrators only)

The Windows® Installer can perform an administrative installation of an application or product to a network for use by a workgroup. An administrative installation installs a source image of the application onto the network that is similar to a source image on a CD-ROM. The administrative installation package can then be pushed by system administrators to client computers in a domain via Group Policies. This is only possible from Windows 2000 Server onwards.

To find out more about Windows® Installer and administrative installations, please refer to the Microsoft web site.

Creating an administrative installation

Administrators can create an administrative installation from the command line by using the /a command line option.

➢ Choose Start - Run.

➢ Type the following:

    msiexec.exe /a X:\install\setup.msi

where X represents the CD-ROM drive letter.

(please check the location of the setup.msi on the CD-ROM)

➢ Specify the following in the dialog that appears:

- Where you want to unpack the .msi file
- The user name and company name to use as default
- The serial number

➢ (optional) Check 'Force activation when Mediator is run' if you want Mediator to be automatically activated the first time the program runs.

➢ (optional) Check 'Automatically activate during installation' if you want to activate Mediator during installation.

These two activation options are "silent" (i.e. they do not display any messages).

The above options are stored in a file called "admin.ini" in the destination folder. You can edit this file using a text editor like Notepad if you want to change the options without making a new administrative installation.

Applying a patch package to an administrative installation

➢ Choose Start - Run.

➢ Type:

```
msiexec.exe /p <path to .msp file> /a <path to administrative .msi file>
```

Members of the workgroup using Mediator must then reinstall the application from the new administrative source image to receive the update.

To completely reinstall the application and cache the updated .msi file on their computer, users may enter either of the following commands:

• ```
  msiexec.exe /fvomus //server/<administrative .msi file>
  ```

• ```
  msiexec.exe /I //server//<administrative .msi file> REINSTALL=ALL
  REINSTALLMODE=vomus
  ```

Troubleshooting

Changing the location of the activation file

By default, the activation data is stored in:

C:\Documents and Settings\All Users\Application Data\mwas\Mediator 9.0 Exp.mwas

In some rare situations, client computers may be setup with restricted access to the above folder, and this will cause the activation file not to be saved. If you have a client server system setup in this way, you can move the activation file to another location by adding an entry to the admin.ini file as follows:

```
[Activation]

mwas=c:\different folder with write access\Mediator 9.0 Exp.mwas
```

Storing several activation files on the server

You can store several activation files in the same folder of the server by adding an entry to the admin.ini file as follows:

```
[Activation]

mwas=\\server\activations\Mediator 9.0 Exp_%COMPUTERNAME%.mwas
```

Where:

server = the name of the server

activations = the share name on the server

%COMPUTERNAME% will be replaced with the client computer name

Problem applying a patch

Q. Nothing happens when I double-click the patch file (ex. patch.msp).

A. The .msp file extension may be allocated to an application other than the Windows installer.

In this case, you can apply the patch as follows:

➢ Chose Start - Run.

➢ Type the following command:

```
msiexec.exe /p c:\temp\patch.msp
```

(assuming that you have copied the .msp file to c:\temp)

Quick Start

The three basic steps

This Quick Start section contains all you need to know to get started with Mediator.

There are really only **three basic steps** that you must learn. They are:

1. Creating objects (to add objects to the initial page)

2. Using the Page list (to create additional pages)

3. Using the Events dialog (to create interactivity)
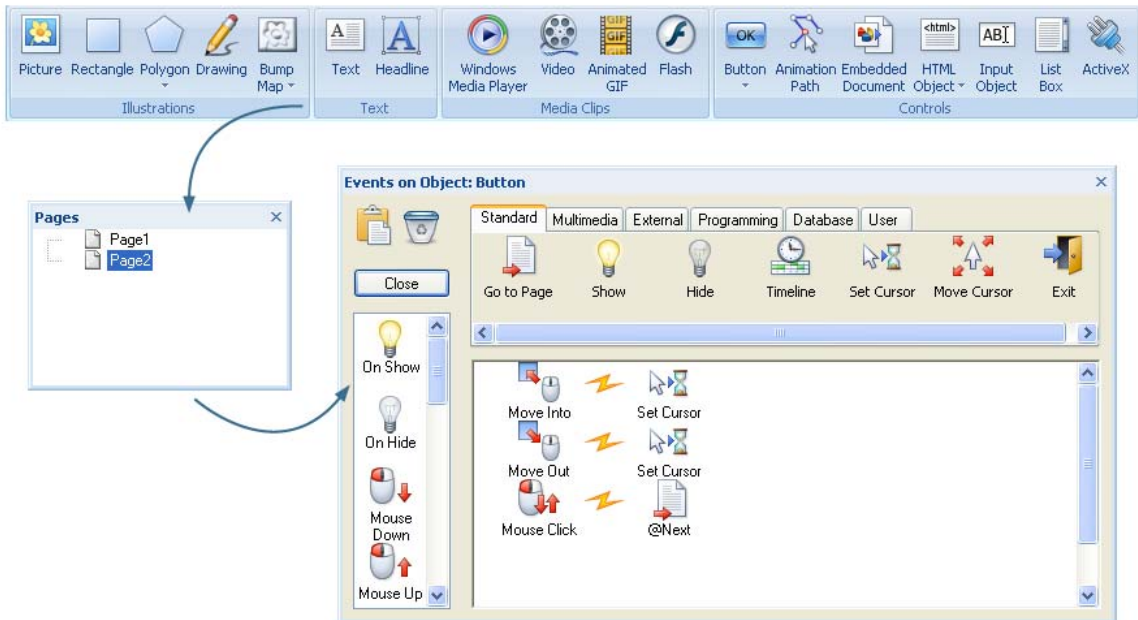
Creating the document

When you start Mediator, the first screen you see is the Welcome dialog.

➤   Click 'Create a new document' to create an empty document.

➤   Click OK to accept the default document type, i.e. 'Standard'.

➤   Click OK to accept the default window mode, i.e. 'Full screen with frame'.

If you have closed the Welcome dialog, you can create a new document by pressing Ctrl + N.

First step - Creating objects

[The complete Mediator document "Quick Start.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

The word "object" refers to all the items that you can place on your pages, such as backgrounds, text, pictures, videos and so on.

To place objects on your pages, you use the **Insert** tab on the main menu (called "the ribbon").

➢ Click the **Insert** tab.

You add an object to the page by clicking once with the left mouse button on the corresponding icon. The mouse pointer changes depending on your selection and you can now define (drag) a rectangular shape on the page for your object. The procedure is the same for all objects except for the Text object, the Polygon object and the Animation Path object.

We are going to start by placing a rectangle on the page:

➢ Click the **Rectangle** icon   in the **Illustrations** group.

➢ Move the mouse pointer back on the page.

➢ Hold the left mouse button down and drag the pointer across the page to create a frame for your rectangle.

➢ Let go of the mouse button to complete the rectangle.

The **Format** tab specific to the Rectangle object opens at the right of the ribbon, letting you modify the properties of the rectangle.

➢ Browse through the style gallery, checking the effect of each style on your rectangle as you move the pointer.

➢ Once you have found a style you like, click it to apply it to the rectangle.

You can use the other options of the **Style** group to apply more visual effects to the rectangle, but for now we will leave it as it is.

Now place a headline at the top of the page:

➢ Click the **Insert** tab again.

➢ Click the **Headline** icon   in the **Text** group.

➢ Move the mouse pointer to the top left corner of the page.

➢ Hold the left mouse button down and drag the pointer across the page to create a frame for your headline.

The Headline Object dialog appears.

➢ Enter "My first Mediator presentation" and click OK.

The **Format** tab specific to the Headline object opens at the right of the ribbon, letting you modify the properties of the headline.

> Browse through the style gallery, checking the effect of each style on your headline as you move the pointer.

> Once you have found a style you like, click it to apply it to the headline.

As for the rectangle, you can use the other options of the **Style** group to apply more visual effects to the headline, but for now we will leave it as it is.

Now place a button on the page:

> Click the **Insert** tab again.

> Click the arrow in the lower part of the **Button** icon in the **Controls** group.

> Browse through the categories of predefined buttons and click the one you like best.

> Move the mouse pointer to the bottom right corner of the page.

> Drag a frame for your button as you did with the rectangle and the headline.

 You can also just click the left mouse button once.

> Double-click the button.

The default text is "Button", but you can enter any text you like.

In Step 3 we will program the button to go to the next page, so instead of "Button"…

> … type "Next" as the descriptive label for the button.

> To complete the button, press Esc or click anywhere outside it.

 To edit the text shown on a button or headline after their creation, just double-click the object. To move an object, click it once to select it and drag it into place while keeping the mouse button down. To resize an object, click it once and pull one of its handles.
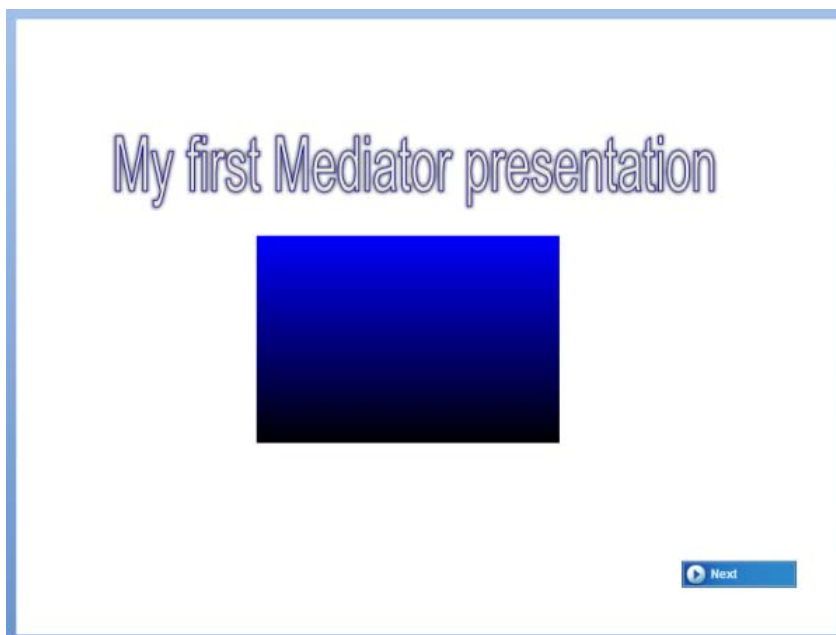
This completes Step 1. You now know how to create objects.

Second step - Using the Page list

[The complete Mediator document "Quick Start.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

All the pages contained in the presentation are listed in the **Page list**. So far we only have one page, called "Page1" by default.
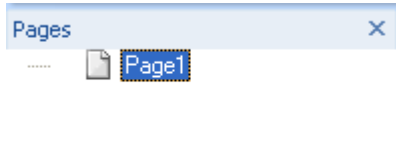
💡 *If the Page list is not already open, click the **View** tab on the ribbon, then click **Page List** in the **Show/Hide** group, or just press **F8**.*

The next step is to create another page in our Mediator presentation.

➢ Click the **Home** tab on the ribbon.

➢ Click the upper part of the **New** icon in the **Pages** group.

💡 *Here we are creating a standard, default page. Clicking the lower part of the New icon would let you browse through a whole range of predefined page layouts.*

Mediator asks for a name for the new page.

➢ Enter "Page2" and click OK.

You have just created the second page of your document. As you can see the Page list now contains two pages.
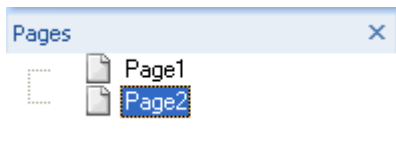
Mediator places the new page after the current page and automatically switches to the new page, so you can start adding objects to it right away.

To skip back and forth between Page1 and Page2 simply click the page you wish to work on in the Page list.

This actually completes Step 2, but before we move on we will add a picture and a text object on our new page.

Let us start with the picture.

➢ Click the **Insert** tab again.

➢ Click the **Picture** icon in the **Illustrations** group.

➢ Move the mouse pointer back on the page.

➢ Hold the left mouse button down and move the pointer across the page to create a frame for the picture.

➢ Let go of the mouse button.

The **Open** dialog appears so that you can specify the picture you would like to import.

➢ Select the picture 'Traffic.png' from the Quick Start folder.
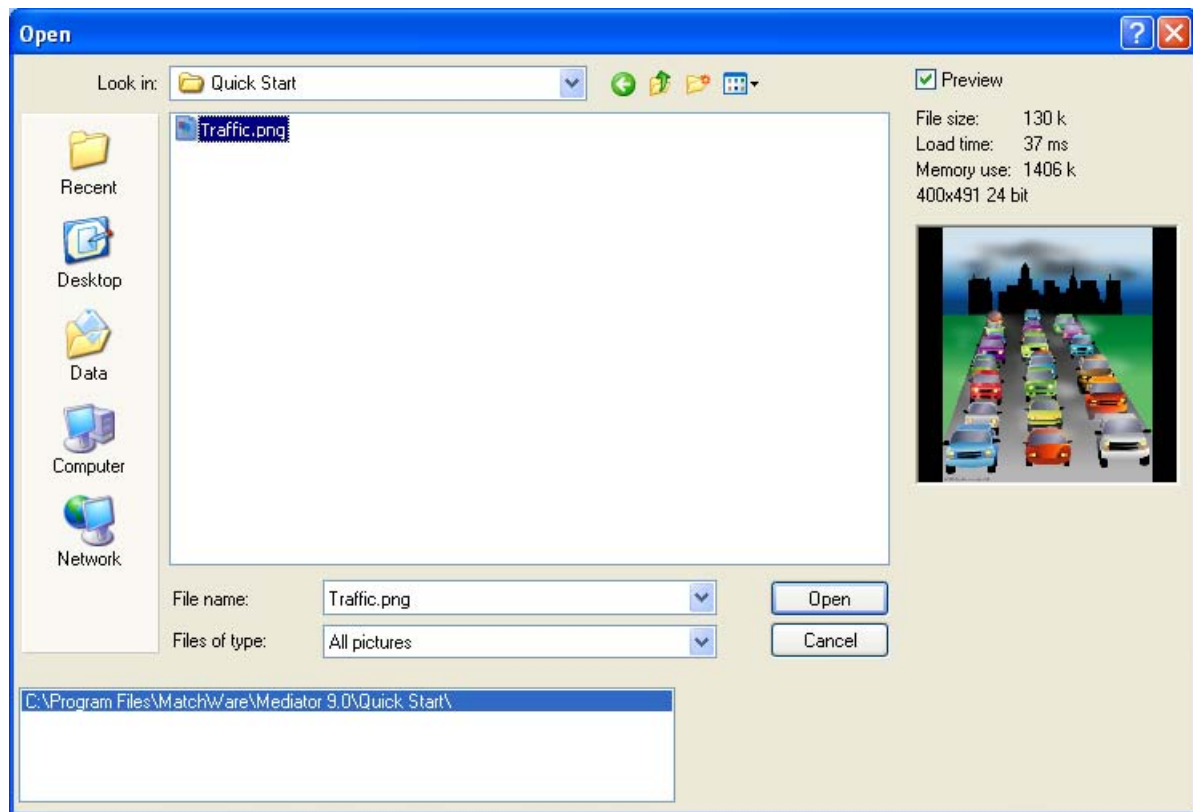
➢ Click **Open** to insert the picture.

The **Picture Adjust Size** dialog appears. This dialog allows you to adjust the size of the picture. We won't go into it here, so for the moment just click OK. For more information on the Picture Adjust Size dialog see "The Picture object".

We are now going to place a text object on the page:

➢ Click the **Insert** tab again.

➢ Click the **Text** icon [A] in the **Text** group.

➢ Move the mouse pointer to the top left corner of the page.

➢ Drag a large frame for your text object on the screen.

The **Edit** tab opens at the right of the ribbon.

➢ Enter "Traffic and the city" in the text object.

➢ Use the tools from the **Font** and **Paragraph** groups of the **Edit** tab to change the font, resize the text, make it bold etc., as you would with your usual word processor.

➢ To exit text editing click the **Close** icon at the right of the Edit tab or click anywhere outside the text field.

You now have two separate pages: Page1 (with a rectangle, a headline and a button) and Page2 (with a picture and a text object).
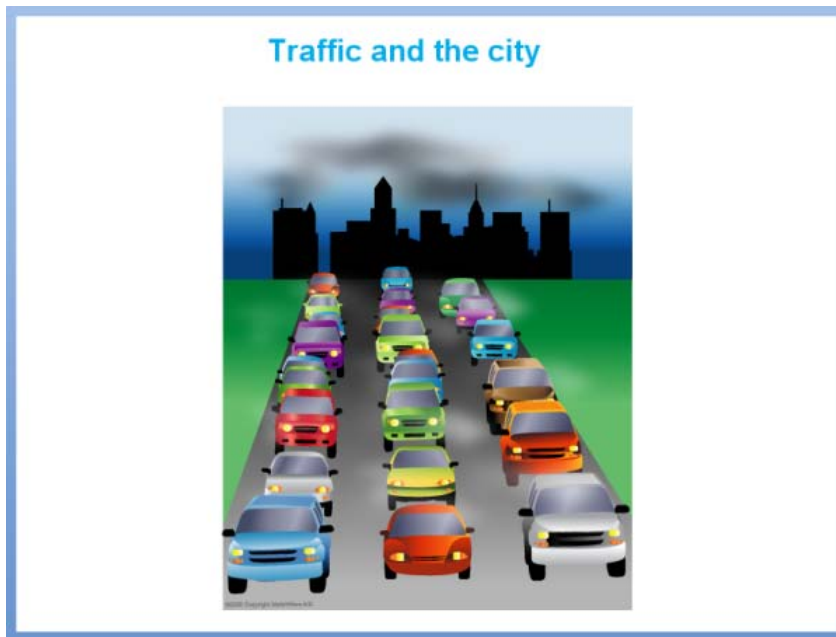
This completes Step 2. You have learned to use the Page list and create additional pages.

Third step - Using the Events dialog

[The complete Mediator document "Quick Start.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

You have created two independent pages very quickly. You are now going to create links between the two pages, or in other words **interactivity**.

For this we will use the **Events** dialog. The Events dialog is what makes Mediator so incredibly powerful. It lets you drag and drop your way to impressive presentations, without any kind of programming.
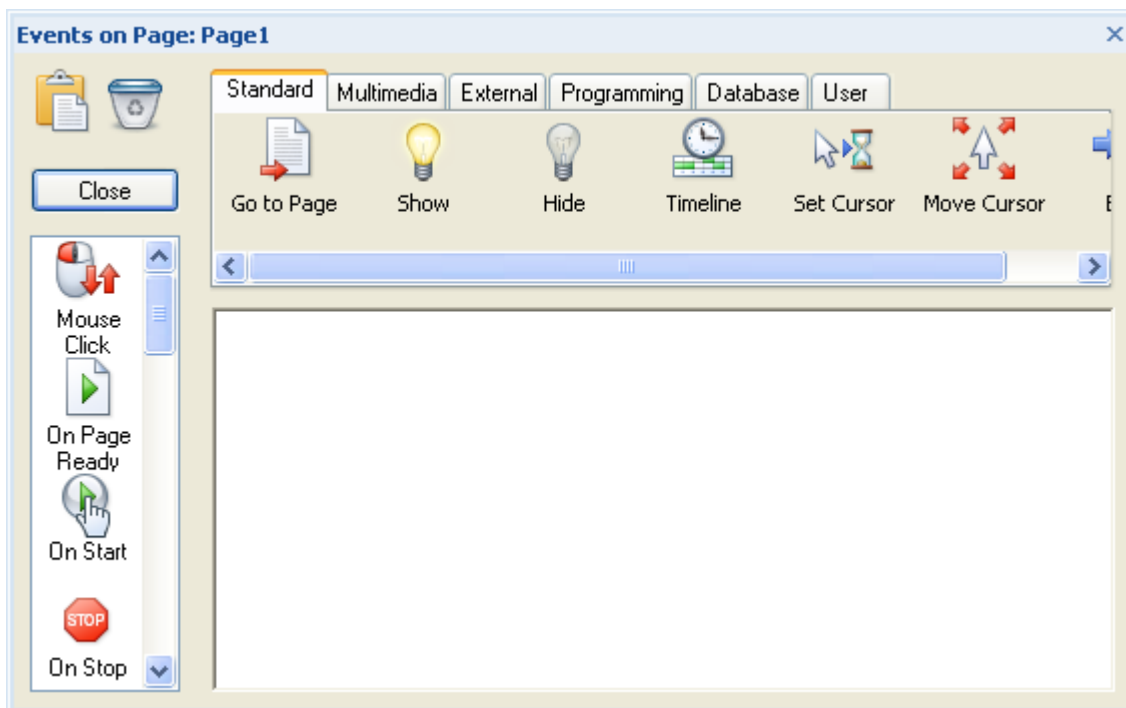
First we will link Page1 to Page2.

➢ Click Page1 in the Page list.

➢ Click the "Next" button you created on the page.

The button now has handles around it, indicating that it is selected.

We would like to "program" the button to take us to Page2 when clicked.

To apply this functionality we need to open the **Events** dialog:

➢ Right-click the button.

➢ Choose **Events** in its local menu.

The **Events** dialog appears. This is where we will now program the button.
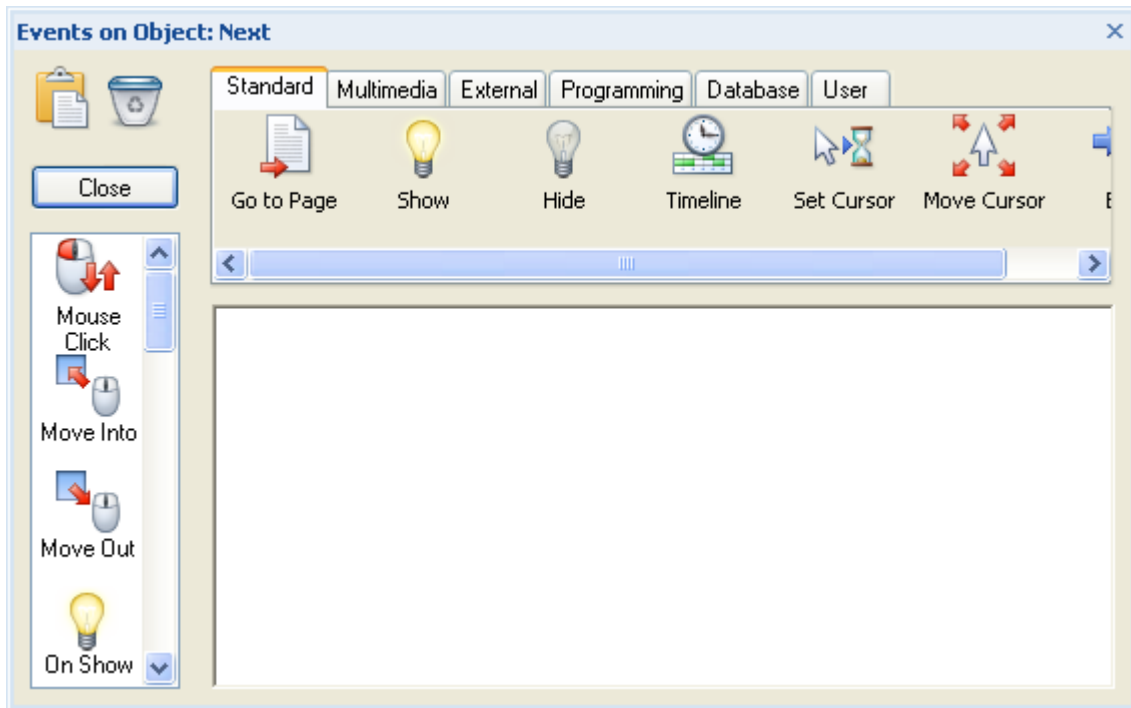
The left side of the Events dialog shows the list of all the possible events. An event is something that can happen to an object. For instance the object may receive a left mouse click or a right mouse click, the mouse pointer may be moved into it, and so on.

The top of the dialog shows the list of all the possible actions. An action is something that is triggered by the event. For instance, we may want to go to another page, play a sound, start an animation and so on.

Creating interactivity in the Events dialog always consists of combining at least one **event** with one or more **actions**.

Here, in order to make the button go to Page2, we must combine the event **Mouse Click** with the action **Go to Page**.

➢ Click the event **Mouse Click** and drag it into the large empty area (called the "active field").

➢ Click the action **Go to Page** and drag it into the active field to the right of **Mouse Click**.

When you drop the Go to Page action the **Go to Page** dialog appears.
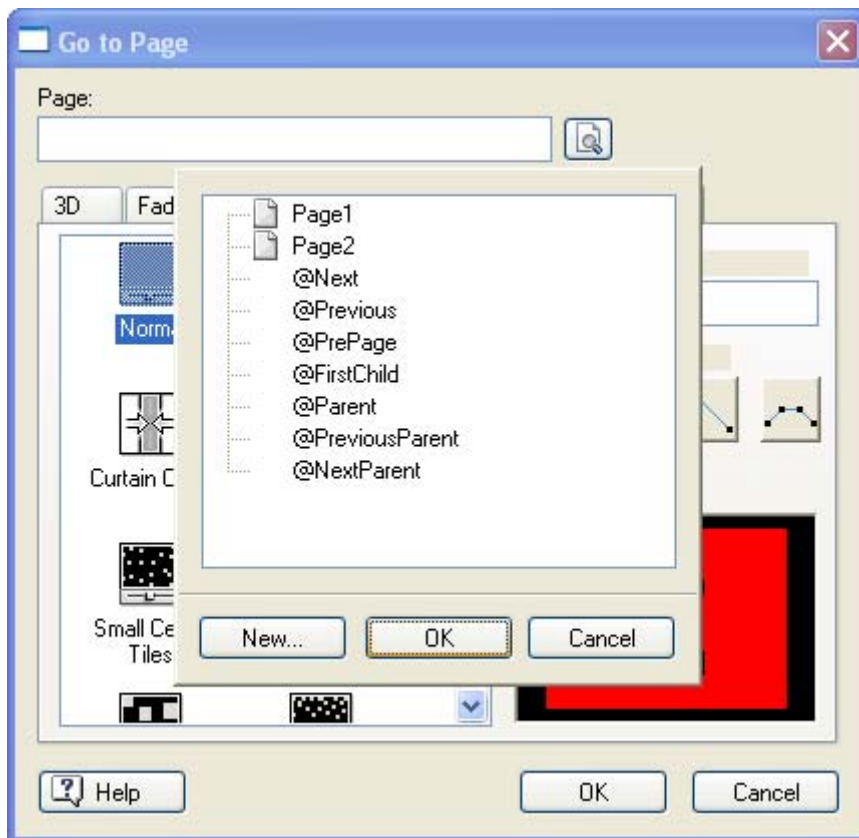
This dialog lets you select the page you wish the button to go to.

Every time you drag a Go to Page action into the active field the Go to Page dialog opens a page list automatically.

This page list is identical to the standard Page list, except that it holds 7 additional special pages, the @pages. For now these @pages are not important, but you can find out more about them in the topic "Go to Page" that describes this action.

You can now select the page you want the button to go to.

➢ Select Page2 from the Page list and click OK at the bottom of the list.

The name Page2 appears in the page field in the top left corner of the Go to Page dialog.

➢ To close the Go to Page dialog click OK in the bottom right corner.

The Events dialog has now changed slightly.

The Mouse Click event icon is unchanged, but the Go to Page action icon is now labeled "Page2", of course indicating that you have programmed the button to go to Page2 when clicked.
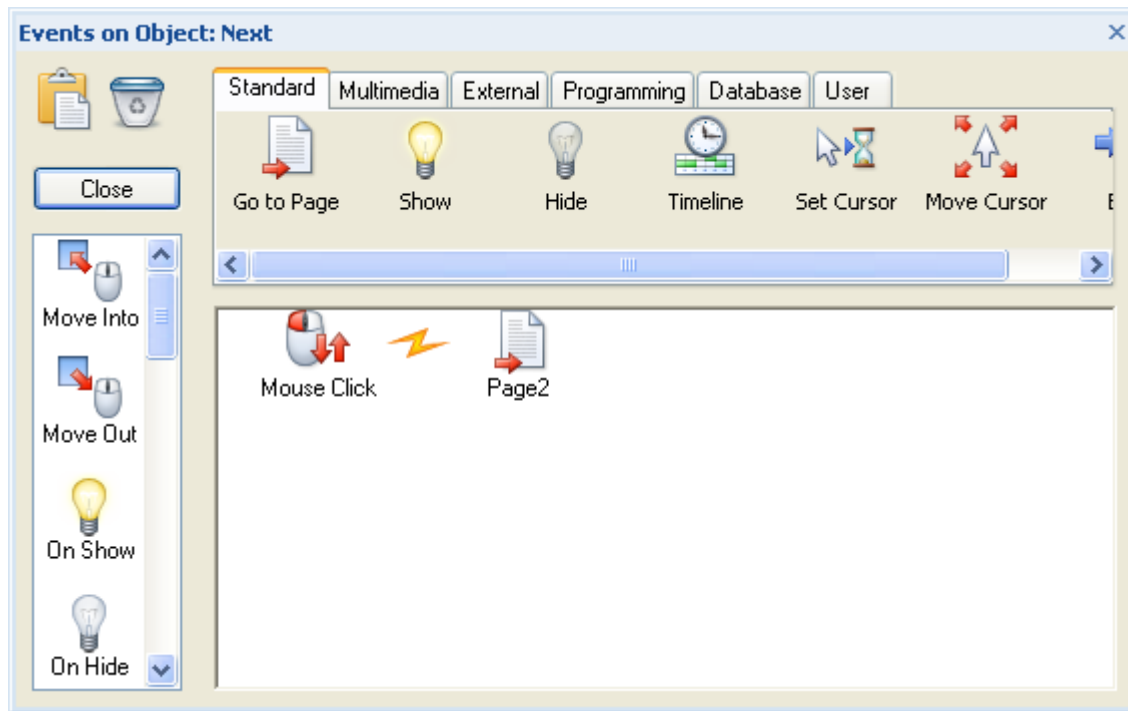
Let us test the presentation to see if the button works.

➢ Close the **Events** dialog by clicking the **Close** button or the small X icon in the top right corner.

➢ Click the **Review** tab on the ribbon.

➢ Click the **Run Document** icon ⊙ in the **Test** group.

You now leave design mode and enter test mode, meaning that you will get a preview of what your presentation will look like once exported and run on another computer.

➢ Click the button you created.

Your presentation skips to Page2.

On Page2 there isn't anything you can click, as we have not set up any interactive events and actions yet on that page. We will, however, do so right now.

➢ Exit test mode and return to design mode by pressing the **Esc** key.

💡 *You can also enter test mode by pressing **F5**. You always return to design mode by pressing **Esc**.*

You are now on Page2. If not, click Page2 in the Page list.

We would like to create a link on Page2 that will take us back to Page1, and again we will use the Events dialog. Making an object interactive is always done by opening its Events dialog to combine events and actions.

All objects, not just buttons, can be interactive. We would like to go back to Page1 by clicking the picture shown on Page2.

➢ Right-click the picture and choose **Events** in its local menu.

The Events dialog appears. Once again we will combine events and actions in order to make an object (the picture) interactive.

➢ Click the **Mouse Click** event from the events field on the left and drag it into the active field.

➢ Click the **Go to Page** action from the actions field at the top and drag it into the active field to the right of **Mouse Click**.

The Go to Page dialog appears, again with the Page list already opened.

➢ Select Page1.

➢ Click OK at the bottom of the Page list.

Page1 now appears in the Page field of the Go to Page dialog. Earlier we just asked you to click OK to close the dialog and test the presentation. However before you close the dialog you can choose one of the many different transition effects available for the page turn.
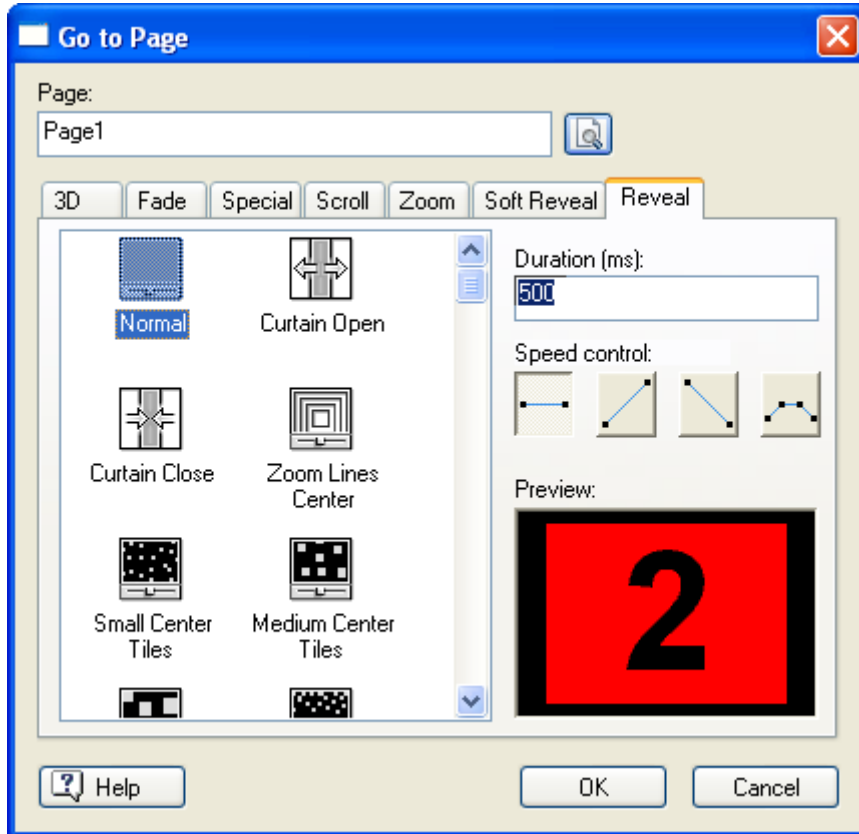
Page turn effects are divided into different categories.
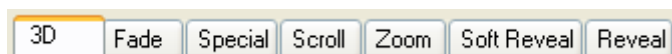
You can scroll up and down in each category, click an effect, and see a preview of it in the preview window.

➢ Find an effect that you like and click it.

➢ Click OK to close the Go to Page dialog.

Let us now test the presentation to see if clicking the picture takes us to Page1 as expected.

➢ Close the **Events** dialog by clicking the **Close** button or the small X icon in the top right corner.

➢ Choose **Review | Test | Run Document** as earlier or press **F5**.

Your presentation goes in test mode, starting on Page1.

*To start test mode on the current page instead, choose **Review | Test | Run Page** on the ribbon or press **F6**.*

➢ Click the button on Page1.

Your presentation goes to Page2.

➢ Click the picture.

Your presentation goes back to Page1, this time using the selected effect.

You can now click back and forth between the two pages.

➢ Exit test mode and return to design mode by pressing the **Esc** key.

You have just created a 2-page slideshow with linked pages.

If you wish to use a different effect or go to a different page, open the Events dialog and double-click the Go to Page action. To select another page (once you have created more pages than the two you have now) click the small button to the right of the 'Page' field. This is the Browse button: it opens the Page list.

In a very short time you have created your first Mediator presentation. You have also learned Mediator's **three basic steps**.

You can now quit this Quick Start here, or go on to "Further steps" and learn how to:

- Show and hide text using the Move Into and Move Out events

- Play a sound

- Start and stop a video

- Create an animation

Further steps

Further steps - Showing and hiding an object

[The complete Mediator document "Quick Start_Further Steps.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

So far we have only looked at the Mouse Click event and Go to Page action. Now we will go one step further and look at the events **Move Into** and **Move Out** and the actions **Show** and **Hide**.

➢ Go to Page1 (click Page1 in the Page list or press the Page Up key).

➢ Click the **Text** icon [A] in the **Insert** tab.

➢ Drag out a frame for your text object next to the rectangle without overlapping it.

➢ Enter some text to describe the rectangle, maybe something like "This is a simple rectangle".

➢ Format the text (font, font size, color and so on).

➢ Click outside the text frame to exit text editing mode.

We would now like to display the text when the mouse pointer is moved into the rectangle and hide it when the mouse pointer is moved out of the rectangle.

In order to apply interactivity to the rectangle (note that we want to assign the events and actions to the rectangle, and not to the text) we must open the Events dialog of the rectangle.

➢ Right-click the rectangle and choose **Events** in its local menu.

 The Events dialog appears. We will now use the two events Move Into and Move Out.

➢ Click **Move Into** in the events list and drag it into the active field.

➢ Click **Move Out** in the events list and drag it into the active field underneath the **Move Into** event.
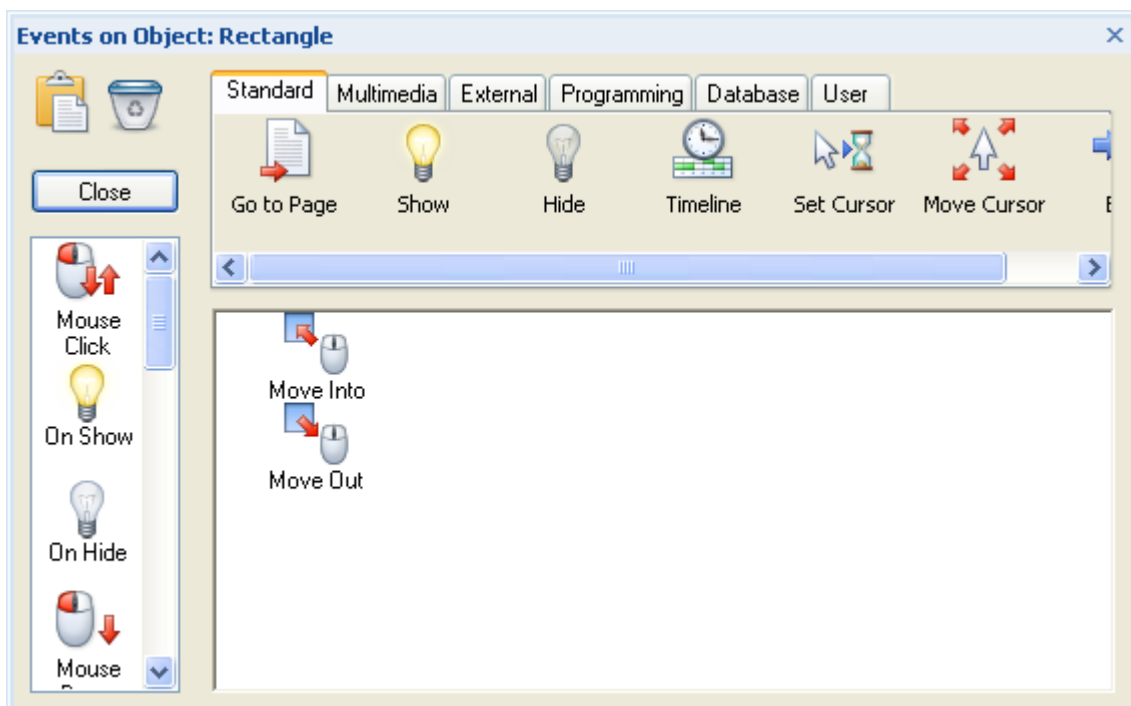
We can now assign an action to each of these events. We want to show the text when the mouse pointer is moved into the rectangle.

➢ Click **Show** in the actions list and drag it into the active field to the right of the **Move Into** event.
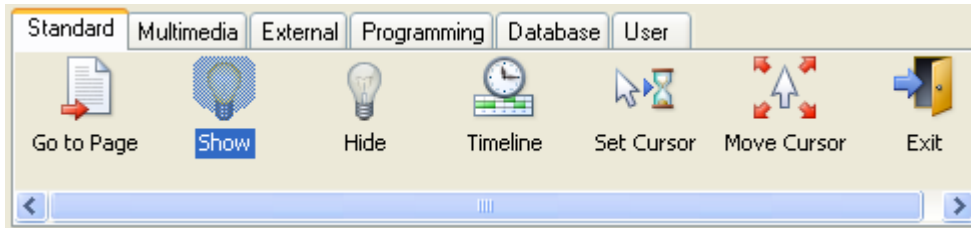
Make sure you drop the Show action to the right of Move Into. If you accidentally drop the Show action to the right of Move Out instead, simply drag it back to the right of Move Into (do not select a new Show action from the actions field).

The **Show Object** dialog appears. It is similar to the Go to Page dialog, but instead of selecting a page you select the object that you wish to show.
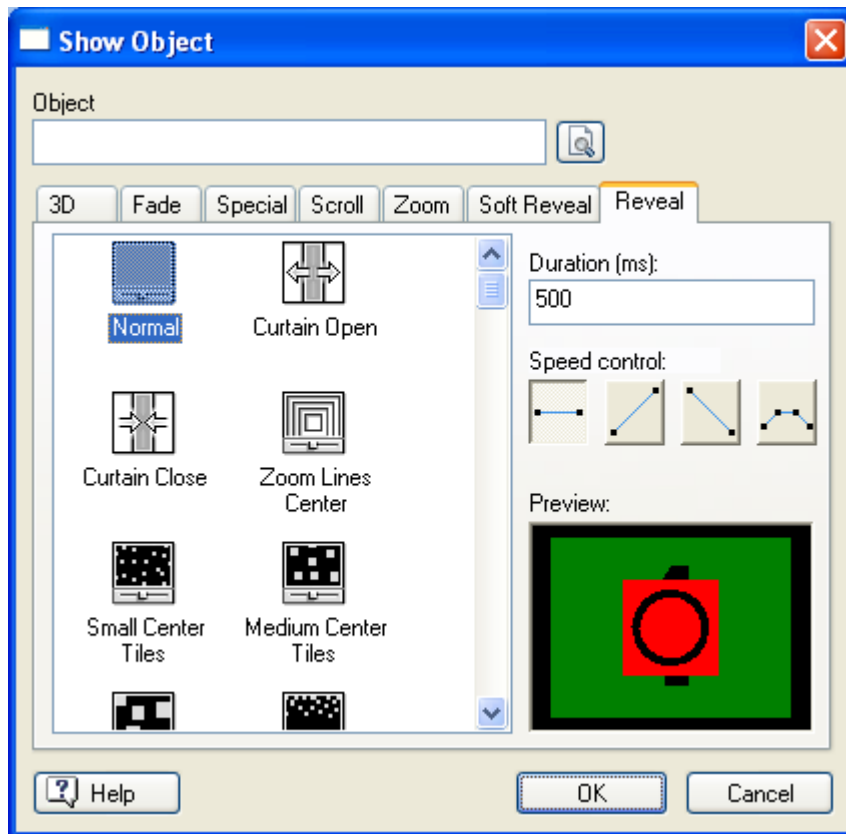
➢ Click the button to the right of the 'Object' field.

This is the Browse button . It opens the Object list, showing you all the objects available on the current page.
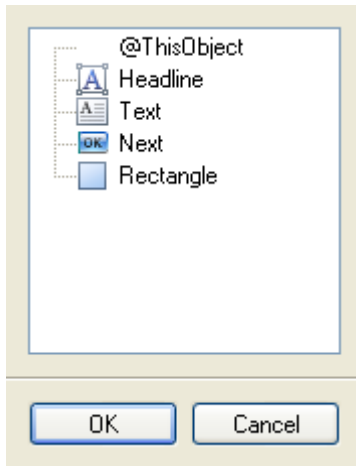
➢ Select the text object 'Text' and click OK.

You can now click OK to close the Show Object dialog or select an effect first. Selecting an effect in the Show Object dialog is done exactly as in the Go to Page dialog.
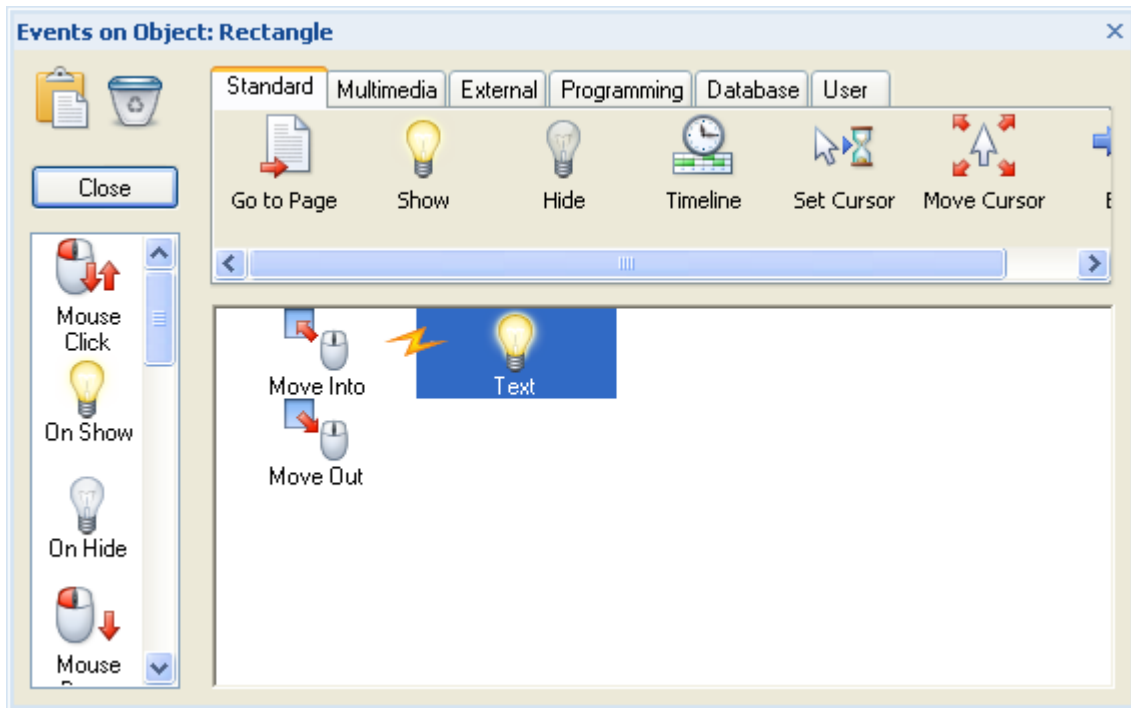
➢ Now click **Hide** 💡 in the actions field and drag it into the active field to the right of the **Move Out** event.
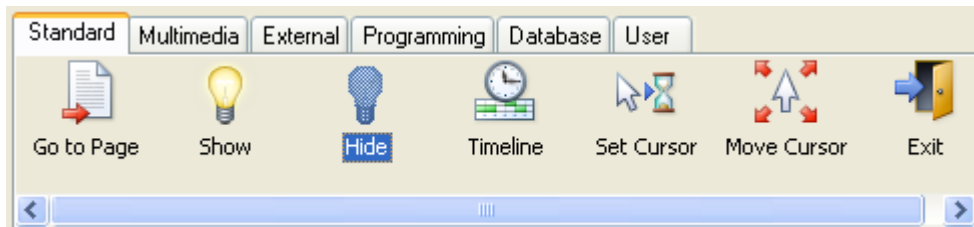
The **Hide Object** dialog appears. It is identical to the Show Object dialog.
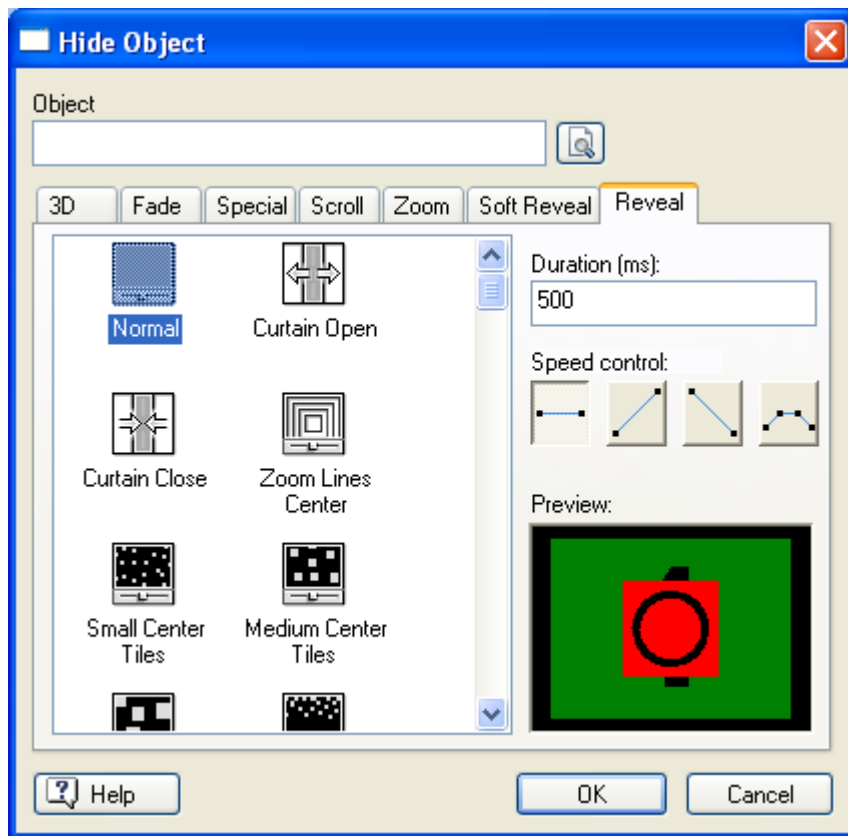
➢ Click the Browse button 🔍 next to the 'Object' field.

➢ Select the text object 'Text' and click OK.

You can now click OK to close the Hide Object dialog or select an effect first.
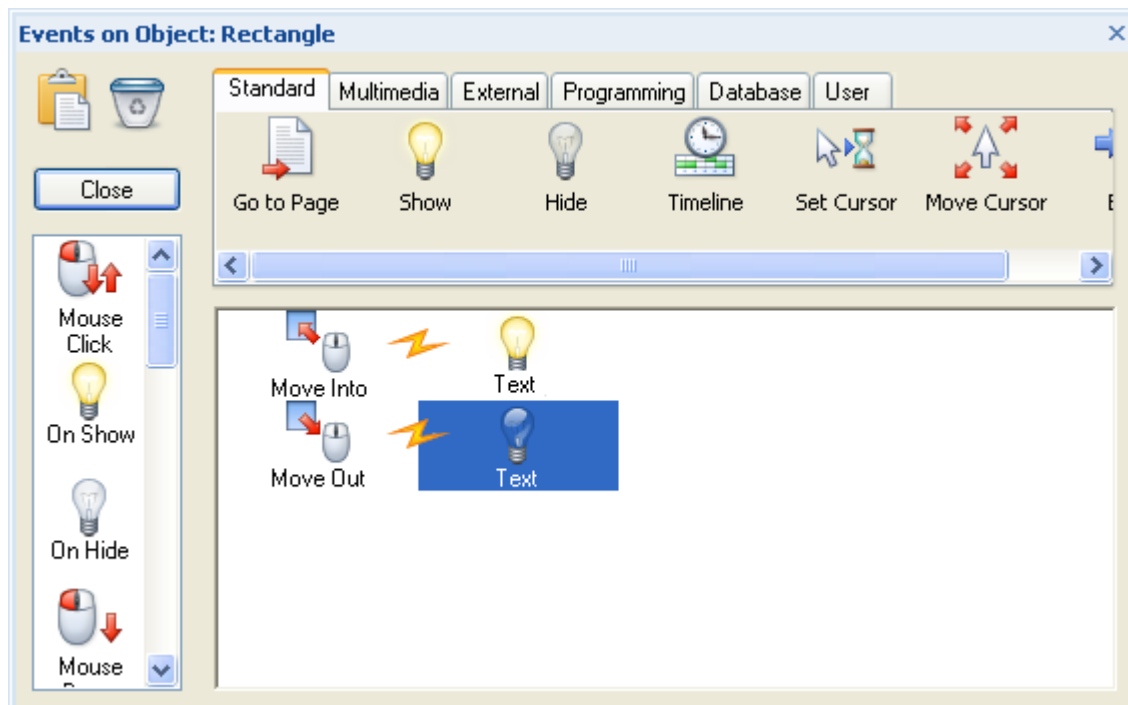
You have just programmed Mediator to show the text when the mouse pointer is moved into the rectangle, and hide it when it is moved out of the rectangle.

We are just missing one thing…

We do not want the text to be visible when the page first opens.

Why not? Well, we only want the text to become visible when the mouse pointer is moved into the rectangle. Therefore the text must be hidden when the page first appears.

Hiding an object is very simple.

➢ Right-click the text object.

➢ Uncheck **Show Object** in its local menu (remove the checkmark by clicking the option).
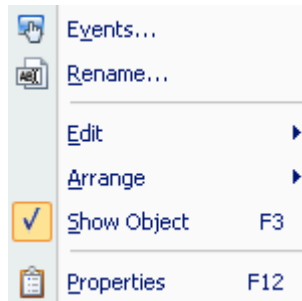
As you can see the object is still there, but it is now hidden.
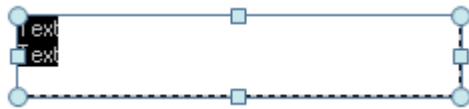
Let us test the presentation to see if the rectangle works.

➢ Close the **Events** dialog.

➢ Choose **Review | Test | Run Document** or press **F5**.

Test your presentation to see if moving the mouse pointer in and out of the rectangle shows and hides the text as expected. Of course you can still move back and forth between Page1 and Page2.

➢ Press the **Esc** key to exit test mode.

Ready for more? How to play music in Mediator is our next step.

Further steps - Playing a sound

[The complete Mediator document "Quick Start_Further Steps.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

By now, you know how to open the Page list and the Events dialog, and how to combine events and actions in the active field, so we won't describe that in detail anymore.

Remember the rectangle on Page1? A text label is shown whenever the mouse pointer is moved into it. Well, how about playing a tune at the same time?

➢ Select the rectangle and open its **Events** dialog.

In the Events dialog you already have the Move Into and Move Out events combined with a Show and Hide action respectively. You can place as many actions after each event as you want, so in order to play a tune when the mouse pointer is moved into the rectangle simply drop the Sound action to the right of the Show action.

➢ Click the **Multimedia** tab above the actions field to see the multimedia actions.

➢ Select the **Sound** action .
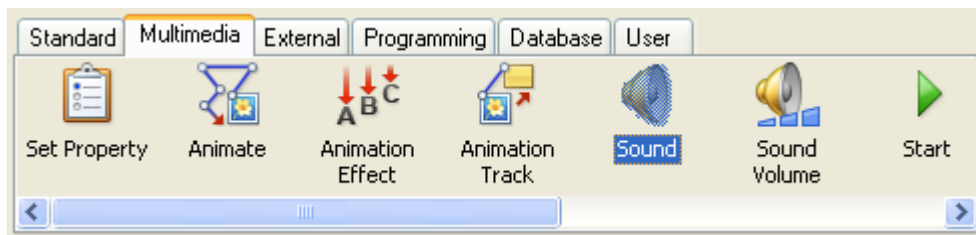
➢ Drop it to the right of the **Move Into - Show** combination.

The Sound dialog appears, in which you select the sound file you wish to use.

➢ Click the Browse icon to the right of the 'Path' field.

➢ Select the sound, for instance 'Twist.mp3' from the Quick Start folder.

➢ Click OK.

To stop the tune when the mouse pointer leaves the rectangle you must use another Sound action.

➢ Select the **Sound** action in the **Multimedia** actions field.

➢ Drop it to the right of the **Move Out - Hide** combination in the active field.

➢ Check the option **Cancel current wave sound**.
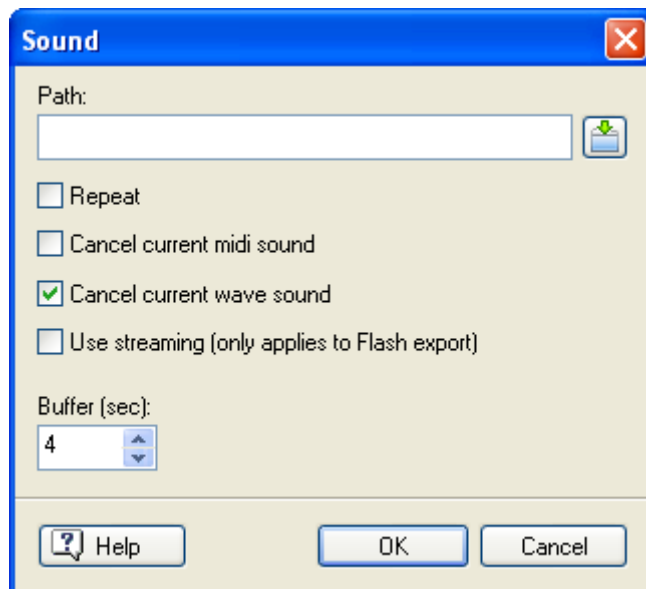
The active field of the Events dialog should now look like this:

You are now ready to test the presentation.

➢ Close the **Events** dialog.

➢ Choose **Review | Test | Run Document** or press **F5**.

Does your presentation work as expected?

➢ Press **Esc** to exit test mode and go back to design mode.

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This is really impressive. You are now creating multimedia presentations with pictures, text and sound, and you've only just started!

How about watching a video now? Just go on to the next step…

Further steps - Playing a video

[The complete Mediator document "Quick Start_Further Steps.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

Playing videos in Mediator is very simple. You create a frame for your video, select the video, and that's it.

Well, of course you can do a lot more, but let's get started.

➢ Open the Page list and click Page2.

➢ Right-click and choose **New**, or just press the **Insert** key.

➢ Enter a descriptive name for the new page, such as "Video".

➢ Click OK.

A new empty page appears on which we want to place a video.

➢ Click the **Insert** tab.

➢ Click the **Video** icon in the **Media Clips** group.

➢ Drag out a frame for your video on the page.

The **Open** dialog appears.

➢ Select the video 'Street.mpg' from the Quick Start folder.

➢ Click **Open**.

The Video Adjust Size dialog appears.

➢ Just click OK to let Mediator adapt the frame size to the video.

You are ready to test the page. Do not choose Run Document this time.

➢ Choose **Review | Test | Run Page** or press **F6**.

The video starts automatically, plays once, then stops.

➢ Press **Esc** to exit test mode.

We would like the video to start on demand, and repeat until paused.

➢ Select the video.

➢ On its **Format** tab, uncheck **Auto Start** in the **Play** group.

This will prevent the video from playing when the page is first opened.

➢ Check **Repeat**.

Once the video is started, this will repeat it over and over until stopped explicitly.

You will now use two events that you haven't used before, **Mouse Down** and **Mouse Up**.

• Mouse Down is triggered when you click the left mouse button.

• Mouse Up is triggered as soon as you let go of the left mouse button.

➢ Right-click the video object and choose **Events** in its local menu.

The Events dialog for the video object appears.

➢ Scroll down the events list.

➢ Select and drag **Mouse Down** into the active field.

➢ Select and drag **Mouse Up** into the active field, underneath **Mouse Down**.
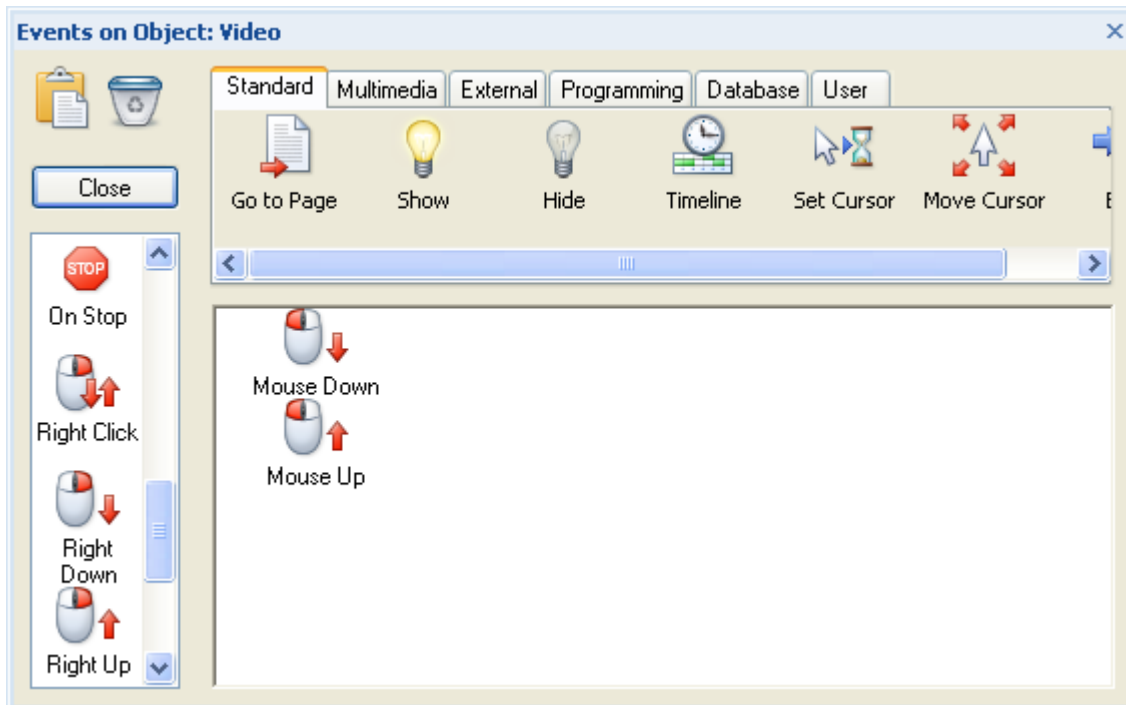
We now want the video to start when we click it, run for as long as we hold the left mouse button down, and pause when we let go.

➢ Click the **Multimedia** tab above the actions field.

➢ Select the **Start** action and drag it into the active field to the right of **Mouse Down**.

The **Start** dialog appears.
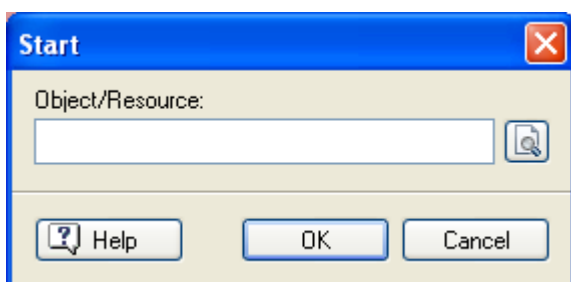
➢ Click the Browse button to access the Object list.

➢ Select the video object in the list (the only available object).

➢ Click OK at the bottom of the list.

➢ Click OK to close the Start dialog.

The video now plays when the left mouse button is held down.
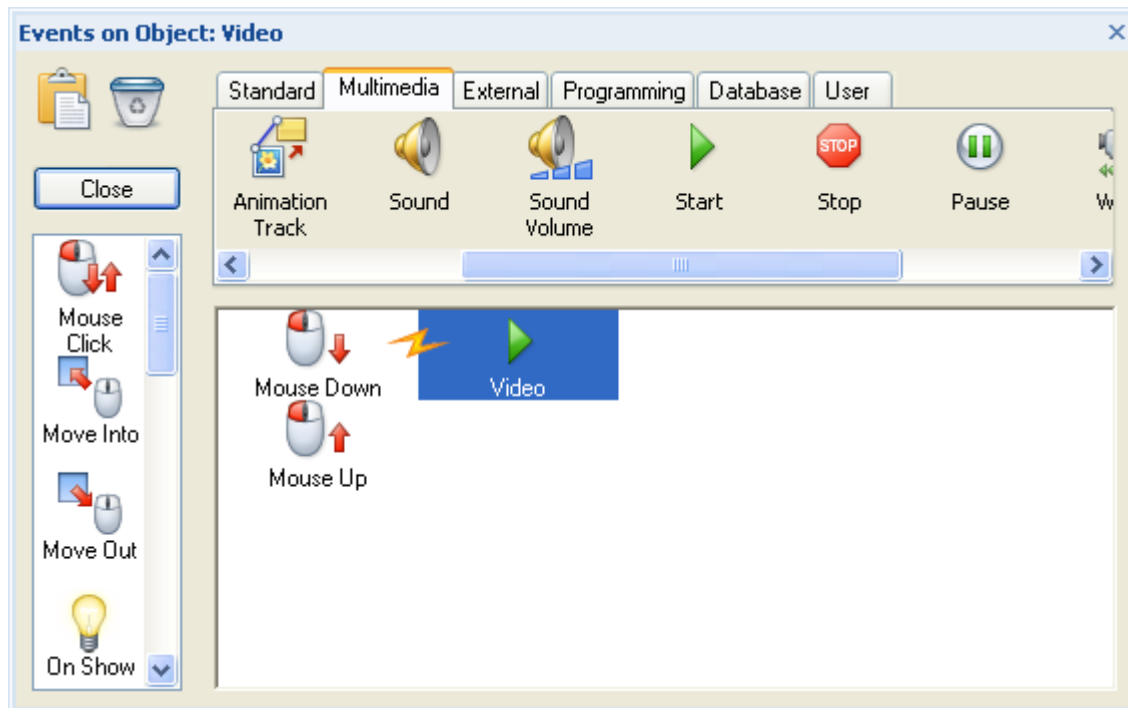
We want to pause the video when the mouse button is released.

➢ Click the **Multimedia** tab above the actions field.

➢ Select the **Pause** action ⏸ and drag it into the active field to the right of **Mouse Up**.

The **Pause** dialog appears. It is identical to the Start dialog.

➢ Click the Browse button 🔍 to access the Object list.
➢ Select the video object in the list (the only available object).
➢ Click OK at the bottom of the list.
➢ Click OK to close the Pause dialog.
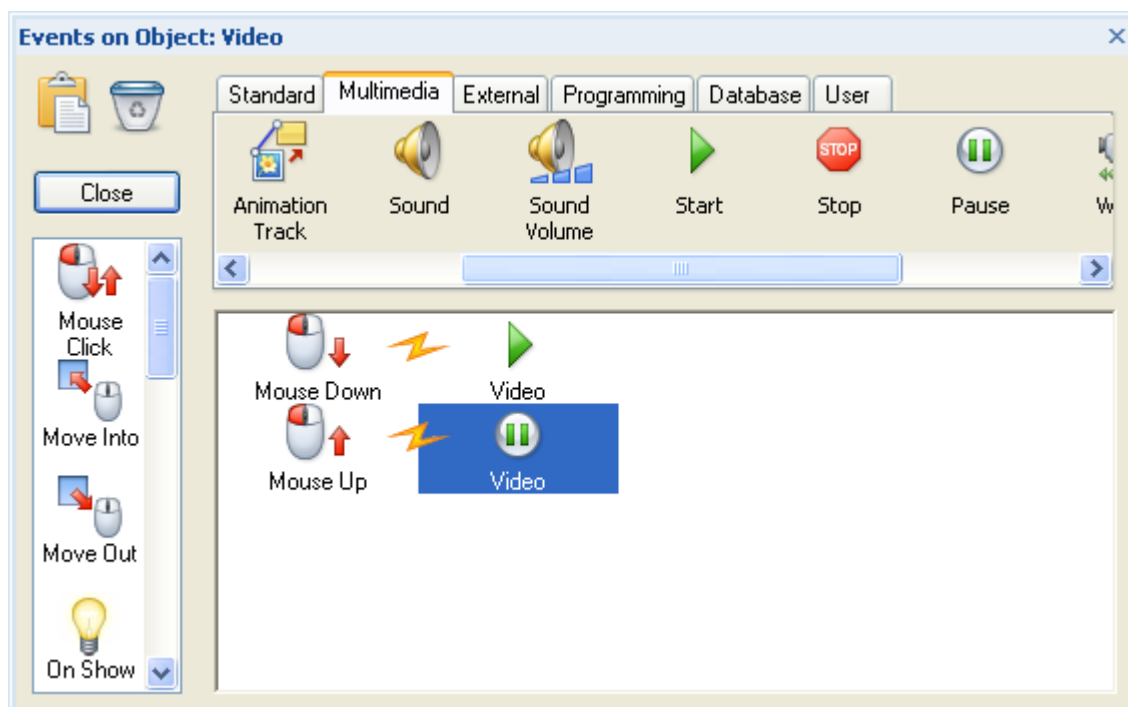
You are ready to test the page. Do not choose Run Document.

➢ Choose **Review | Test | Run Page** or press **F6**.

The video is paused. Click and hold the left mouse button down to play it. Let go of the mouse button to stop it.

➢ Press **Esc** to exit test mode.

Page1 and Page2 are not linked to the Video page. If you want to link them, create a button on Page2 that takes you to the Video page (using Mouse Click and Go to Page "Video"), and possibly a button on the Video page to go back to Page2 (using Mouse Click and Go to Page "Page2").

Now, are you in the mood for some movement? Carry on and learn how to animate objects.

Further steps - Animating an object

[The complete Mediator document "Quick Start_Further Steps.md8" used in this example can be found in the Mediator program folder, in "…\Examples\Quick Start".]

The final topic in this Quick Start is a tutorial on how to animate objects around the screen.

➢ Open the Page list.

➢ Click the Video page.

We would like to animate an animated GIF across the screen.

➢ Choose **Insert | Media Clips | Animated GIF** .

➢ Click once in the bottom left corner of your page to place it (animated GIFs are not resizable).

The **Open** dialog appears.

➢ Select the animated GIF 'Car.gif' from the Quick Start folder.

➢ Click **Open**.

Now we would like to animate the car across the screen. First you must learn how to create an animation path.

➢ Choose **Insert | Controls | Animation Path** .

The Animation Path **Edit** tab appears.

The **Add Point** icon is activated, ready for you to create an animation path. Here we will create a simple path with only two points, but you could create a path with many points joined by straight lines or curves.

➢ Click once in the bottom left corner of your page.

A white dot with a red rim appears. This is your first animation point.

➢ Click once in the top right corner of your page.

You have placed the second point in your animation path, and you can now see a blue line connecting point 1 and point 2.
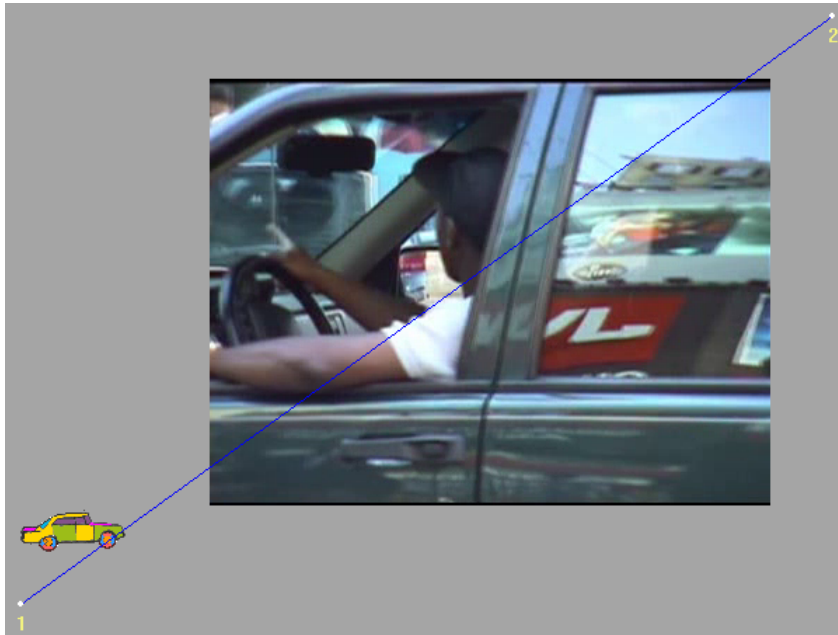
Your first animation path is complete.

➢ Click the **Close** icon at the right of the Edit tab to exit editing mode.

We now want to animate the car along the animation path as soon as it receives a click.
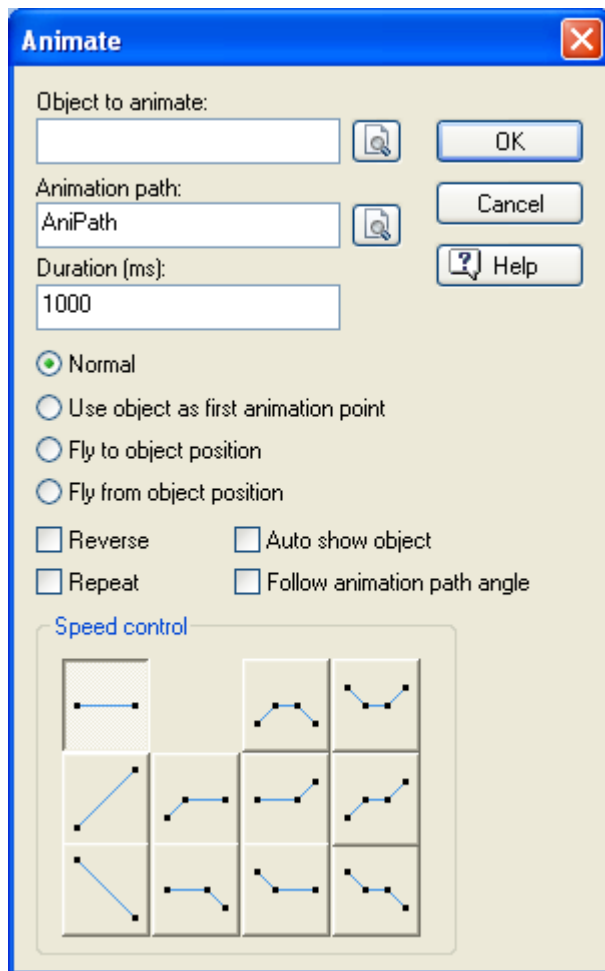
➢ Right-click the car and choose **Events**.

➢ Select **Mouse Click** and drag it into the active field.

➢ Click the **Multimedia** tab above the actions field.

➢ Select the **Animate** action and drag it into the active field to the right of **Mouse Click**.

The **Animate** dialog appears with the Animation path field already filled in.

➢ Click the Browse button next to 'Object to animate'.

➢ Select the animated GIF (the car).

➢ Set **Duration** to 4000 (4000 milliseconds = 4 seconds). This defines how long the entire animation will last.

➢ Select **Fly from object position**. This means that the car will be animated from its current position.

➢ Select **Follow animation path angle**. This means that the car will be rotated in the direction followed by the animation path, making the animation look more natural.

➢ Click OK.

You are ready to test the page.

➢ Choose **Review | Test | Run Page** or press **F6**.

The car is spinning its wheels, waiting for you to click it. When you do, it moves across to the top right corner of the page, where it stays until you click it again.

The video starts as soon as you click it while holding the mouse button down.

You have just created a 3-page slideshow containing all the elements of a multimedia presentation: text, pictures, sound and video.

You are ready to become a multimedia designer. Good luck!

User Guide

Setting up your project

Setting up your workspace

The Mediator window is made up of several components:
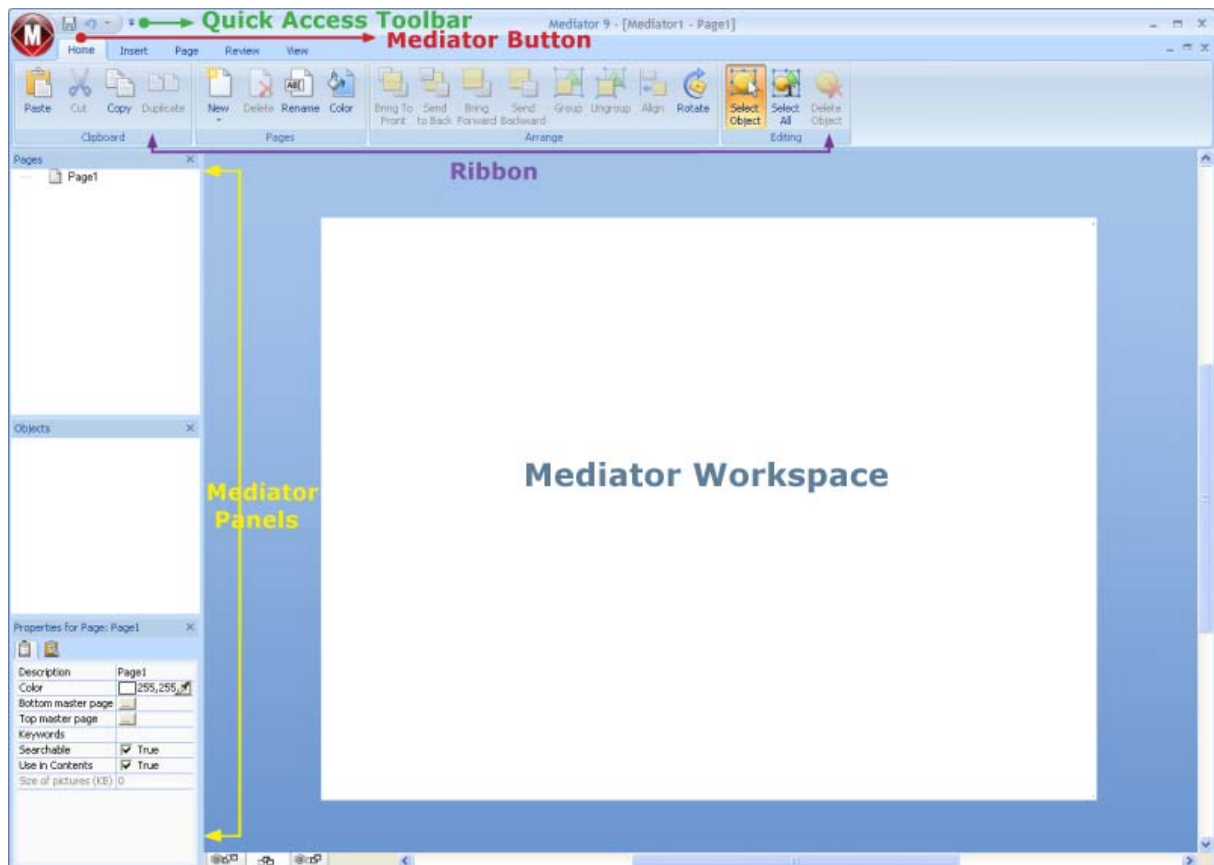
- The **Mediator Button** is displayed in the upper left corner of the Mediator window. It opens the **Mediator Menu**, which contains commands affecting the entire document, such as New, Open, Save, Print or Export.

- The **Quick Access Toolbar** is a component of the Microsoft Office 2007 interface. It is a customizable toolbar that is available at all times, regardless of the menu tab currently open on the ribbon. By default, it is located in the upper left corner of the Mediator window, next to the Mediator Button.

- The **Ribbon** is also a component of the Microsoft Office 2007 interface. Its tabs, corresponding to the main activities in Mediator, contain all the necessary commands, options and icons, organized in groups. It is designed to help you quickly find the commands that you need to complete a task.

  When a particular object is selected, a special Format tab may appear at the right of the ribbon. It contains all the commands that are specific to the selected object.

- The **Mediator Panels** are displayed by default on the left of the Mediator window. Taken together, they give you a complete overview of your project.

- The **Mediator Workspace** is the area you use to design your project.

Customizing the Quick Access Toolbar

The Quick Access Toolbar contains the most frequently used commands. By default, it is located in the upper left corner of the Mediator window, next to the **Mediator Button**.

To move the Quick Access Toolbar closer to the workspace area:

➢ Click the **Customize Quick Access Toolbar** arrow on the right of the toolbar.

➢ Choose **Show Below the Ribbon**.

You can also add the commands you use most frequently to the Quick Access Toolbar, or remove commands you use less often. See "Setting up your preferences" for more information.

Minimizing the ribbon

Mediator lets you minimize the ribbon to increase the workspace available:

➢ Click the **Customize Quick Access Toolbar** arrow on the right of the toolbar.

➢ Choose **Minimize the Ribbon**.

➢ To use the ribbon while it is minimized, click the tab you want to use, and then click the command you want to use.

As soon as you have made your choice, the ribbon returns to its minimized form.

➢ To restore the ribbon, click the Customize Quick Access Toolbar arrow again and uncheck Minimize the Ribbon.

You can also minimize the ribbon temporarily as follows:

➢ Double-click the current tab.

➢ To restore the ribbon, just double-click any of its tabs.

*You can also press **Ctrl + F1** to minimize or restore the ribbon.*

The layout of the commands, options and icons in the ribbon changes when the width of the Mediator application window is reduced. Controls normally represented by large icons may for instance now be represented by small icons. If the width of the application window is greatly reduced, a group may be represented only by its icon.

➢ To view the contents of such a collapsed group, just click its icon.

Using access keys and shortcut keys

To select a command from the ribbon, all you need to do is click the relevant tab to open it, then choose the command.

You can also use access keys for this purpose. Access keys are different from shortcut keys.

- **Access keys** are used to navigate through the interface and select its different commands using the keyboard. Each command shown in the Mediator Button menu, the Quick Access Toolbar and the Ribbon has an access key.

- **Shortcut keys** are key combinations such as F1 or Ctrl + O used to perform frequently used commands. Shortcut keys are not related to the organization of the commands in the interface. You will find a list of all the shortcut keys used in Mediator in "Appendix 1: Keyboard shortcuts".

➢ To select a command using an access key, start by pressing the **Alt** or **F10** key. You will now see the first layer of access keys you can use at that point displayed as small labels underneath each tab or command.
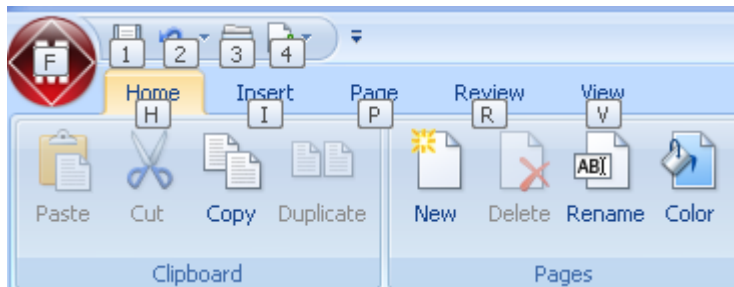
➢ Press the access key for the tab or command you require to see the second layer of access keys.

For instance, pressing H above will open the Home tab and display its access keys, as shown below.
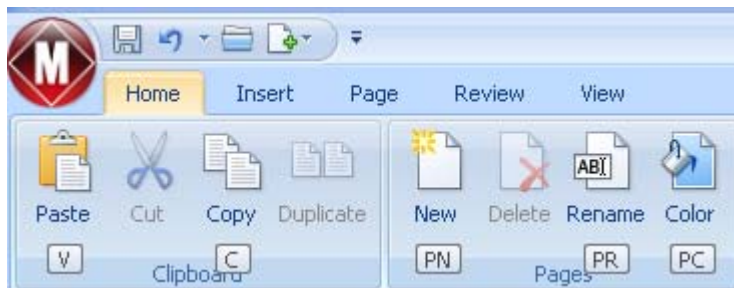
➢ Press the key or keys corresponding to the command you want to select.

For instance, pressing P, then R above will open the Rename Page dialog.

Using the Mediator panels

The two Mediator panels displayed by default on the left of the Mediator window give you a complete overview of your project:

- The Page List lists all the pages making up your project.

- The Object List lists all the objects placed on the current page.

The **View** tab gives you access to other important panels and dialogs:

- The Properties dialog lets you view and fine-tune all the properties applicable to the currently selected page or object.

- The Multimedia Catalog contains a vast collection of high-quality multimedia elements organized in different categories and themes which you can drag on the pages of your project.

- The Multi-User Status window is useful when working in multi-user mode. It reflects in real-time all the accesses made to the document by its concurrent users, giving the user name and computer name of each user.

- The Events dialog is responsible for all the activity in a Mediator project. It contains a list of events applicable to the selected object, to which you can associate various actions by simple drag and drop.

The **Page List**, **Object List** and **Properties** dialog always reflect your latest selections or changes:

- When you select a page in the Page list, the Object list is refreshed to show the objects available on that page.

- When you select an object in the Object list, the Properties dialog is refreshed to show the properties of that object.

- When you change the name of an object in its Properties dialog, the Object list is updated to reflect that change.

Please refer to the specific sections describing these panels for more information on how to use them. The Reference section contains an in-depth description of all the Mediator objects together with their Properties dialog.

Resizing panels

➢ To resize a panel, move the pointer on one of its edges until it changes to a double arrow and drag with the mouse in the required direction.

Undocking panels

It is usually helpful to keep some of the panels open on your workspace while designing your project. To ensure they take as little space as possible, the Page list and Object list are docked on the left side of the screen when you first open Mediator.

You can however undock each panel as required.

➢ To undock a panel, just drag its title bar away from its current position until it is completely free, then let go of the mouse button.

You can also double-click the title bar of the panel to undock it and double-click it again to redock it. If you want to undock a panel and move it freely on the workspace without it "snapping" to a docked position, press the Ctrl key and hold it down while dragging the title bar of the panel.

Docking panels

You can dock an undocked panel to the left, right, top or bottom edge of the workspace as follows:

➢ Drag the title bar of the panel and move it in the direction required until you see the arrow shapes left , right , up and down appear on the edges of the workspace. Drag the panel on top of the required arrow until you see a darker shade of blue outline the new position. Release the mouse button if you are happy with this new position, else continue dragging to the required position.

You can also dock a panel above, below or on the side of another panel. To do this:

➢ Drag the title bar of the panel and move it in the direction of the target panel until you see a four-arrow shape appear.
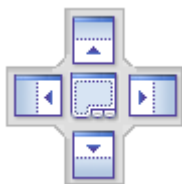
You now have different possibilities:

- Moving the panel over the left, right, up or down arrow will dock it on the corresponding side of the underlying panel.

Here for instance, the Object List is being docked to the right of the Page List.
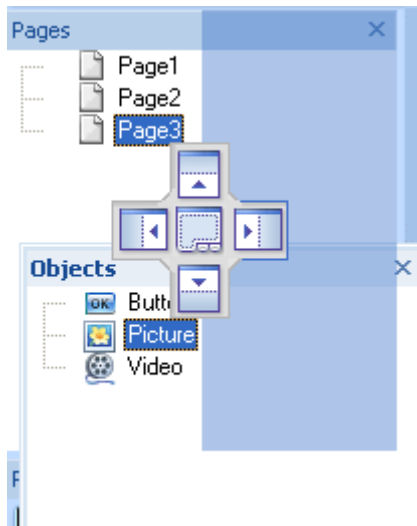
- Moving the panel to the middle square will integrate it as a tab of the underlying panel, converting it to a multi-tab panel.

  Here, the Object List is being integrated with the Page list as a tabbed panel.
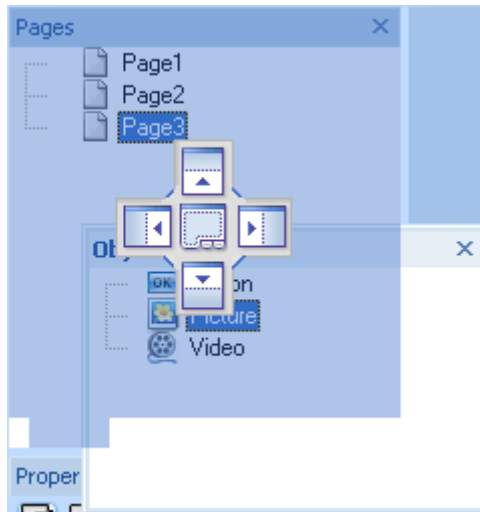
➢ To free such a tabbed panel, drag it by clicking its tab, not its title bar.

  To separate the Object list from the Page list in the example below, you would therefore click the Objects tab.
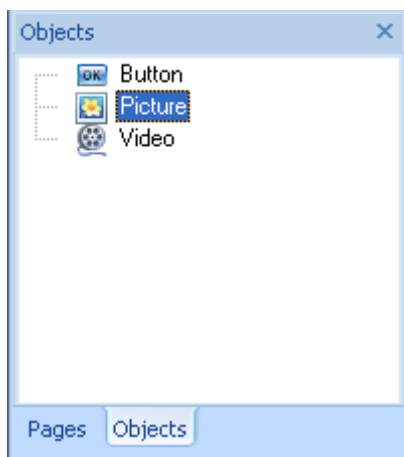
Resetting panels to their default position

If necessary, you can reset all the panels to the default position they had when you first installed Mediator:

➢ Click the **Mediator Button**.

➢ Click **Mediator Options** in the bottom right corner of the dialog.

➢ Click **Preferences** on the left.

➢ Click **Reset Interface**.

When using this command, note that other components, such as the Quick Access Toolbar or the list of recently opened files, are also restored to their defaults.

Using the Mediator workspace

The area available to you to design your project is called the Mediator workspace.

The Mediator document is represented in the middle of the workspace. This area is referred to as the "page", and you define its size (also called "resolution") when you create the document.

The workspace is always three times wider and three times higher than the page. So if your page is 1024 pixels wide and 768 pixels high, the workspace will be 3072 pixels wide (i.e. 1024 x 3) and 2304 pixels high (i.e. 768 x 3).

Although the page is the only visible area when testing or running the exported version of the project, you can use the entire workspace when designing your project. You could for instance hide objects initially by placing them outside the page, and then animate them into the page as a result of a user action. Or animate out of the page an object initially placed on the page.

You may also use the non-visible workspace to store objects that you are not sure about, but don't want to delete yet.

Objects can be twice as high and twice as wide as the page, except for animation paths, which can stretch across the entire workspace. If for instance the page is 1024 x 768, the maximum object size is 2048 x 1536 pixels.

To move around the workspace, you can:

- Use the scroll bars

- Press and hold down the **Space** bar or the **Ctrl** key while dragging the page.

Setting up your preferences

 The Mediator Options dialog lets you customize your environment and gives you access to external web resources.

➢ Click the **Mediator Button**.

➢ Click **Mediator Options** in the bottom right corner of the dialog.

The Mediator Options dialog that opens contains several panels, corresponding to different options.

Proofing options

This dialog contains various options which you can set to determine the type of errors reported by the spellchecker.

It is described in detail in the topic "Spellchecking options".

Saving options

Create backup of document files: Creates a backup of the md8 file and saves it as a *.bak file. The *.bak file is a copy of the last saved version of your document. See "Saving a document" for more information on this feature.

Save auto-recovery info: When this is checked, Mediator saves a copy of your open documents automatically at regular intervals. If the Mediator session ends abnormally, Mediator asks you upon restart whether you want to auto-recover your lost work. Set the interval between automatic saves in the time field. See "Saving a document" for more information.

Advanced options

Max Undo levels: This field lets you specify the maximum number of tasks that you want to be able to undo using the Undo command of the Quick Access Toolbar.

Invisible objects, show name: Check this option to display the name of hidden objects in their top left corner. It is advisable to keep this option enabled so that you have a way of detecting these objects during design.

Visible objects, show name: Check this option to display the name of all visible objects in their top left corner.

Show Welcome dialog when starting: If the checkmark is removed Mediator starts with an empty window.

Show Adjust Size dialog (picture): Here you select whether to show the Picture Adjust Size dialog when you import a picture. The dialog lets you automatically adjust the frame size to fit the picture in its original size or, conversely, scale the picture to fit the frame. See "The Picture object" for more information on this dialog.

Show Adjust Size dialog (video): Here you select whether to show the Video Adjust Size dialog when you import a video. The dialog lets you automatically adjust the frame size to fit the video in its original size or, conversely, scale the video to fit the frame. See "The Video object" for more information on this dialog.

Reset Interface: Clicking this button resets all the panels to their default positions. When using this command, note that other components, such as the Quick Access Toolbar or the list of recently opened files, are also restored to their defaults. See "Using the Mediator panels" for more information on resizing and docking panels.

Reset Multimedia Catalog: Clicking this button removes the elements you might have added to the Multimedia Catalog and restores its original contents. See "Using the Multimedia Catalog" for more information.

Check for program updates: This option allows Mediator to check for program updates via the Internet. You can set the frequency of the checks in the time field, or disable the feature by removing the checkmark.

Customize options

This panel lets you add the commands you use most frequently to the Quick Access Toolbar, or remove commands you use less often.

➢ In the field **Choose commands from**, choose the ribbon tab containing the required command.

➢ Choose the required command in the **Commands** field and click **Add**.

You can also add entire groups to the Quick Access Toolbar. Groups are denoted by a drop-down symbol .

 *A quicker way to add a command to the Quick Access Toolbar is to click the ribbon tab containing the command you want to add, right-click the command and choose **Add to Quick Access Toolbar**.*

Clicking **Reset** will restore the original contents of the Quick Access Toolbar.

 You can also access this panel by clicking the **Customize Quick Access Toolbar** arrow on the right of the toolbar.

Resources

This dialog lets you access the MatchWare web site and obtain the latest product updates.

Planning your project

The first step in creating a multimedia project is to plan its design and consider its essential features:

- The type of media needed (video, pictures, animation features etc.)

- The level of user interaction required (buttons for navigation, hypertext, input text from user etc.)

- The platforms you wish to support (e.g. Windows® XP, Windows® 2000 etc.)

- The export format you require (CD-ROM, HTML, Flash etc.)

- The specification of the target computer (computer speed, screen and color resolution etc.)

Mediator offers three different document types, corresponding to its export formats:

- The document type **Standard** lets you create a project for distribution on CD-ROM or other removable storage medium (DVD-ROM, USB stick, etc), as a self-executable .exe file or as a .zip file. This is the document type that gives you access to the most features.

- The document type **HTML** lets you create web sites with flying objects, clickable buttons, scrolling text, timelines and much more. In other words, actions which would otherwise only be possible through advanced programming.

  This is achieved by the use of dynamic HTML and cascading style sheets. By contrast with standard HTML, dynamic HTML allows the manipulation of objects which is at the core of the Mediator functionality.

  Mediator lets you place each object exactly where you want on the HTML page. You can even let objects overlap and insert more objects without displacing the existing ones, thereby giving you complete control over the layout of your pages.

  The Mediator HTML export does not use any plug-ins, Java applets or other special components. The only requirement is that the end user must have a standard Internet browser such as Microsoft Internet Explorer 7 or later or Mozilla Firefox 2.0 or later.

- The document type **Flash** lets you create banners, web pages and full web sites in the widespread Flash format. You can even create Flash files to be inserted into another Mediator project via the Flash object.

Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose, and only shows the features, options and export formats that are relevant to it.

Once you have determined your preferred export format, you therefore need to check that the corresponding document type does support all the features you require.

Please refer to the topic "Mediator 9 feature list" for a complete list of all the features available for each document type. A complete list of the restrictions applicable to HTML and Flash documents can be found in the topics "HTML restrictions" and "Flash restrictions".

💡 *You can also create a dummy document of each type and check the features that are available to you.*

For more information on the different export formats available, see "Exporting: Introduction".

When you plan the schedule for the project, make sure you include sufficient testing time. It is a good idea to test each section as you complete it rather than to leave all the testing to the end.

You are now ready to proceed with the creation and design of your project. See "Creating a document" for more information about this procedure.

Designing your project

Working with documents

Creating a document

When you start Mediator, the first screen you see is the Welcome dialog.

Here you can select to:

- Create a new document

- Open an existing document

- Open one of the last documents you worked on in Mediator

- Use the wizard to create the framework for a new project using a ready-made template

You can bypass this screen next time you start Mediator by checking 'Do not show this dialog again'. To show it again at a later stage, click 'Show Welcome dialog when starting' in the Mediator Options dialog. See "Setting up your preferences" for more information.

You can also create a new document by one of the following methods:

- Clicking the **Mediator Button** and choosing **New**.

- Clicking the **New** icon in the Quick Access Toolbar.

- Pressing **Ctrl** + **N**.

Specifying the document type

The next step is to define the type of document you would like to create. You can choose:

- **Standard** to create a multimedia presentation to be stored on CD-ROM or other removable storage medium (DVD-ROM, USB stick etc.)

- **HTML** to create an HTML web site or HTML presentation

- **Flash** to create a Flash banner or Flash web site

Mediator automatically adapts its user interface to the document type you choose here, and only shows the features, options and export formats that are relevant to it. Projects of type HTML or Flash do not have as many tools, effects, events and actions available as projects of type Standard.

Please refer to the topic "Mediator 9 feature list" for a complete list of all objects, events and actions available for each document type. For a list of the restrictions applicable to HTML and Flash documents, see "HTML restrictions" and "Flash restrictions".

For more information on the different export formats available, see "Exporting: Introduction".

You can change the document type at any time after its creation by clicking the **Mediator Button** and choosing **Prepare | Properties**. When changing your document from Standard to HTML or Flash, you will however need to check that all the elements, objects, actions and other features that you have used in your project are indeed supported by the new document type. See "Document properties" for more information.

Creating a document of type Standard

When you choose to create a document of type Standard, the following dialog appears:
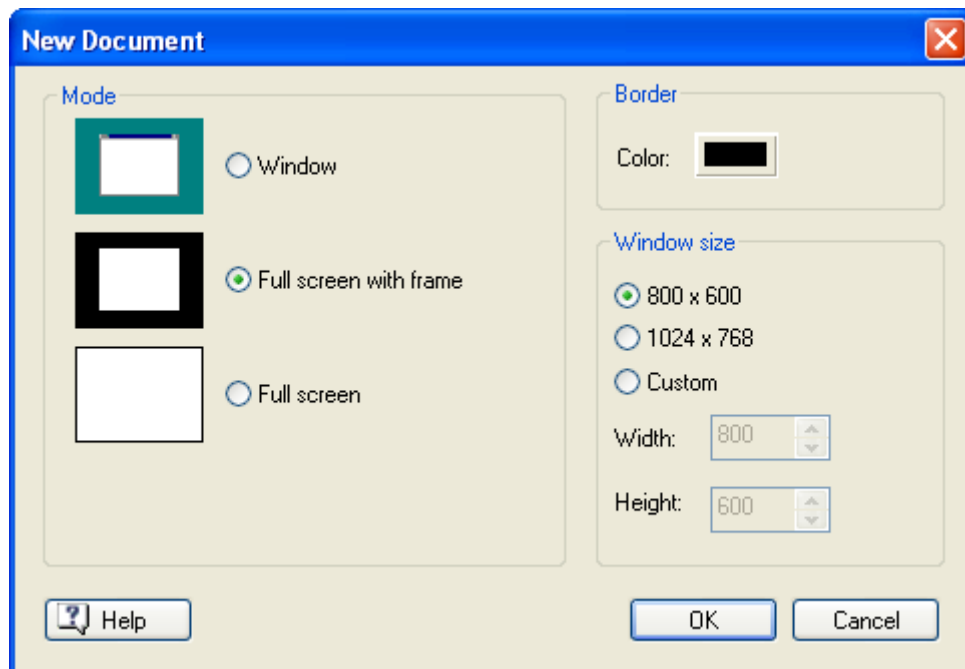
➢ Click one of the buttons on the left to select the document mode. This determines how your project is displayed when running on the end user computer, referred to in the description below as the "destination computer".

The selection you make in this dialog is only relevant when testing the project or viewing its exported version with the Mediator Viewer. In design mode, you always view the Mediator document in the Mediator workspace.

You can select a different document mode at any time during design (see "Document properties"), so your choice here is not critical.

- **Window**

In this mode, your project is displayed in a normal window on the destination computer. The end user can move the window anywhere on the desktop and even place it behind other windows.

It is not possible to change the color resolution, which is automatically adjusted to the color resolution on the destination computer.

You must use this document mode if you intend to use a custom shape window. See the topic "Custom shape window" for a full description of this feature.

- **Full screen with frame**

This mode is similar to the Window mode, except that the project is displayed in the middle of the screen with a border covering the rest of the desktop.

The 'Color' field on the top right of the dialog lets you choose the border color. The default color is black.

- **Full screen**

In this mode, the destination computer desktop disappears when the end user runs the project and its screen resolution changes to match the document size you specify in this dialog.

Some computers do not support application switching when running in Full screen mode. As this depends both on the operating system and the graphics card driver, it is not possible to determine in advance which ones will or will not support it.

You should therefore choose one of the other two document modes if you intend to use an action involving application switching, such as Web Link, Email, Execute, Open Doc or Open MD8 Doc.

➢ Select the document size required.

You can choose one of the standard sizes or the 'Custom' option to specify your own size.

If you have selected the 'Full screen' mode, you can choose the 'Custom' option but you must select a supported screen resolution.

You can also create irregular shapes by using a custom shape window. In that case, you should specify here the same size as that of the mask picture you intend to apply. For a full description of this feature, see the topic "Custom shape window".

You can resize the document later if necessary using **View | Document | Resize**. However, this is not recommended as document scaling is almost never 100% accurate.

➢ Click OK.

You are now ready to start designing your multimedia project.

Creating a document of type HTML or Flash

When you choose to create a HTML or Flash document, the following dialog appears:
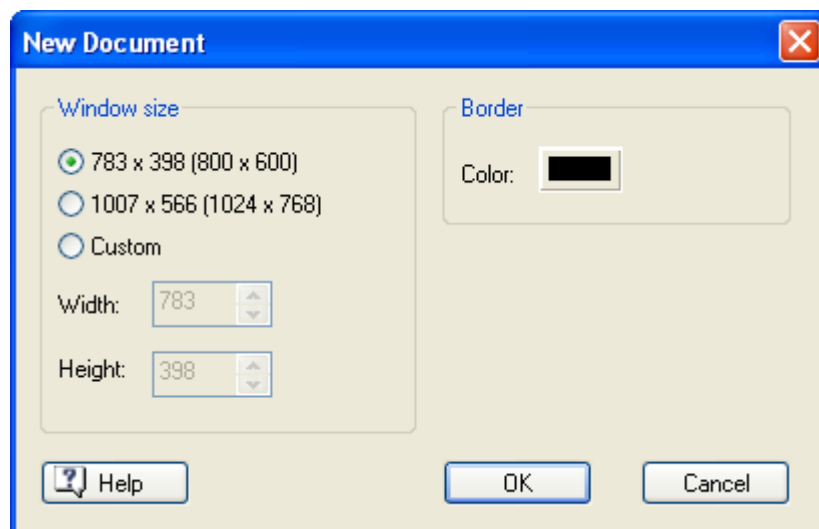
➢ Select the document size required.

You can choose either one of the two standard sizes or the 'Custom' option to specify your own size.

The sizes available are slightly smaller than the standard sizes, to account for the space taken by the toolbars and scroll bars of the Internet browser used to view the exported project.

These document sizes will allow the end user to see the whole page without any scrolling.

If you intend to export your project to HTML and need more space vertically, you have two choices:

- If you need the same amount of additional vertical space on all your pages, just enter the required document height here.

- If you need more vertical space on some pages only, you can set their height via their Properties dialog by entering a higher value in the 'Height' property. See "Page properties: General tab" for more information on this property. You can also do this simply by dragging the bottom edge of the page downwards to the required size at any time during the design phase.

If you intend to export to Flash, you can also create a banner by entering one of the common banner resolutions below:

- Large banner: 468 x 60

- Small banner: 250 x 60

- Pop-up window 1: 400 x 250

- Pop-up window 2: 400 x 400

You can also resize the overall document after its creation with **View | Document | Resize**.

➢ Click the 'Color' field on the top right of the dialog to choose a background color for the browser window.

You can change this color later on in the Screen tab of the Document properties dialog (see "Document properties").

➢ Click OK.

You are now ready to design your web project.

Saving a document

Mediator documents are saved as md8 files.

To save a document:

➢ Click the **Mediator Button**.

You can now choose either:

- **Save** to save your document under its existing name and continue working in Mediator.

- **Save As** to save your document under a different name. This is also a way of creating a copy of your document.

*To save your document, you can also click the **Save** icon in the Quick Access Toolbar or press **Ctrl + S**.*

By default, the previous version of your document is automatically saved as a .bak file. To disable automatic backups, uncheck 'Create backup of document files' in the Mediator Options dialog.

Once you have saved your document, Mediator helps you to keep track of all the files (pictures, sounds, videos and so on) that you add to it from external drives. If for instance you use a picture file from a CD-ROM, another external device or the Internet, Mediator asks you as soon as you insert the picture if you want to copy the picture file to the project folder (i.e. the folder containing your .md8 document). This ensures that all the files you use in your project are always available from your hard drive.

Recovering a backup file (*.bak)

If you save a document after having made some changes which you wish you had not made, you can restore the previous version of the document as follows:

➢ Click the **Mediator Button** and choose **Open**.

➢ Browse to the folder containing your Mediator document and enter the file name *.* in the Open dialog to view the list of all the files contained in that folder.

➢ Select the *filename*.bak file, where *filename* is the name of your Mediator document and click Open.

➢ Click the **Mediator Button** and choose **Save As** to save the .bak file under its original .md8 name to overwrite the incorrect version of the document.

Auto-recovery

By default, a temporary copy of your document is also saved automatically at regular intervals to allow auto-recovery in the event of a program failure. To disable automatic saving of auto-recovery information, uncheck 'Save auto-recovery info' in the Mediator Options dialog.

This feature is only available if your document has been saved at least once.

When auto-recovery is enabled, a temporary copy of your document is made as follows:

- At the frequency specified in the Mediator Options dialog

- Just before entering test mode when you use one of the options of the Test group in the Review tab

In the event of a program failure during testing, this gives Mediator the possibility of recovering the last changes you made before testing, even if you had not saved the document. The first time you start Mediator after the forced exit, Mediator asks you whether you want to auto-recover the last changes you made or ignore them.

Opening a document

To open a document:

➢ Click the **Mediator Button**.

➢ Choose **Open**.

*You can also press **Ctrl + O**.*

Mediator also lets you open documents in multi-user mode. For more information, see "Using multi-user mode".

Converting Mediator documents from previous versions

Mediator 9 can convert documents created with Mediator 7 or Mediator 8.

Important: Before un-installing the previous version of Mediator and converting your existing documents to Mediator 9, you should create a "Copy to Folder" distribution of these documents by choosing **File | Create Distribution Files | Copy to Folder** in the version of Mediator you used to create them (Mediator 7 or 8). This will ensure that all the resources used in your project will be copied from their various locations and placed in your project folder (i.e. the folder containing your .md8 document). This is particularly important if you have used Mediator resources in your project, such as resources from the Multimedia Catalog, since their path may not be the same in Mediator 9.

Note that the Keywords list (extension .KIX) and the Text search list (extension .SIX) maintained by Mediator 7 and Mediator 8 in the project folder alongside the main Mediator file (the .md8 document) are now embedded in the .md8 document itself by Mediator 9.

➢ To convert a Mediator 7 or Mediator 8 document to Mediator 9, just open it in Mediator 9.

Media Player objects in Mediator 7 documents

Since Mediator 8, Mediator requires Media Player 9 or above to play Media Player objects, although it will use the latest version of Media Player found on the computer.

In Media Player 9, all the properties that related to the user interface of the Player in earlier versions have been replaced by a single property called "uiMode". This new property can take the following values:

- **None:** The Player is shown without any controls. The only visible element is the video window itself.

- **Mini:** In addition to the video window, the Player is shown with a status window, as well as Play/Pause, Stop, Mute and Volume controls.

- **Full:** This is the default setting. In addition to the video window, the Player is shown with a status window, a seek bar, and Play/Pause, Stop, Previous, Next, Mute, Fast Forward, Fast Reverse and Volume controls.

When converting Media Player objects from Mediator 7 documents, Mediator 9 sets the new 'uiMode' property to 'None' by default. However:

- If the Mediator 7 'Show controls' property was set, 'uiMode' is set to 'Mini'.

- If the Mediator 7 'Show tracker' property was set, 'uiMode' is set to 'Full'.

Document properties

You can display and edit the properties of a Mediator document at any time as follows:

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Properties**.

The Document Properties dialog is made up of several tabs.

General tab
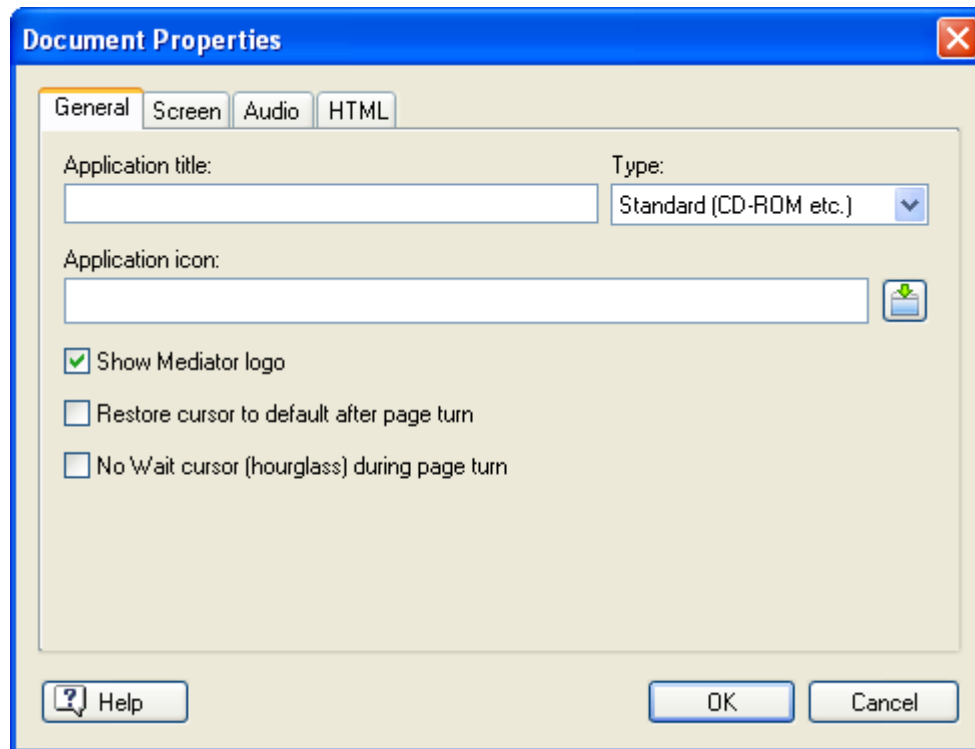
Application title: You can use this field to give a title to your project (distinct from the file name).

This is shown on the title bar of the Mediator Viewer window (for documents of type Standard) or the browser window (for documents of type HTML or Flash).

Type: This field lets you change the document type you chose when creating the document so that you can have access to different export formats.

You can choose between:

- **Standard** to create a multimedia presentation to be stored on CD-ROM or other removable storage medium (DVD-ROM, USB stick etc.)

- **HTML** to create an HTML web site or HTML presentation

- **Flash** to create a Flash banner or Flash web site

Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose here, and only shows the features, options and export formats that are relevant to it. Projects of type HTML or Flash do not have as many tools, effects, events and actions available as projects of type Standard. When changing your document from Standard to HTML or Flash, Mediator displays a message advising you to check that all the elements, objects, actions and other features used in your project are indeed supported by these formats.

Whenever possible, Mediator informs you of any such compatibility problems during export.

Please refer to the topic "Mediator 9 feature list" for a complete list of all objects, events and actions available in Mediator for each document type. For a list of the restrictions applicable to HTML and Flash documents, see "HTML restrictions" and "Flash restrictions".

Application icon: Click the Browse button 📥 to access the Open dialog and select the desired icon file. The icon you select is placed on the left of the title bar (for documents of type Standard) or the browser window (for documents of type HTML or Flash). It will also appear next to the name of the HTML page when bookmarking it in the list of Favorites.

Show Mediator logo: A Mediator logo appears at the end of your project at runtime (or at the bottom of the page in the case of HTML projects). If you do not want to include the logo in your project, remove the checkmark.

Restore cursor to default after page turn: Checking this option ensures that the standard pointer is displayed after each page turn, even if you have used the Set Cursor action to specify a different cursor shape on the previous page and have not reset the cursor before leaving the page. This option is only available for documents of type Standard.

No Wait cursor during page turn: Check this option if you do not want the Wait cursor to appear while Mediator goes from one page to the next. This option is only available for documents of type Standard.

Screen tab

Apart from the 'Custom shape window' field, this tab is identical to the dialog that appears when you create a new document of type Standard. This dialog is described in the topic "Creating a document".
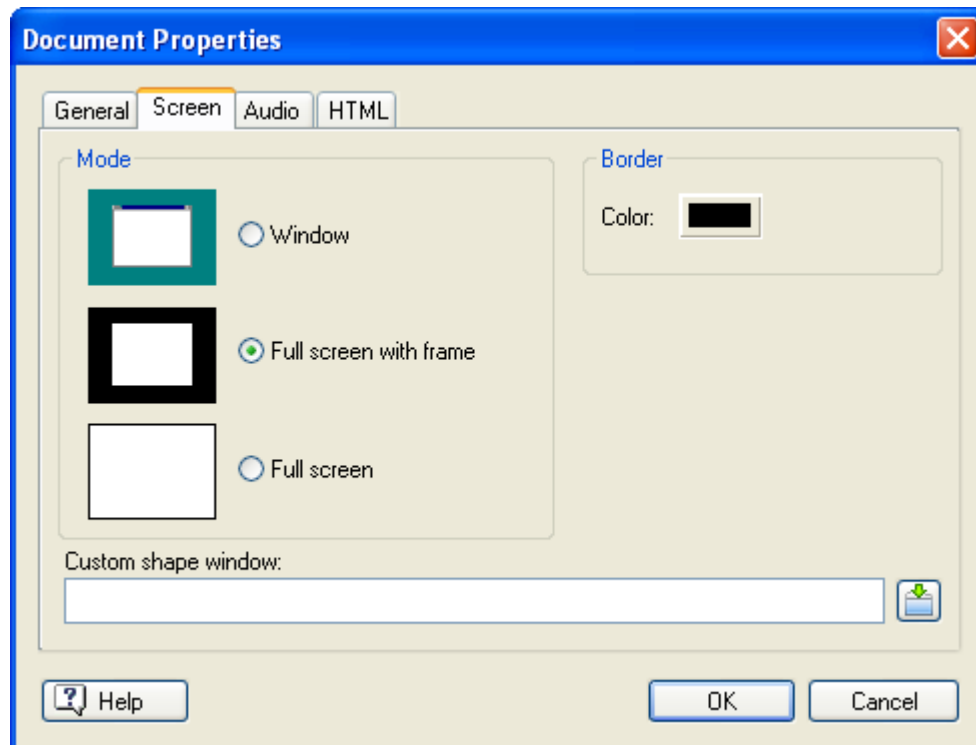
Custom shape window: This feature allows you to create non-rectangular projects, not just circular or triangular, but using any irregular shape you can think of.

This is done by applying a mask that defines the areas of the project window to be shown. You can only apply masks to projects running in Window mode (i.e. not 'Full screen' or 'Full screen with frame').

For a full description of this feature, refer to the topic "Custom shape window".

Audio tab

This tab is only available for documents of type Standard.
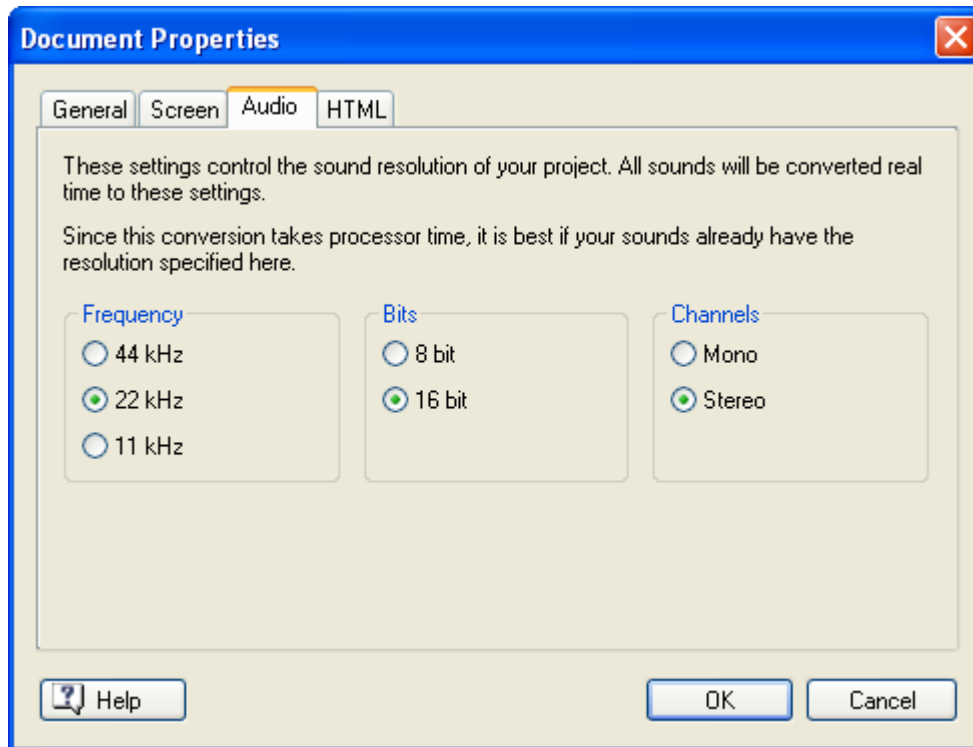
If your Mediator project contains several sounds using different resolution settings, they will all be converted to the same resolution. The resolution used is the one you specify here.

When choosing this sound resolution, bear in mind the following points:

- Since all the sounds will be played at the resolution shown here, make sure you choose a resolution that gives the desired sound quality.

- Because the conversion of the sound resolution to the settings chosen here takes processor time, you can improve overall performance significantly if all or most of your sounds are already set to this resolution.

HTML tab
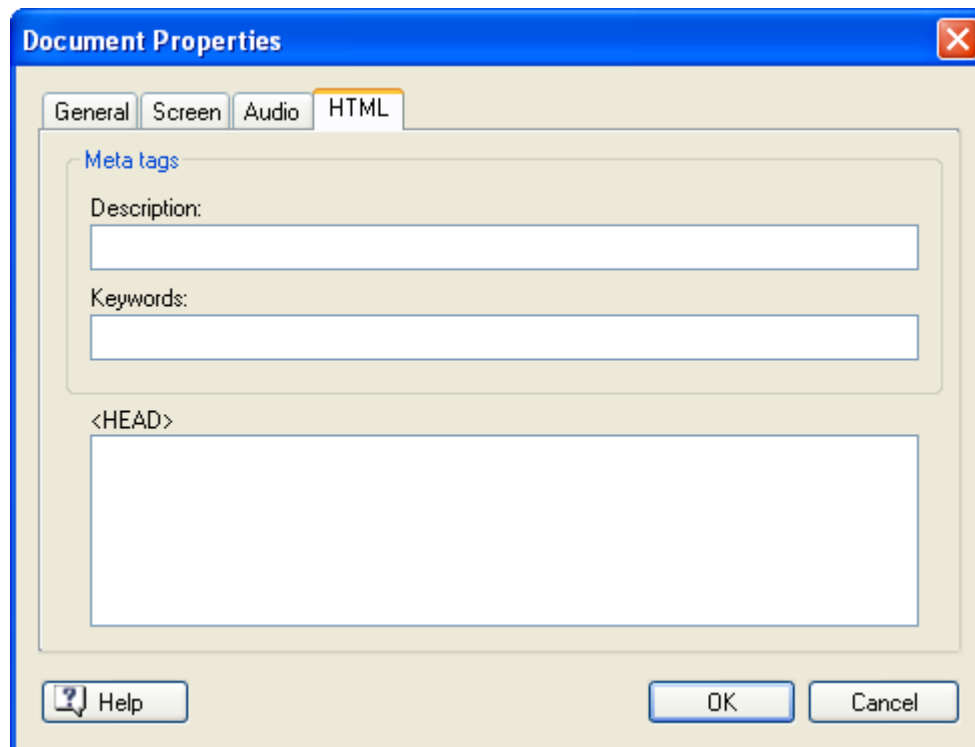
This tab is only relevant for projects that you intend to export to HTML or Flash. It allows you to enter a description and/or keywords relating to your entire project, which are inserted in the corresponding meta-tags on the main HTML page generated during export.

Keywords should be separated by commas or semi-colons.

- When exporting to HTML, the description and keywords are placed in the index.htm file generated.

- When exporting to Flash, they are placed in the main.htm file.

You can also insert HTML code directly into the Mediator project by pasting it in the <HEAD> field. The code will be inserted in the <HEAD> section of the main html pages (index.htm and default.htm), after the HTML code created by Mediator.

Note however that although Mediator validates all the HTML code it generates according to the W3C HTML 4.01 standard, this does not apply to code you insert here. It is therefore your responsibility to ensure that it is valid.

Custom shape window

Advanced

Most multimedia authoring tools only let you create rectangular projects. Mediator, however, allows you to create not only custom-sized windows and projects with full screen scaling, but also projects in irregular shapes.

This does not mean just circular or triangular projects, but any shape you can think of, with user-defined transparent areas.

Here are examples of three different custom-shaped project windows:

- one window shaped as a country (Egypt),

- one shaped as a book,

- one shaped as a CD with a transparent hole in the middle.
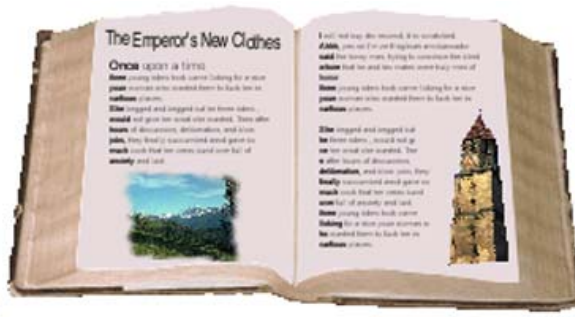
The project window is actually still rectangular, but by applying a mask to it, you can define the area(s) of the window you wish to show.

You can only use apply masks to documents of type Standard, running in Window mode (i.e. not 'Full screen' or 'Full screen with frame'). For more information on document types and document modes, see "Creating a document".

A mask is a 3-color picture which must use only these exact three colors:

Black   (RGB 0,0,0)

White   (RGB 255, 255, 255)

Red   (RGB, 255, 0, 0)

- Wherever the picture is black, the window becomes transparent.

- Wherever the picture is white, the window remains visible.

- Red areas can be used to drag the window.

The mask used to create the Egypt project window shown above looks like this:

This picture used as mask is not itself visible to the end user, but determines which part of the project window is visible.

Here the part of the project window covered by the black area outside the country shape is not shown. The rest of the project window is shown. The red border defines the area of the project window that the end user can click to drag the project window around the screen.

The mask picture must have exactly the same resolution as the project window. If your project window is 800x600 pixels, the mask picture must therefore also be 800x600.

You are advised to use the picture formats PNG or GIF, since they give the best compression and keep the original colors (unlike JPG).

Applying a mask

To apply a mask to a project, you must of course specify the mask picture you want to use.

You can make the mask picture yourself using a picture editing program or select one of the masks included in the folder "Custom Shapes" of the Mediator program folder.

You are free to edit or resize any of the masks that you find in this folder.

In the following we are going to use the Egypt mask shown above as an example.

➢ Create a new Mediator document of type Standard.

➢ Select the document mode 'Window'.

➢ Select a window size identical to the size of your mask picture.

Since the Egypt mask picture is 800x600 pixels, the window size must be set to 800x600.

Often you will do the opposite, e.g. start by defining your project, then design the mark picture accordingly.

A blank page appears.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Properties**.

➢ Click the **Screen** tab.

➢ Select the file "egypt 800 600.png" in the field 'Custom shape window'.
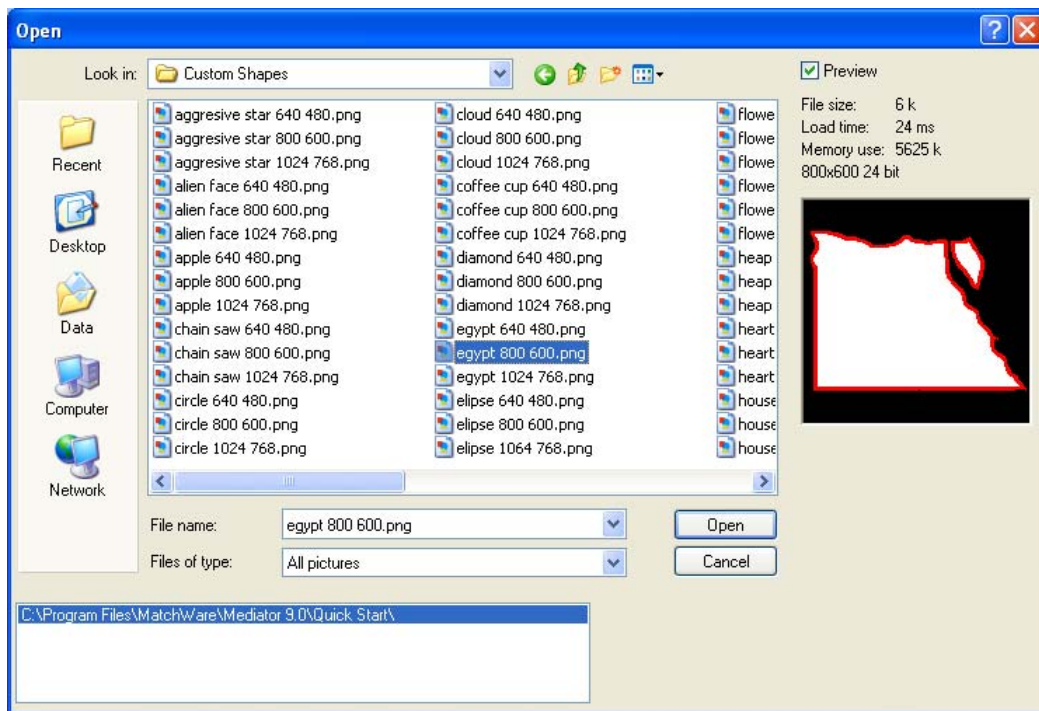
➢ Click OK.

The mask is applied to the window.

You can now design your pages as usual. Objects and parts of objects located in the invisible area are not shown in the workspace, but you can still access them in the Object list.

Objects located in the drag area (the red-colored part of the mask picture) will not accessible to the end user. Therefore make sure you do not place objects containing actions in this area.

Printing a document

To print a screenshot of each page of the project as it looks in design mode, do as follows:

➢ Click the **Mediator Button**.

➢ Choose **Print**.

The following dialog appears:
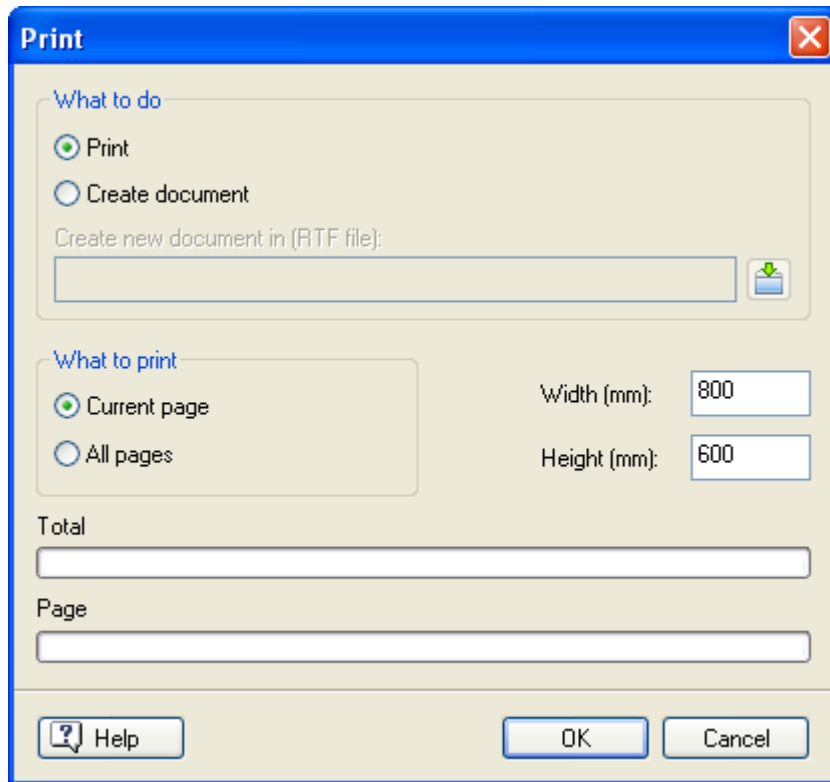
You can choose to print to a printer or to a file.

Printing to a file lets you document your project by adding comments or perhaps a logo.

• Click **Print** to print directly to the printer.

• Click **Create document** to print to an RTF file.

Create new document in: If you have chosen to print to a file, enter the path name of the file to print to in this field or click the Browse button to select it.

The next group of options lets you choose whether to print the current page only or all the pages of your project.

If you select to print the whole project, each Mediator page is printed on a separate page.

Width: Allows you to set the width of the screenshot of the Mediator page to be printed.

Height: Allows you to set the height of the screenshot of the Mediator page to be printed.

Mediator uses the **Total** and **Page** fields to show you the progression of the printing operation.

You can also print text files and pictures from within a Mediator project at runtime by using the Open Doc, Execute or Report actions. See "Printing text and pictures" and "Report" for more information.

You will find a ready-made Print Page combination using Report and Open Doc in the User tab of the Events dialog.

Setting a password

Mediator lets you add a password to your document. Password-protected projects can be viewed, but not edited unless you enter the proper password.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Set Password**.

The Set Password dialog appears.
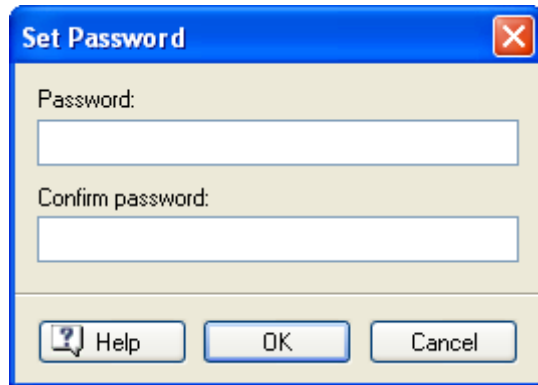
➢ Enter the password in the top field.

➢ Click the bottom field and enter exactly the same password. Confirm by clicking OK.

From now on, Mediator will ask you to enter the password every time you open the document.

• To change the password, enter a new password in this dialog.

• To remove the password, leave both fields empty and save the document.

Do not lose your password! It is not possible to edit a password-protected Mediator document without entering the correct password.

Do not set a password before you really need to. If you only want to prevent the users of the exported version of your project to access it, set the password just before exporting it. It is also advisable to keep a non password-protected version for your own usage.

Merging documents

Mediator allows you to join together two or more projects. This allows several people within a company to work on different parts of the same project or students to prepare individual projects that will eventually be merged.

If you are working in a networked environment with access to shared folders, it might be easier to use Mediator's multi-user mode. This allows several users to work concurrently on the same project. For more information, see the section "Using multi-user mode".

➢ Open the main project.

➢ Click the **Mediator Button**.

➢ Choose **Merge**.

An Open dialog appears.

➢ Select the project you wish to merge into the main project.

➢ Click **Open** to begin the merge operation.

Mediator merges the two projects and places the pages of the second project after the pages of the main project in its Page list. The merged pages will adopt the document type of the main project (e.g. Standard, HTML or Flash).

See the topic "Creating a document" for more information on the different document types.

Merge restrictions

Before merging two projects, Mediator performs several checks to ensure that they are compatible with each other.

The merge operation is aborted if one of the following problems is encountered:

- The two projects have different sizes.

- The two projects use global variables that have identical names.

A dialog will appear to tell you what the problem is.

You should also take the following points into consideration before merging projects:

- Do the projects have the same document type (e.g. Standard, HTML or Flash)?

   If not, the properties of the project being merged (including its document type) will be modified to match that of the main project. This means that any objects or features in the project being merged that are not supported in the main project are deleted.

- Do the projects have pages with identical names?

   If so the page names of the project being merged are automatically renamed, and all page links updated accordingly.
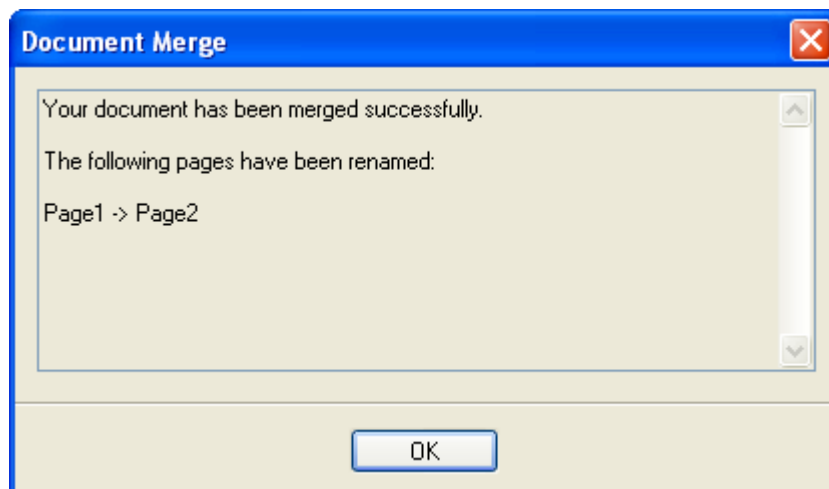
- Do the two projects use different custom shape windows?

   If so the mask of the project being merged is changed to match that of the main project.

   See the topic "Custom shape window" for more information on that feature.

Using multi-user mode

Mediator's multi-user mode allows several users sharing a network to work concurrently on the same project. If you are working in a team, you can for instance allocate different pages of your project to different team members, so that the project is created by the whole team simultaneously, each member working on their own specific area.

To prevent users from overwriting each other's work when working in multi-user mode, Mediator enforces a system of locks. Whenever for instance a user starts editing a page, Mediator prohibits any other user from working on that page. The page can however still be viewed by all users. Similarly, although all users are allowed to make changes affecting the entire document, only one of them can make such changes at any one time.

When working in multi-user mode, it is helpful to display the **Multi-User Status** window, which is continuously updated to reflect all the accesses made to the document by its concurrent users, giving their user name and computer name.

➢ Choose **View | Show/Hide | Multi-User Status**.
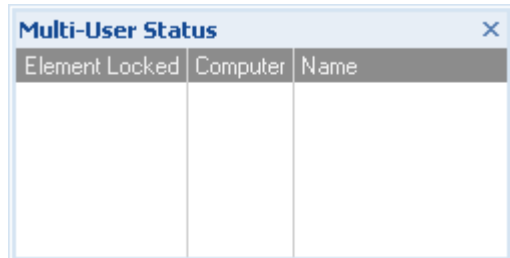
💡 *You can resize, dock and undock the Multi-User Status window according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.*

Opening a document in multi-user mode

Any Mediator document can be opened in multi-user mode, provided that the conditions below are met:

- The document is hosted on a shared network folder accessible to all the potential users.

- The users have read and write access rights both to the document and to the folder containing it.

- The document it is not already opened in single-user mode by any of the users.

Conversely, it is not possible to open in single-user mode a document already opened in multi-user mode by another user.

To open a document in multi-user mode:

➢ Click the **Mediator Button**.

➢ Choose **Open as Multi-User**.

🔵 If you open a document that you last saved in multi-user mode by any other method (e.g. by choosing Open, by pressing Ctrl + O or by clicking the file name in the 'Recent Documents' list), Mediator displays a message asking you whether you want to open that file in single or multi-user mode.

As soon as you open a document in multi-user mode, Mediator creates a temporary folder with extension '.multiuser' in the shared network folder containing the document. This temporary '.multiuser' folder contains system files essential to the workings of the multi-user mode. **Do not** delete the multiuser folder under any circumstances.

A document accessed in multi-user mode is no different from any other Mediator document. As soon as all concurrent users of the document have closed it, it can be re-opened by any one user in single-user mode as normal.

Creating a document for multi-user mode

If you are creating a new document on a shared folder, and want other users to be able to work on it simultaneously, you must save and close the document after creating it, and then re-open it in multi-user mode. This enables the other users to open the file in multi-user mode.

Saving a document in multi-user mode

There is a fundamental difference in the way documents are saved in multi-user mode as compared to single-user mode.

Whereas it is up to the user to save the document whenever he or she decides to do so in single-user mode, in multi-user mode the document is saved automatically every time any of the concurrent users makes a change to it. Individual users are no longer able to save the document themselves and the Save command is actually disabled.

Working in multi-user mode

Apart from some operations affecting the whole document, most of the Mediator features are available in multi-user mode. The operations that are disabled in multi-user mode are listed under "Restrictions" below.

Operations on a single page

As soon as a user of the document starts working on a particular page, that page becomes locked, thereby preventing any of the other concurrent users from making any changes to it.

This is denoted by the presence of a Lock icon next to the page in question in the Page list.

Moving the mouse over the Lock icon gives the user name and computer name of the current "owner" of the lock.
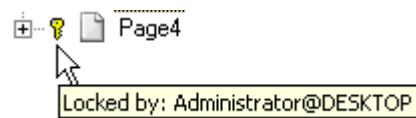
Any user trying to make changes to a locked page will receive a message indicating that the page is locked and giving the user name and computer name of the owner of the lock.

A locked page can still be viewed by all users, although any changes made by the owner of the lock are not visible to the other users until the owner leaves the page, thereby releasing the lock.

Also bear in mind the following points that apply to multi-user mode:

- Every time you integrate a file into your project, for instance by creating a picture object or a video object, Mediator displays a message asking you whether you want to copy this file into the project folder on the network. Choosing Yes ensures that the object will be visible and accessible to all the other concurrent users.

  It is still your responsibility to ensure that any other external data files you use, such as files referred to by the Embedded Document object, are stored in a shared location accessible to all the other users. You also need to make sure that Mediator will include such files when creating the exported version of your project. See "Adding data and program files" for more information.

  You are advised to always copy all such external files in the shared network folder containing the project.

- Every time a user makes a change which affects the page list, the display of the page list is refreshed on all computers accessing the document, showing the list as it appears to the user having made the change. This means that the pages and sub-pages you have expanded may become collapsed, and vice-versa. You may need to expand or collapse again the various pages and sub-pages as needed.

- You cannot delete a page containing sub-pages in multi-user mode, even if none of these sub-pages are locked.

- Although you can still rename a page using the Rename command, you cannot rename a page by slowly double-clicking its name in the Page list in multi-user mode.

Operations on multiple pages

In single-user mode, Mediator lets you use the Properties dialog to change the properties of several pages simultaneously by selecting all the relevant pages first. Only the fields that are common to all the pages selected are then shown in the Properties dialog. This is convenient if you wish for instance to change the color of several pages in one go, apply a master page to several pages and so on.

This operation is still possible in multi-user mode. If however some of the pages selected are locked, you will receive a message to that effect for each of the locked pages, and the change will not be made on those pages.

Note also that if you select a bottom or top master page by entering the name of the master page rather than by using the Browse button when one of the pages selected is locked, you will receive a message about the lock every time you enter a character of the master page name.

Operations on the document

It is not possible for two different users to perform simultaneously operations that affect the entire document, such as:

- Accessing the document properties with Prepare | Properties

- Accessing the Variables dialog with Page | Programming | Variables or View | Programming | Variables

- Accessing the Additional Files dialog with Prepare | Additional Data Files or Prepare | Additional Program Files

Any user trying to access one of these commands at the same time as another user will receive a message indicating that the document is locked and giving the user name and computer name of the owner of the lock.

Restrictions

As mentioned above, some of the operations affecting the entire document can only be performed in single-user mode.

These operations, which are disabled in the relevant tabs and menus, include the following:

- Merging projects

- Setting a password on the document

- Exporting

- Resizing the document

- Using the Search Manager

Note also that any guides set in multi-user mode are not saved when working in multi-user mode. See the topic "Using the guides" for more information on this feature.

Working with objects

Creating objects

The **Insert** tab contains all the objects that you can insert in your project.

The choice of objects available depend on the type of your document, e.g. **Standard**, **HTML** or **Flash**.

The document type is normally defined when you create the document, but you can choose a different document type at any time later by clicking the **Mediator Button** and choosing **Prepare | Properties**. For more information, see "Document properties".

Most of the objects can be inserted using the same procedure:

➢ Click the desired object in the Insert tab. When you move the mouse pointer away from the tab, you can see that the corresponding tool has been activated. For instance when you click the Rectangle icon the mouse pointer changes to a rectangle.

➢ Move the mouse pointer into the workspace and drag out a rectangular frame of the desired size at the position where you want to place your new object (you can change both the size and position later).

   To "drag out" an object, place the mouse pointer at the point where you would like your object's top left corner to be. Click and hold down the left mouse button while moving the mouse toward the bottom right corner and let go of the mouse button when you are satisfied with the size of your object.

For some objects, this is all you need to do to. Others need additional input from you. Pictures and videos for instance require you to specify a file name: as soon as you let go of the mouse button, an Open dialog appears which lets you browse and select a file on your computer.

As soon as you have placed the object, a **Format** tab specific to the object opens at the right of the ribbon to let you see and modify the object properties.

Here is for example the Format tab of the Headline object.

Once the object is created, the mouse pointer returns to its standard selection shape, letting you create another object or select an existing object. You can also return the pointer to its standard selection shape at any time by choosing **Home | Editing | Select Object**.

If you need to create several objects of the same type, press and hold the Shift key down while clicking the object icon in the Insert tab and positioning the object. This lets you create a series of objects with the same default properties, which you can then customize individually if necessary. Release the Shift key before creating the last object or choose Home | Select Object to return the pointer to its standard selection shape.

You will find a detailed description of the creation process of each object and a full list of their properties in the Reference section of this documentation, under "Objects".

Handling objects

There are many operations that can be performed on objects. Some can be performed on all objects, others are specific to particular objects. This topic and the other topics of this section describe basic operations that can be performed on all objects.

You will find a detailed description of each object and all their properties in the Reference section of this documentation, under "Objects".

The first thing to do before you can manipulate an object is to select it.

Selecting an object

➢   To select an object, just click it once.

Notes:

*   This assumes that the mouse pointer is in its standard selection mode, identified by the pointer shape ⬚ . To return the pointer to this shape if necessary, choose **Home | Select Object**.

*   Objects with transparent areas only react when you click their visible areas.

Selecting several objects

You can select several objects in different ways:

*   Hold down the **Ctrl** key while clicking all the objects you want to select.

*   Draw a frame around the objects with the mouse. This will select all the objects that are entirely contained within the frame.

*   Choose **Home | Editing | Select All** (or press **Ctrl + A**) to select all the objects contained on the page.

Selecting objects in the Object list

Sometimes you will find that an object cannot be selected on the page. This is because objects can be placed on top of each other making it very difficult to select the lower objects. You can solve this problem by selecting them in the Object list.

➢   If the Object list is not open, choose **View | Show/Hide | Object List** or press **F4**.

The Object list also makes it easier to select several objects and secondary objects such as hypertext objects. Refer to the topic "Using the Object list" for more information.

Deselecting objects

*   If one object only is selected, click another object or click the workspace to deselect it.

*   If several objects are selected, simply click the object you want to deselect.

Deleting an object

➢   To delete an object from the page, select it and choose **Home | Editing | Delete Object** or press the **Delete** key.

Copying and pasting an object

➢   To copy an object (including size, position, colors, events and actions), select it and choose **Home | Clipboard | Copy** (or press **Ctrl + C**).

➢   To paste it back on the same page or a different page, choose **Home | Clipboard | Paste** (or press **Ctrl + V**).

Duplicating an object

➢   To create an object identical to the selected object (including size, position, colors, events and actions), choose **Home | Clipboard | Duplicate** (or press **Ctrl + D**).

Editing an object

Once you have created an object, you may need to modify its contents. To do this, just double-click the object. This will let you for instance:

*   Choose a different picture in a picture object or a different video in a video object.

*   Edit the text of a text object, a headline or a button.

*   Change the shape of a polygon, an animation path or a drawing object.

Object properties

Objects also have specific properties which you can view and edit.

As soon as you select a particular object, a Format tab specific to the object appears at the right of the ribbon. Clicking this tab lets you see and modify its most important properties.

Here is for example the Format tab of the Headline object.

When several objects are selected, only the properties that are common to all these objects are available.

Each object also has a Properties dialog, which lets you view and fine-tune all the properties applicable to the object. If the Properties dialog is not open, you can open it by one of the following methods:

- Choose **View | Show/Hide | Properties**, or

- Right-click the object and choose **Properties** in its local menu, or

- Press **F12**.
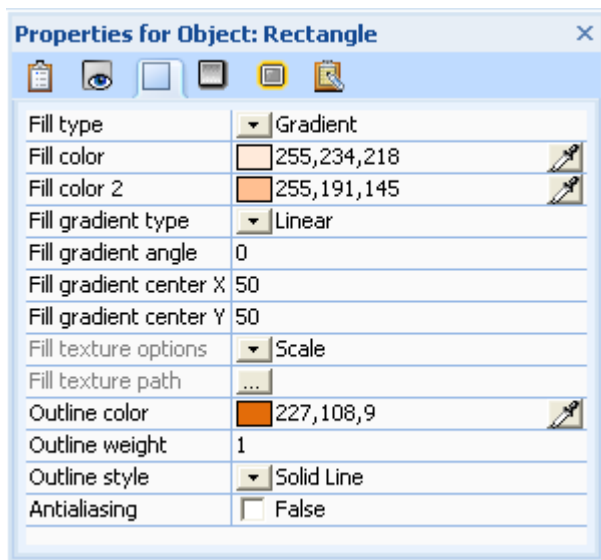
You can resize, dock and undock the Properties dialog according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.

The Properties dialog always refers to the currently selected object. If no object is selected the Properties dialog refers to the current page.

You will find a detailed description of each object and all their properties in the Reference section of this documentation, under "Objects".

Creating interactivity

To find out how to make your objects interactive, see the topic "Using events and actions".

Showing and hiding an object

You can decide whether a particular object should initially be visible or hidden. Hiding an object can be useful if you only want it to appear once a particular event (such as a mouse click) has occurred on another object. You can hide an object in several ways:

- Uncheck **Show Object** in its local menu, or

- Uncheck **Visible** in the General tab of its Properties dialog, or

- Press **F3**.

All these methods are equivalent.
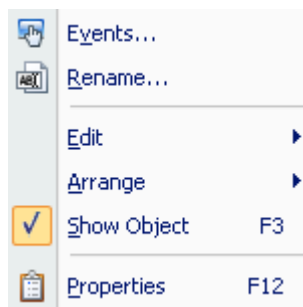
Important: Hidden objects cannot react to events. Do not confuse transparent objects and hidden objects. They are both invisible, but transparent objects (often used as hotspots) are still able to react to events whereas hidden objects cannot.

Defining a default object

If you want to create many objects with similar or identical properties, you can save a lot of work by defining the first one you create as the default for this particular type of object (e.g. a button, a picture, a text object, etc.). This means that the next time you create an object of this type it will inherit all the properties of the object you defined as default, including *all its events and actions*.

To define a particular object as default for this type of object:

➢ Right-click the object and choose **Edit | Define as Default Object** in its local menu.

Example: You have created a blue button with yellow text that goes to the next page. If you define it as default, all the buttons you create from now on will have the same color, text and functionality as this button.

Using the Object list

 The Object list is very important. It gives you a complete overview of all the objects you have placed on the page.

If the Object list is not open, you can open it by one of the following methods:

- Choose **View | Show/Hide | Object List**, or

- Press **F4**.
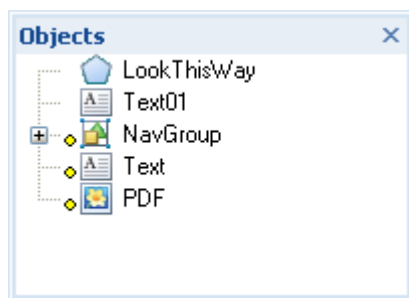
You can resize, dock and undock the Object list according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.

Each object is listed by name and represented by the same icon as in the Insert tab. The Object list also reflects the order in which the objects have been placed on the page.

- A yellow dot next to an object name means that events and actions have been defined for the object.

- A green dot next to an object name means that notes have been entered for this object in the Notes tab of its Properties dialog.

Selecting an object

Sometimes you will find that an object cannot be selected on the page. This is because objects can be placed on top of each other making it very difficult to select one of the lower objects. You can solve this problem by selecting them in the Object list.

➢   To select an object in the Object list, just click it.

Selecting several objects

The Object list often provides you with a better overview when you want to select several objects.

The way you select several objects in Mediator is the same as in Windows:

➢   Click the first object, then press and hold down the **Ctrl** key while clicking the other objects one by one.

Each of the objects you click becomes highlighted to indicate that it is selected.

You can also select a range of objects:

➢   Click the first object, then press and hold down the **Shift** key while clicking the last object in the range you want to select.

All the objects listed between the first and the last object become selected.

Deselecting objects

➢   To deselect one or more objects simply click them again while holding down the **Ctrl** key.

Selecting grouped objects

Grouped objects are identified in the Object list with a + sign as follows:

➢   Click the + sign to see the objects in the group.
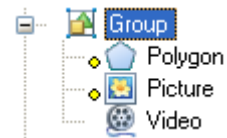
➢   Select the secondary object required.

This gives you access to its Properties dialog and Format tab. To access the local menu of a grouped object, you should right-click it in the Object list, not on the page, as this would display the local menu of the group.

Hotspots and hypertext objects are secondary objects attached to another object. Objects that have one or more hotspots or hypertext objects attached to them are also identified with a + sign as follows:

➢   To view the hotspots or hypertext objects in the Object list, click the + sign in front of the corresponding object.

See "Grouping objects" for more information on this topic.

Selecting locked objects

To fix an object in its current position, you can check the 'Lock' option in its Properties dialog. Once an object is locked, you cannot select it by clicking it on the page. The only way to select a locked object is to click it in the Object list.

To unlock a locked object select the object in the Object list and remove the 'Lock' checkmark in its Properties dialog.

See "Object properties: General tab" for more information on locking.

Arranging objects using the Object list

Objects are listed in the Object list according to the order in which you create them. The first object you create appears at the bottom of the list, the most recent object at the top.

The order of the objects in the list also reflects their level on the page. The object at the top of the list is placed in front of all other objects on the page (it is at the top level) whereas the object at the bottom of the list is placed behind all other objects on the page (it is at the bottom level).

You can move one or more objects to the back or to the front, one level back or one level forward with the Arrange commands. Refer to "Arranging objects" for more information on this procedure.

You can also simply click an object in the Object list and drag it to a different level by holding the left mouse button down. When you start dragging an object (or group) a black line appears in the Object list. This line indicates the position where the object will be dropped when you let go of the mouse button. As long as you hold the mouse button down, the black line follows the mouse movement.
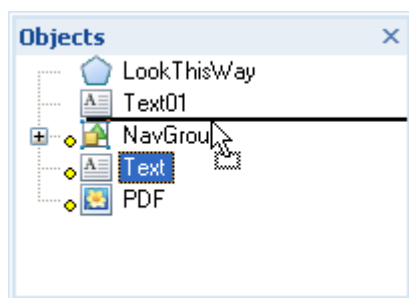
When you need to reorder several objects on the page, it is often much easier to use the Object list rather than the Arrange commands. Select as many objects as needed and drag them up or down in the list. The black line indicates the position where all the objects will be dropped.
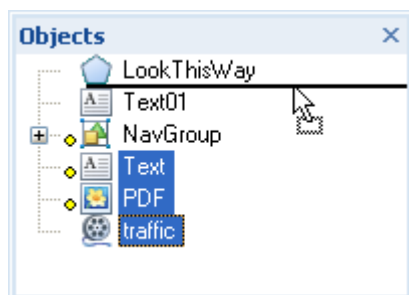
Renaming an object

You can rename an object in several ways:

• Right-click it and choose **Rename** in its local menu.

• Select it in the Object list and press **F2**.

• Select it in the Object list and click it again *slowly*.

Saving an object in the Multimedia Catalog

If you have created an object that you would like to re-use in other pages or future projects, you can save it in the Multimedia Catalog.

➢ Select the object or set of objects and drag them to the category of your choice in the User Area of the Multimedia Catalog.

The object is saved in the Multimedia Catalog with the extension .o8o which is specific to Mediator. You can drag it back from the Multimedia Catalog into your project at any time. See the section "The Multimedia Catalog" for more information.

You can also right-click the object and choose **Edit | Save in Multimedia Catalog**. In that case the object is placed in the root of the User Area.

Moving objects

You can move an object anywhere in the workspace simply by selecting it and dragging it to the desired location. As soon as you hold the mouse button down on the object, a hand appears to indicate that you can now grab and move the object.

- To move an object in one direction only, press and hold down the **Ctrl** key as you start dragging the object. The object movement will now be confined to the horizontal or vertical direction.

- You can also move an object with the keyboard. Select the object and use the arrow keys to move the object one pixel at a time. To move the object more quickly, hold down the **Shift** key. Instead of moving one pixel at a time, the object now moves by the number of pixels defined in the grid. For more information on the grid see "Using the grid".

You can also reposition an object more accurately by editing its X and Y coordinates, which correspond to its top left corner. You can do this in two ways:

- Using the fields of the **Position & Size** group in the **Format** tab
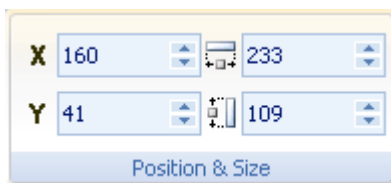
- Using the **General** tab of the **Properties** dialog
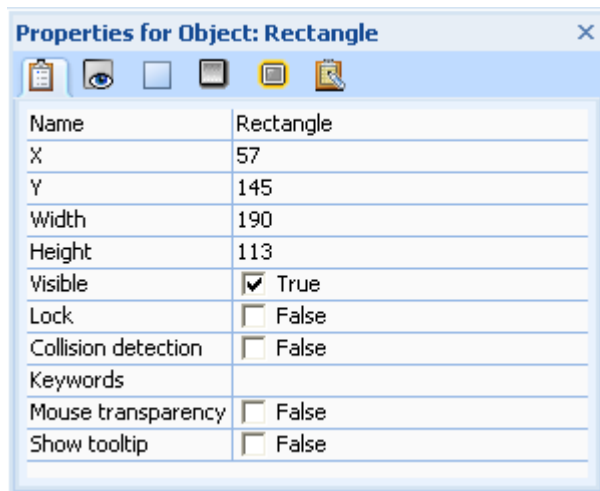
The coordinates (0,0) correspond to the top left corner of the page. The workspace is always three times wider and three times higher than the page. So if your page is 1024 pixels wide and 768 pixels high, the workspace will be 3072 pixels wide (i.e. 1024 x 3) and 2304 pixels high (i.e. 768 x 3). Its top left coordinates will be (-1024,-768) and its bottom right coordinates (2048, 1536).

You can also define vertical and horizontal guides to help you position and align your objects. See "Using the guides" for more information.

Resizing objects

The quickest way to resize an object is to select it and pull one of its eight handles (one in each corner and one on each edge):
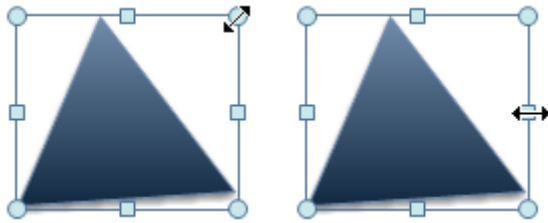
- To change the width or the height of the object, pull one of the edge handles.

- To resize the object proportionally (keeping the X/Y aspect ratio), pull one of the corner handles.

- To resize the object freely in both X and Y directions, press and hold down the **Ctrl** key while pulling one of the corner handles.

- To resize the object symmetrically in all directions, press and hold down the **Shift** key while pulling either a side or corner handle.

This only works on non rotated objects.

You can also resize the object accurately by editing its Width and Height values. You can do this in two ways:

- Using the fields of the **Position & Size** group in the **Format** tab
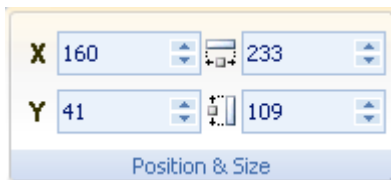
- Using the **General** tab of the **Properties** dialog
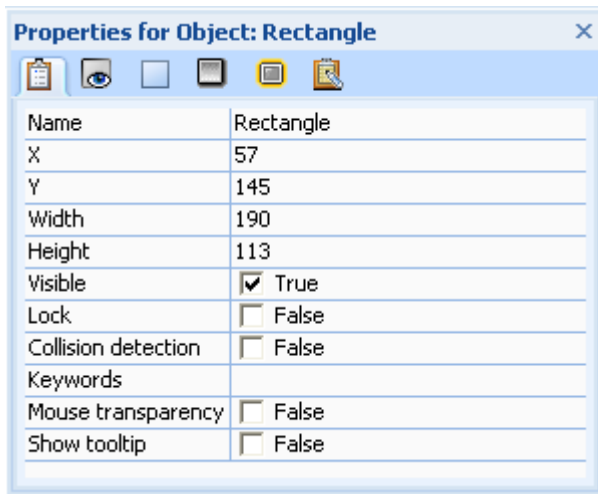
Rotating objects

Where applicable, Mediator lets you rotate objects after their creation.

Note that some objects cannot be rotated.

Mediator gives you several ways of rotating objects depending on the degree of precision you require.

Rotating an object using predefined rotations

➤   Select the object to be rotated.

➤   Click its **Format** tab at the right of the ribbon.

➢ Choose **Style | Effects | Rotate** and browse through the gallery of predefined rotations to check their effect on your object. To apply one of these rotations, just click it.

Rotating an object using the Rotate tool

➢ Select the object and choose **Home | Arrange | Rotate**.

A circle appears in the middle of the selected object and your mouse pointer changes to a rotation arrow ↻. The circle is your rotation center.
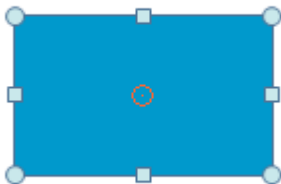
➢ Rotate the object around the rotation center by pressing the left mouse button while moving the mouse pointer in the required direction.

A tooltip appears to show you the degree of rotation so far.
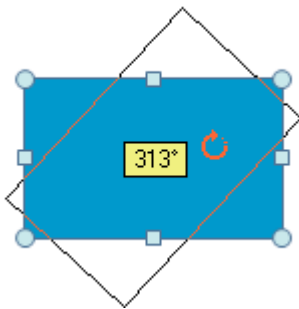
Rotating an object via its Properties dialog

You can also view and edit the degree of rotation accurately in the **Visibility** tab of the **Properties** dialog of the rotated object.

Rotate	313

To unrotate an object set the Rotate value to 0.

Moving the rotation center

If you want to rotate the object around a point (called the rotation center) other than the center of the object, you can move this rotation center as follows:

➢ Move the mouse pointer over the circle so that its shape changes to a cross ✥.

➢ Drag the rotation center to its new position.

The 'Rotate X center' and 'Rotate Y center' values of the Properties dialog tell you where the rotation center is placed in relation to the center of the object.

Rotate	313
Rotate X center	-2
Rotate Y center	84

To move the rotation center back to the exact center of the object enter 0 in both fields.

Grouping objects

Mediator lets you group objects together so that you can treat them as a single unit. Grouping is particularly useful for protecting and maintaining connections and distances between objects.

➢ To group several objects together, start by selecting the objects one by one while keeping the **Ctrl** key down.

➢ Choose **Home | Arrange | Group** or press **Ctrl + G**.

 The Group command is only active when you have selected two or more objects.

Once objects are grouped, they appear as a group in the Object list.

➢ To view the objects in the group click the + sign.

If you wish to add more objects to the group, simply drag them into the group within the Object list.

Notes:

- You can still edit objects that are part of a group. Select the object in the Object list (click the + sign to see the objects in the group, then click the object) to get access to its Format tab, Properties dialog and local menu.

- You can also show, hide or animate a grouped object, as well as apply events and actions to it.

- To select an object within a group when applying an action, click the + sign for the group in the action's object list and select the object.

- Groups cannot be resized. If you need to resize a group, you can use the following workaround: copy the group, paste it in a new document, resize this new document with View | Document | Resize (checking the 'Resize objects' option) and copy the group back into the original document.

 To quickly select a grouped object, press and hold the Ctrl key, then click the object on the page.

Ungrouping objects

➢ Select the group.

➢ Choose **Home | Arrange | Ungroup** or press **Ctrl + U**.

 The Ungroup command is only active when you have selected a group.

Arranging objects
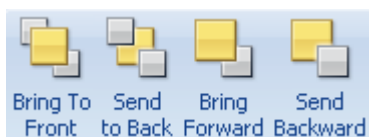
When you create objects in Mediator they are placed on the page in a hierarchical order. The first object you create is placed at the bottom level of the page, behind all the other objects, whereas the last object you create is placed at the top level, in front of all the other objects.

You can change the stacking order of objects easily with the Arrange commands:

- To change the order of one or more objects, select them and choose one of the **Arrange** commands in the **Home** or **Format** tab.

- You can also right-click an object and choose one of the **Arrange** commands in its local menu.

Arrange | Bring To Front (Ctrl + F)

Places the selected object on top (in front) of all the other objects. If you have selected several objects, they are all placed on top, the relationship between them being maintained.

Arrange | Send to Back (Ctrl + B)

Places the selected object at the bottom (back), behind all the other objects. If you have selected several objects, they are all placed on the bottom, the relationship between them being maintained.

Arrange | Bring Forward

Moves the selected object up by one position. If you have selected several objects, they are all placed one position higher.

Arrange | Send Backward

Moves the selected object back by one position. If you have selected several objects, they are all placed one position lower.

The Object list reflects the order in which the objects have been placed on the page.

➢ To open the Object list, choose **View | Show/Hide | Object List** or press **F4**.
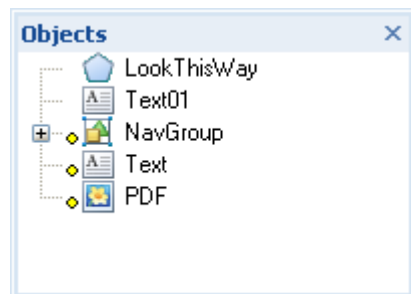
You can also use the Object list to change the order of the objects by simply dragging them up and down the list. Refer to "Using the Object list" for more information on how to do this.

Aligning objects

Mediator lets you align objects in relation to the page or in relation to each other.

➢ Select the object or objects to align.

➢ Choose **Home | Arrange | Align**.
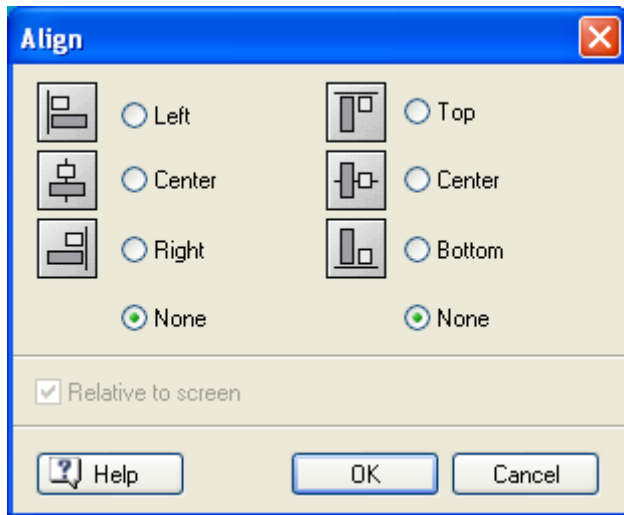
The four radio buttons on the left of the dialog set the horizontal alignment and the four radio buttons on the right set the vertical alignment. To leave the horizontal alignment unchanged, you select the left 'None' radio button. Conversely, to leave the vertical alignment unchanged, you select the right 'None' radio button.

If for instance you have selected a picture, checking 'Left' and 'Top' will place the picture on the top left corner.

If you have selected several objects, they are aligned in relation to the first object you selected. Checking 'Right' for instance will align all the selected objects with the right-hand side of the first object you selected.
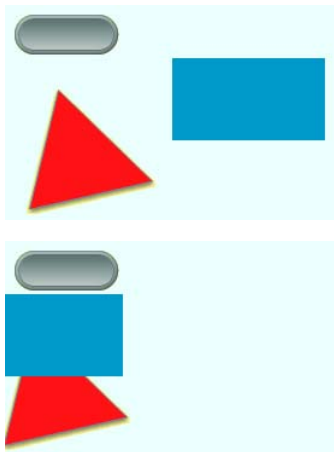
If you check 'Top', the selected objects will retain their horizontal position but will be aligned with the top of the first object you selected. The alignment is therefore determined by the first object you select.

If you check the **Relative to screen** option, all the selected objects react as if they were grouped. They are repositioned on the page so as to maintain their inter-relationship. This means that if you check 'Right', the object furthest to the right will be placed on the right-hand side of your Mediator page and the other objects will move along with it, but their vertical and horizontal relationship will be maintained.
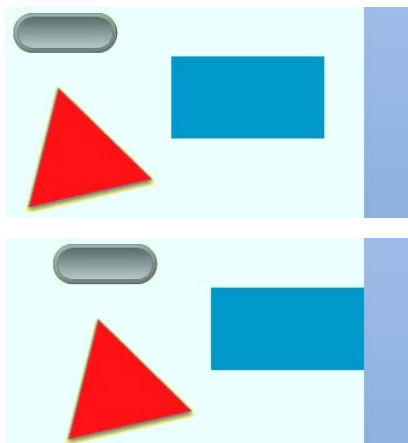
Applying styles

You can change the look of many Mediator objects by modifying their background properties (fill) or their frame properties (outline). You can also enhance their visual aspect by giving them shadows or glow effects, by applying alpha channels to them or by changing their opacity level to make them more or less transparent.

This topic describes how to apply effects to objects by using the **Format** tab on the ribbon.

For all these procedures, you start by selecting the object to be edited. As soon as the object is selected, its Format tab appears on the right of the ribbon.

Notes:

- If you select several objects, only the properties that are common to these objects can be edited.

- You can also use the Properties dialog of the object to perform the operations described here. The Properties dialog lists all the properties that are applicable to the object and allow you to fine-tune their values.

You will find a detailed description of each object and all their properties in the Reference section of this documentation, under "Objects".

Changing the fill of an object

➢ Choose **Format | Style** and click the arrow next to **Fill**. You now have several choices:

- Click one of the solid colors in the upper part of the menu.
- For more color nuances, click **Other** and choose a color in the standard Windows dialog.
- To remove the fill, thereby making the object transparent, click **No Fill**.
- To change the second color of a gradient, point to **Gradient Color** and choose a color.
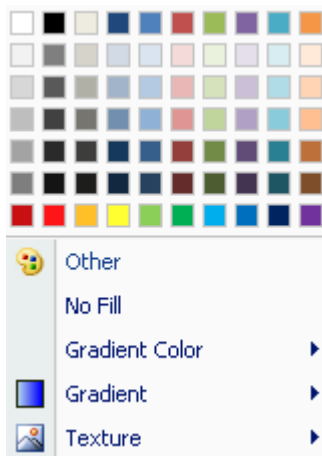
A gradient is a gradual transition between two colors or two shades of the same color:

➢ To add a gradient to the fill, point to **Gradient**, and browse through the gallery of predefined gradients to check their effect on your object. To apply one of these gradients, just click it.

Finally you can apply different textures to the fill:

➢ Point to **Textures**, and follow the same procedure as for gradients.

Changing the outline of an object

➢ Choose **Format | Style** and click the arrow next to **Outline**.

As with the fill, you can choose to give the outline a solid color, or you can remove the outline altogether by choosing **No Outline**.
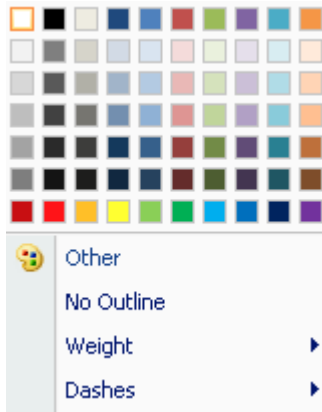
You can also change the **Weight** (i.e. thickness) of the outline, and define the style of the **Dashes** used to represent it.

The procedure to change the outline is the same as that described above for the fill.

Adding a shadow or a glow effect to an object

➢ Choose **Format | Style** and click the arrow next to **Effects**. You can now:

- Point to **Shadow**, and browse through the gallery of predefined shadows.
- Point to **Glow**, and browse through the gallery of predefined glow effects.
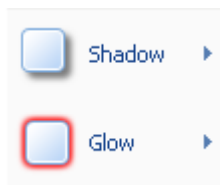
➢ As before, once you have checked the preview of your chosen effect, click it to apply it.

Applying an alpha channel to an object

Soft edges, edges and patterns are predefined alpha channels that can be applied to rectangles and picture objects to give them a level of transparency.

➢ Choose **Format | Style** and click the arrow next to **Effects**.

➢ Point to **Soft Edges**, **Edges** or **Pattern** and choose an effect you like.
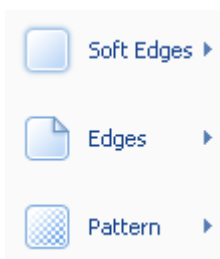
For more information on alpha channels, see "Using alpha channels and bump maps" and "Object properties: Visibility tab".

Changing the opacity level of an object

➢ Choose **Format | Style** and click the arrow next to **Effects**.

➢ Point to **Opacity** and browse through the different opacity levels to check their effect on your object.

➢ Click the chosen opacity level to apply it.

Do not confuse transparent objects and hidden objects. They are both invisible, but transparent objects (often used as hotspots) are still able to react to events whereas hidden objects cannot.

Rotating an object

This can be done in several ways. For more information, see "Rotating objects".

Choosing a color

 This topic describes the Colors dialog which lets you choose colors and define custom colors to apply to Mediator pages and objects.

This dialog can be accessed in different ways:

- From the **Format** tab of the selected object, for instance when choosing **Style | Fill | Other**.
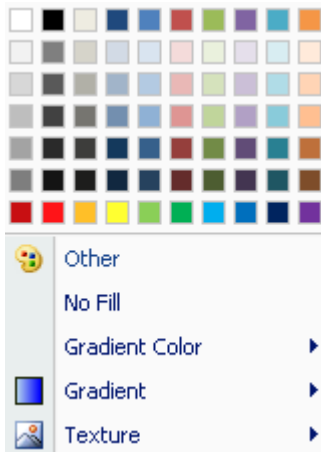
- From the **Properties** dialog of the selected object, when clicking the color box on the left of a color field.
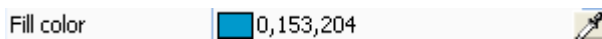
Both of these operations display the Colors dialog.
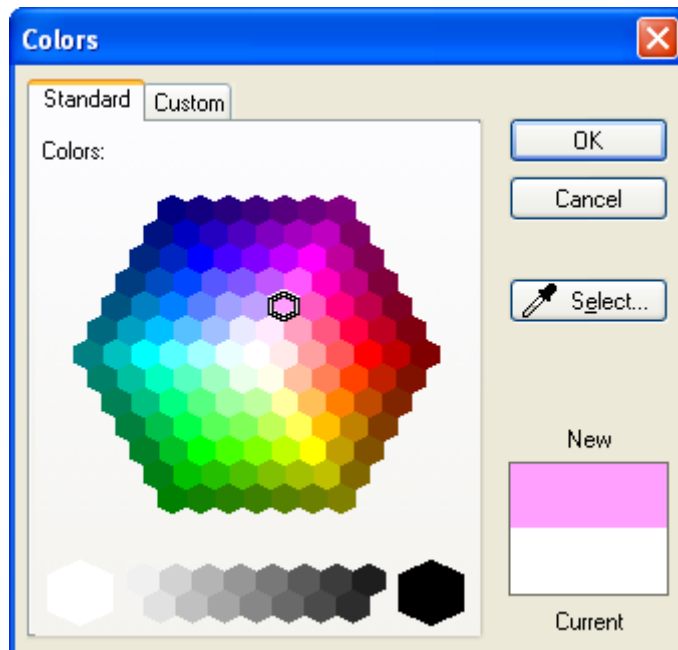
The **Standard** tab shows the predefined colors.

➢ Click one of the color cells to choose that color.

You can also pick an existing color from anywhere on the screen with the pipette .

➢ Click the **Select** button.

The shape of the mouse pointer changes to a pipette.

You can now click a color from an existing object, background, menu and so on.

The new color appears in the bottom right of the dialog, above the current color.

➢ Click OK to validate.

You can also click the **Custom** tab to define you own color.
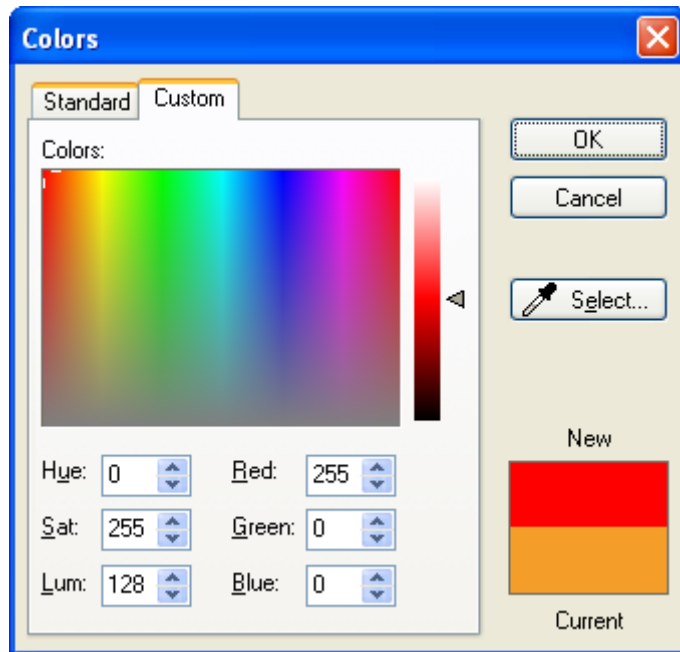
Here you can select a color in three different ways:

- Click anywhere in the color matrix and use the slider on the right of the matrix to adjust the color's attributes. The slider displays the possible amounts of white and black in the color.

- Enter the RGB values (Red, Green, Blue) manually.

- Enter the Hue, Saturation and Luminosity values manually.

The easiest way to experiment with different colors is to press and hold the mouse button while moving the pointer around the color matrix.

Using alpha channels and bump maps

Alpha channels and bump maps are gray-scaled pictures that are used to apply a new look to existing objects or backgrounds.

- Alpha channels apply transparency.

Alpha channels are not separate objects. They are simply a property of the object being modified. Note that Mediator also supports the use of pictures with embedded alpha channels.

- Bump maps apply 3D effects or textures.

By contrast with alpha channels, bump maps are independent objects. You obtain the effect by placing the bump map on top of the object to modify.

Alpha channels

An alpha channel picture applies transparency to the object it modifies via levels of gray-scale colors. The color black is completely transparent and the color white completely solid. Gray colors between black and white apply different levels of transparency: the darker, the more transparent. Remember that you can only use gray-scaled (8 bit) pictures as alpha channels. If you select a color picture, Mediator just ignores it.

Alpha channels are rather special and can be used for many different effects.

Here we have a picture on the left, and on the right the same picture with the above alpha channel.
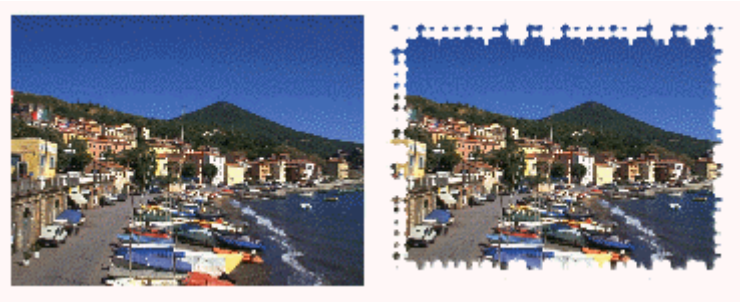
Here are examples of different kinds of alpha channels:
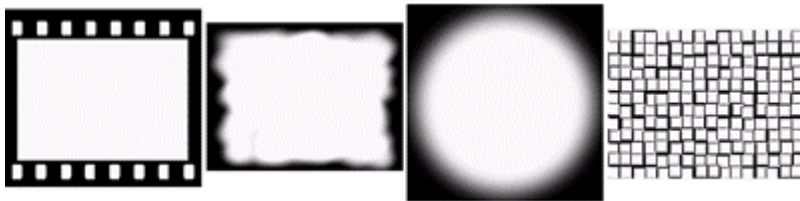
As you can see not all alpha channels are the same size. You don't have to worry about this, as an alpha channel is scaled to the size of the object it is applied to. However, if you want the alpha channel to appear without distortion, its aspect ratio must be very similar or identical to the aspect ratio of the object.

Here the alpha channels have been applied to the same picture. You can easily see the effect achieved by each alpha channel.

Note that you can apply a separate alpha channel to a picture that already contains an embedded alpha channel to produce a combined alpha channel effect.

Applying an alpha channel to an object

Mediator lets you apply alpha channels to pictures, rectangles and button pictures in different ways:

- By selecting a predefined style containing an alpha channel in the style gallery of their **Format** tab.

- By selecting a predefined effect with **Format | Style | Effects**.

- By selecting an alpha channel in the 'Alpha channel' path field of their **Properties** dialog.

  For pictures and rectangles, see "Object properties: Visibility tab" for more information. For buttons, see "Button properties: Picture tab".

Bump maps

A bump map is also a gray-scaled picture which changes the look of the picture placed underneath it. Unlike the alpha channel, it also appears as a distinct object on the page.

You can only use gray-scaled (8 bit) pictures as bump maps. In 8-bit pictures color values range from 0 to 255, 0 being black and 255 being white.

- If a pixel in the gray-scaled picture has the value 128 the picture or background underneath it is not changed at all.

- If the value is higher than 128 the picture becomes brighter and if the value is lower than 128 the picture becomes darker.

Bump maps let you apply a 3D look to existing objects.

Here the bump map has been placed on top of a blue background. It creates a frame on the background, so we have made it a little bigger and placed a picture inside the hollow area.
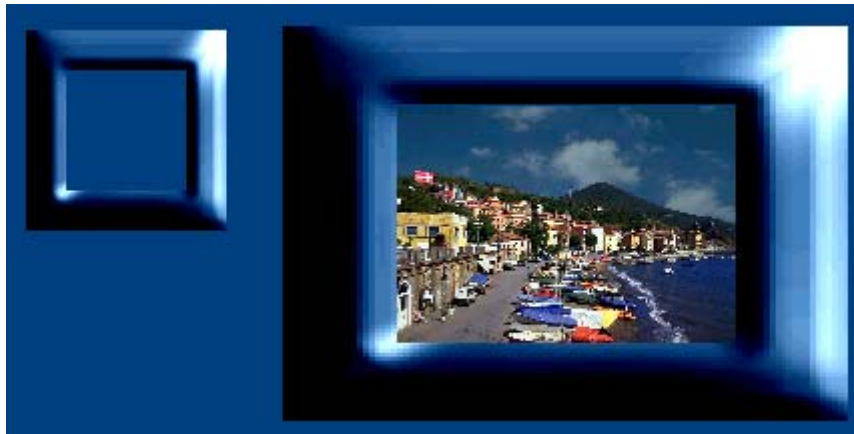
These are three different ways of using a bump map:

Texture   3D Buttons   3D Objects

You can even place bump maps on top of each other or animate a bump map to achieve amazing visual effects.

Applying a bump map to an object

➢ Create a bump map object by choosing **Insert | Illustrations | Bump Map**.

➢ Select the bump map picture required, either from the gallery of predefined bump maps or from your own hard disk. See "The Bump Map object" for more information.

➢ Place the bump map object on top of the object you want to modify.

Using the grid

 The grid is a series of evenly spaced horizontal and vertical dots that help you position your objects. When the grid is activated, objects snap to the grid points when you move them with the mouse. The greater the spacing, the greater the "jump".

You can also move selected objects with the arrow keys. When you hold down Shift while pressing one of the arrow keys, the selected object moves in the direction of the arrow by the number of pixels entered in the grid. The grid does not need to be activated for this function to work.

➢ To access the grid, choose **View | Workspace | Grid**.
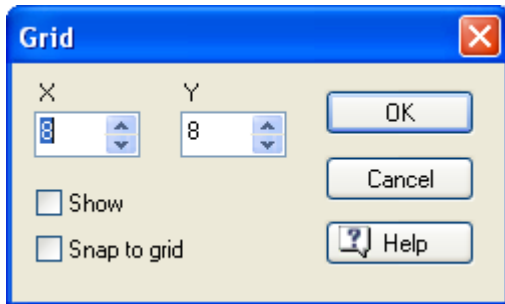
X and Y fields: The X and Y fields indicate the number of pixels between the grid points. Usually they should be set between 8 and 16. Remember that the greater the spacing, the greater the "jump".

Show: Checking this displays a series of tiny dots on the page to represent the grid. Even when the grid is hidden, the objects still snap to the grid points if 'Snap to grid' is checked.

Snap to grid: Check this to activate the grid and make the objects snap to the grid points when moved.

You can also define vertical and horizontal guides to help you position and align your objects. See "Using the guides" for more information.

Using the guides

 Guides are nonprinting blue lines that help you align and position objects.

You can set guides where you want them using the workspace local menu. You can add, move and delete guides as needed. You can also lock guides in place so that you cannot move them accidentally.

Adding a guide

Before you add a guide, you must make sure they are visible:

➢ Choose **View | Workspace | Guides**.

➢ Check **Show** in the Guides dialog and click OK.
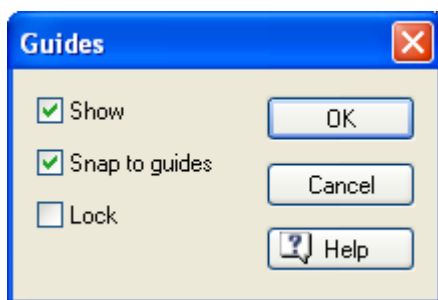
➢ Move the mouse pointer at the point of the workspace where you want to insert the guide.

➢ Right-click the page to open its local menu.

➢ Choose **Guides | Add Vertical** or **Guides | Add Horizontal** to insert the corresponding guide on the workspace.

Activating and locking the guides

By default, the guides are activated, meaning that objects snap to the guides when you move them with the mouse within a few pixels of the guides.

Show: Uncheck this option to hide the guides. When the guides are hidden, the objects still snap to the guides if 'Snap to guides' is checked.

Snap to guides: Uncheck this option it if you don't want the objects to snap to the guides when moved.

Lock: If you check this option, you will not be able to move the guides. This is useful when your page contains many different objects that you need to position accurately, as it prevents you from moving the guides themselves inadvertently while trying to drag an object.

Moving a guide

➢   Place the mouse pointer on the guide so that its shape becomes a double arrow.

You can now move the guide in two different ways:

•   Move the guide with the mouse in the direction required.

   The number shown in the yellow box changes dynamically as you move the guide to indicate its current position.

•   Double-click the guide and enter the new position for the guide in the white box that appears.

Deleting a guide

➢   Place the mouse pointer on the guide so that its shape becomes a double arrow.

➢   Right-click the guide to open its local menu.

➢   Choose **Delete Guide**.

Working with pages

Creating pages

The page is the foundation of any Mediator project: this is where you place all your objects, and the way you navigate in a Mediator project is by going from page to page.

When adding a new page to your project, you have two choices:

- Creating an empty page, or

- Creating a page based on a predefined page layout

Creating an empty page

You can add a new empty page to your project in several ways:

- Choose **Home | Pages | New** (clicking the upper part of the icon), or

- Choose **Page | Page Setup | New** (clicking the upper part of the icon), or

- Press the **Insert** key.

The New Page dialog appears.
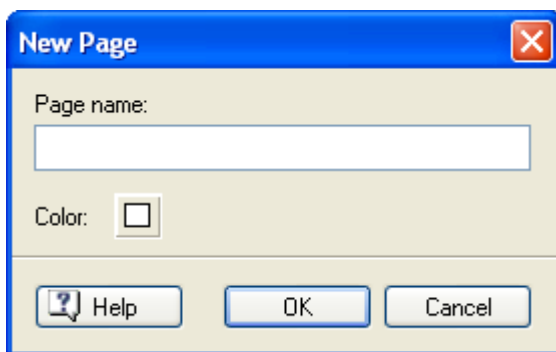
➢ Enter a name for the new page.

➢ (optional) Choose a color for the new page by clicking the Color button.

This opens the standard Colors dialog in which you can set the background color of the page. For more information on the Colors dialog, see "Choosing a color".

The color you select becomes the new default page color, and remains so until you select another color in the New Page dialog.

Creating a page based on a predefined page layout

Clicking the arrow in the lower part of the New Page icon lets you choose from a gallery of predefined pages.
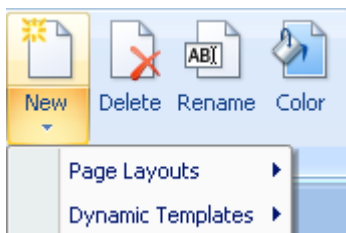
When you insert one of these predefined pages into your project, it is placed immediately after the current page.

Page Layouts: Here you will find families of pages which you can drop directly onto your project to save you from having to do all the design work yourself. You can customize the pages as you wish by adding or deleting buttons. You can link the pages to create a full web project and are free to use some or all of the pages more than

once. The page layouts displayed correspond to the document type and document size you chose when creating the document in the New Document dialog. For more information on document types and document sizes, refer to the topic "Creating a document". Note that you can change the document type after its creation. See "Document properties" for more information. You can also resize a document after its creation with the **View | Document | Resize** command. If you have chosen a custom size for your document, all the page layouts available for your document type are displayed, and you can choose the size nearest to your own document size.

Dynamic Templates: This category contains four ready-made interactive pages - Contents, Index, Search and History - which you can drop in your projects to integrate the corresponding functionality automatically.

These interactive pages are fully described in the topic "Using the dynamic templates".

Handling pages

The **Page Setup** group of the **Page** tab contains the most important commands when working with pages.

*For convenience, the **Pages** group of the **Home** tab also contains the most important page commands.*

You can also access the commands related to the currently selected page in other ways:

- By right-clicking the page in the Page list

- By right-clicking the workspace (without hitting any other object)

All the pages contained in your project are listed in the Page list. You can select a page simply by clicking it in the list.

If the Page list is not open, you can open it by one of the following methods:

- Choose **View | Show/Hide | Page List**, or

- Press **F8**.

The Page list also allows you to change the order of the pages within the project, and gives you access to a few additional commands. For a full description, refer to "Using the page list".

Deleting a page

➢ Select the page in the Page list and choose **Page | Page Setup | Delete** or press the **Delete** key.

Note that page deletions cannot be undone.

Renaming a page

➢ Select the page in the Page list and choose **Page | Page Setup | Rename**.

Changing a page color

- Choose **Home | Pages | Color**, or

- Choose **Page | Page Setup | Color**.

Copying and pasting a page

➢ To copy a page select it in the Page list and choose **Home | Clipboard | Copy** (or press **Ctrl + C**).

➢ Select the page in the Page list after which you would like to insert the copied page and choose **Home | Clipboard | Paste** (or press **Ctrl + V**).

Page properties

All pages have a Properties dialog where you can make any necessary changes.

If the Properties dialog is not open, you can open it by one of the following methods:

- Choose **Page | Page Setup | Properties**, or

- Right-click the page in the Page list and choose **Properties** in its local menu, or

- Press **Ctrl + F8**.

You can resize, dock and undock the Properties dialog according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.

You can quickly change the properties of several pages simultaneously by selecting all the relevant pages. In that case, only the fields that are common to all the pages selected are shown in the Properties dialog. This is convenient if you wish to change the color of several pages in one go, apply a master page to several pages, etc.

See the topics "Page properties: General tab" and "Page properties: Notes tab" for a complete description of all the properties applicable to the page.

Creating interactivity

To find out how to create interactivity on your pages, refer to the topic "Using events and actions".

Using the Page list

The Page list enables you to quickly access all the pages of your project and to jump to any page simply by clicking it.

If the Page list is not open, you can open it by one of the following methods:

- Choose **View | Show/Hide | Page List**, or

- Press **F8**.
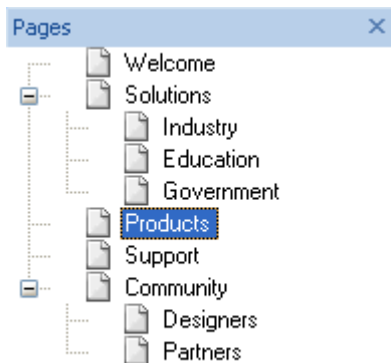
You can resize, dock and undock the Page list according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.

The pages are listed with their default names, in order of creation. You can move pages anywhere in the Page list simply by dragging and dropping them.

You do no have to place all pages in a straight line under each other. You can also create sub-pages by indenting them under higher-level pages in order to structure large projects. This allows you to visualize very easily the structure of your project with chapters, sub-chapters, start pages etc.

The + sign next to a page name indicates that the page contains one or more sub-pages. To see the sub-pages, simply click the + sign, which then changes to a - sign. The sub-pages appear to the right of the main page.

When you have finished viewing the sub-pages, click the - sign again and the + sign re-appears next to the main page.

The structure of the Page list is important because:

- A Mediator project always runs from the first page in the Page list (from top to bottom).

- The commands @Next, @Previous etc. in the Go to Page action all relate to the structure of the Page list. Refer to the description of the Go to Page action for a description of these special @pages.

Selecting a page

➢ To select a page in the Page list, just click it.

Selecting several pages

The way you select several pages in Mediator is the same as in Windows:

➢ Click the first page, then press and hold down the **Ctrl** key while clicking the other pages one by one.

Each of the pages you click becomes highlighted to indicate that it is selected.

You can also select a range of pages:

➢ Click the first page, then press and hold down the **Shift** key while clicking the last page in the range you want to select.

All the pages listed between the first and last page become selected.

Deselecting pages

➢ To deselect one or more pages simply click them again while holding down the **Ctrl** key.

Inserting a new page

➢ To insert a new page in the Page list simply right-click the page after which you would like to place the new page, and choose **New** (or select the page and press the **Insert** key).
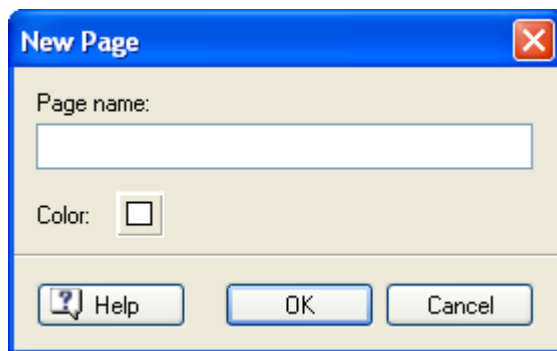
You can choose a color for the new page by clicking the Color button. The color selected becomes the new default page color, and remains so until you select another color in the New Page dialog.

Renaming a page

You can rename a page in several ways:

- Right-click it and choose **Rename** in its local menu.

- Select it and press **F2**.

- Select it and click it again *slowly*.

Moving a page

➢ Click the page in the Page list and move it to the desired location while keeping the mouse button down. Let go of the mouse button.

- If you let go of the mouse button **between** two pages (thin line visible between the pages), the selected page is placed between the two pages.

- If you let go of the mouse button **on top of** (or next to) another page (highlighted by a thick line), the page you are moving is inserted as sub-page of the highlighted page.

Saving a page in the Multimedia Catalog

If you have designed a page or a set of pages that you would like to re-use in your current or future projects, you can save them in the Multimedia Catalog.

➢ Select the page or set of pages and drag them to the category of your choice in the User Area of the Multimedia Catalog.

The pages are saved in the Multimedia Catalog with the extension .o8o which is specific to Mediator. You can drag them back from the Multimedia Catalog into your current project or any other project at any time. See the section "The Multimedia Catalog" for more information.

You can also right-click the page and choose **Save in Multimedia Catalog**. In that case the page is placed in the root of the User Area.

Copying a page to another project using Windows

As well as using the Multimedia Catalog as described above to copy one or more pages from one project to another, you can also use your desktop or any other folder:

➢ Select the page or set of pages and drag them to the desktop or folder of your choice.

This will create a file with the name of the first page you are copying followed by the extension o8o, for instance "mypage.o8o".

➢ Open the project you want to copy the pages to.

➢ Drag the .o8o file into its Page list.

You can even select several *.o8o files and drag them all into the Page list at once.

If some of the new pages have the same names as existing pages Mediator will rename the pages being inserted.

To merge two entire projects together, refer to the topic "Merging documents".

Using master pages

A master page is a page that you use as a bottom or top layer on one or more other pages.

If used properly, master pages will save you a lot of work. If for instance you want to have a Next and Back button on each page of a slideshow, you only have to create the buttons once on a separate page that you designate as a master page.

If you later decide to choose a different button type, change the events and actions, add another button and so on, you only have to change the page designated as master page instead of all the pages using the buttons.

You can designate a particular page as **top master page** or **bottom master page**:

- Objects placed on a **top master page** appear in front of objects placed on the current page. A top master page is therefore useful for buttons and menus.

- Objects placed on a **bottom master page** appear behind objects placed on the current page. A bottom master page is therefore useful for backgrounds and page design.

You can have as many master pages as you want, which means that you can create different sections in your projects, each using different backgrounds, buttons, menus etc.

A page that uses another page as a master page can itself be used as a master page, but it will be shown without its assigned master page. Note also that the background color of a master page is ignored on a normal page. This gives you the option of creating pages with different background colors, although still sharing the same master page. If you want to use a master page to define the same background color for all pages, place a rectangle of the required color on the master page, making sure it covers the entire surface of the page.

Creating a top or bottom master page

At the bottom of the screen you will see three tabs .

The middle tab represents the current page. It is the tab that is selected while you are designing your page.

The other two tabs let you assign a master page to the current page, as follows:

- Click the left tab to assign a bottom master page.

- Click the right tab to assign a top master page.

You can also assign a master page to a page by opening the Properties dialog of the page and clicking the Browse button next to 'Bottom master page' or 'Top master page' to select the required master page.

The first time you click one of the master page tabs the Page list appears to let you choose the page to use as master page.
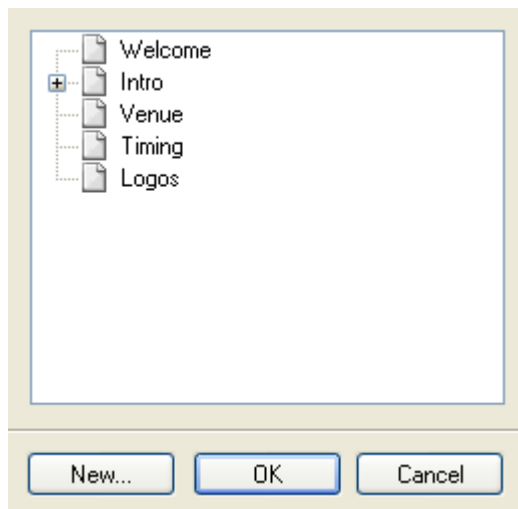
➢ Either select an existing page from the list or click New to create a new page.

If you click New the following dialog appears:
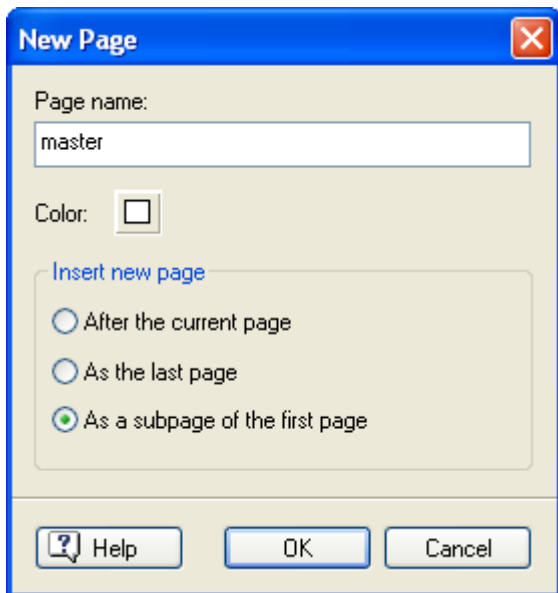
➤ First select a name for the page. Here we have used the name "master", but you can use any name.

➤ Select a color for the page (if you are only going to use the page as master page you do not need to select a color, since the background color of a master page is ignored).

➤ Select where you wish to insert the page in the Page list.

After the current page: Places the master page immediately after the current page in the Page list.

As the last page: Places the master page as the last page in the Page list. It is often convenient to regroup all your master pages at the bottom of the Page list.

As a subpage of the first page: Places the master page as a sub-page of the first page in your project. This is convenient when you have many pages in your Page list, and wish to access your master pages often and quickly.

As soon as you select a master page, the tabs shown at the bottom of the screen change appearance:

• If you assigned a bottom master page to the current page, the left tab is selected.

• If you assigned a top master page to the current page, the right tab is selected.

You can now edit the master page itself.

Editing the master page

Create all the buttons and objects that you require on your master page.

When you have finished simply click the middle tab to go back to the normal page.

The tabs shown at the bottom of the screen have now changed.

• If you assigned a bottom master page, the eye on the left tab is now visible , indicating that the current page now has a bottom master page.

• If you assigned a top master page, the eye on the right tab is now visible , indicating that the current page now has a top master page.

• If you assigned both a bottom master page and a top master page, both eyes are visible .

You will see that the objects placed on the top master page appear in front of the objects on the normal page while the objects placed on the bottom master page appear behind the objects of the normal page.

 You can also edit a master page by selecting it on the Page list.

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Using the master page tabs

Once you have assigned a master page to the current page, you can access it for further editing as follows:

➢ On the left master page tab ![icon], click the part of the icon representing pages ![icon] (not the eye) to go automatically to the page assigned as the bottom master page.

➢ On the right master page tab ![icon], click the part of the icon representing pages ![icon] (not the eye) to go automatically to the page assigned as the top master page.

Clicking one of the master page tabs allows you to edit the corresponding master page, although you actually remain on the normal page. The eyes disappear from the master page tabs and the relevant master page tab is selected.

You can use these tabs to skip back and forth between the three pages.

When a page has a master page attached to it, it can sometimes be convenient to view it without its master page. You might for instance want to edit an object placed under an object belonging to the top master page.

➢ To hide the bottom master page click the eye on the left tab ![icon]. The eye is now marked with a red cross ![icon].

➢ To hide the top master page click the eye on the right tab ![icon]. The eye is now marked with a red cross ![icon].

When both master pages are hidden, the eyes on both tabs are marked with a red cross ![icon].

➢ To view a master page again, simply click the corresponding eye to remove the red cross.

Quick example

In the following example we create a project that shows license plates from each of the 50 American states.

On our normal page we place a picture of a license plate:

We click the left tab ![icon] to create a common background. The Page list appears and we click New to create a new page that we will use as our bottom master page.

The master page tabs now change to ![icon], indicating that we are ready to edit the bottom master page.

On the bottom master page we place a rectangle, which we tone from black to light blue.
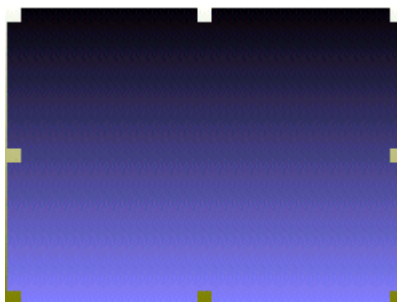
We click the middle tab to go back to the normal page.

The master page tabs change to , indicating that our normal page now has a bottom master page attached to it.

The normal page is now displayed with a toned rectangle in the background.

We now wish to assign a top master page with a headline and two buttons. We click the tab on the right , select New in the Page list, and start designing our top master page.

We place a headline (License Plates) at the top of the page and two navigation buttons (Back and Next) at the bottom.

We click the middle tab to go back to the Normal page.

The master page tabs change to , indicating that our normal page has now both a bottom and a top master page attached to it.

The normal page is now displayed with the toned rectangle as background and our headline and buttons on the foreground.

We can assign these two master pages to all the pages of our License Plates project…

…which means that if we later decide to change the look of the buttons, the headline or the background, we only need to edit those two pages (the bottom master page and the top master page) instead of the 50 pages of the slideshow.

We did not set up the actual Go to Page actions on the buttons in this quick example.

Assigning a master page

There are four different ways of assigning a master page to a page.

1. Using the master page tabs at the bottom of the screen

2. Using the page Properties dialog of the page

3. Using the page Properties dialog on multiple pages

4. Copying a page that has master pages already assigned

1. You can use the master page tabs ![tabs] (as described above) to assign master pages to the current page. Once you have selected a bottom or top master page, you cannot however delete it or choose a different master page using these tabs.

2. To choose a different master page, choose **Page | Page Setup | Properties**, and select a new page in the relevant master page field. To delete a master page, just clear the field.
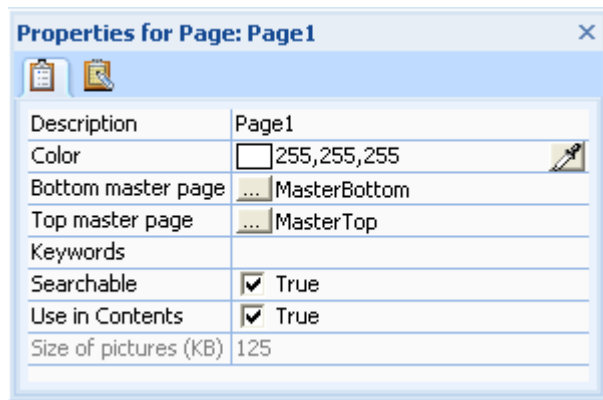
3. If you wish to attach the same master pages to many pages and do not want to go through the same process for each page (using the tabs to select bottom and top master pages), you can use the Mediator multi-edit function.

➢ Open the Page list (**View | Show/Hide | Page List**).

➢ Select all the pages to which you want to assign the same master pages (hold down the Ctrl key while selecting the different pages).

➢ Choose **Page | Page Setup | Properties**.

➢ Click the **Browse** button of the relevant master page field (Top or Bottom).

➢ Select the page you want to use as a master page.

4. If you have created a page and have assigned one or two master pages to it, it is very easy to create more pages that also use the same master pages. Simply copy and paste the page in the Page list.

➢ Open the Page list (**View | Show/Hide | Page List**).

➢ Select the page you wish to copy.

➢ Right-click and select **Copy** or press **Ctrl + C**.

➢ Right-click and select **Paste** or press **Ctrl + V**.

➢ Repeat the last step until you have the right amount of pages.

Using the dynamic templates

→ Advanced

This topic describes the four ready-made interactive pages - Contents, Index, Search and History - which you can drop in your projects when creating a page (**Page | New | Dynamic Templates**) to integrate the corresponding functionality automatically.

Although these dynamic template pages are fully functional, you can change their visual appearance to match the rest of your project design. You can add more buttons, pictures, change the color, change the text, etc.

We will now describe these pages one by one.

Contents

Dragging the Contents template into your project gives it a Table of Contents.

In design mode, the contents field is empty. In test mode and in the exported version, it contains a list of all the pages you have chosen to include in the contents list. (You must check 'Use in Contents' in the Properties dialog of a page if you want that page to be included in the list.) The end user can select a page to jump to that page. The Back button takes the user back to the page he/she came from.

Index

Dragging the Index template into your project gives it an Index page.

The left field lists all the keywords defined in the project. When the end user clicks a word in this field, all the pages containing this particular keyword appear in the right field. The user can now select a page to jump to that page. The Back button takes the user back to the page he/she came from.

You can associate keywords with pages and objects at design time:

➢ Open the General tab of the Properties dialog of the page or object and enter the keywords in the Keywords field, separating them with semicolons, without spaces (e.g. Flower;Tulip;Yellow).

Search

Dragging the Search template into your project allows the end user to perform text searches.
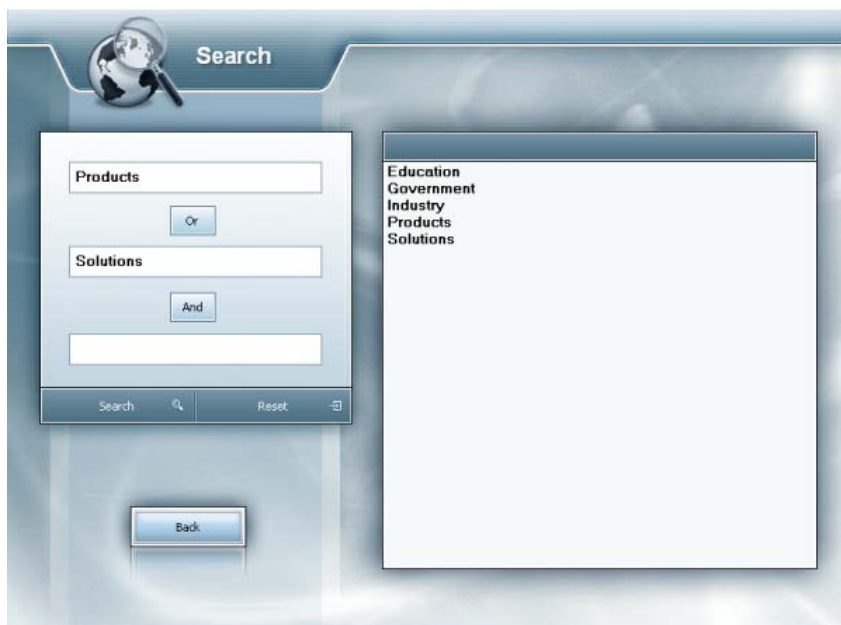
The user enters the words to be searched for in the three fields on the left. When the **And** button is displayed, Mediator looks for pages containing *all* the words entered by the user. Clicking the And button changes it to an **Or** button. In that case, Mediator looks for pages containing *any* of the words entered by the user. Clicking Search starts the search.

Mediator looks for pages whose keywords or objects contain the words entered by the user. Keywords may be associated with pages or objects as described above. Note that the 'Searchable' property of the page or object must be enabled for that page or object to be searched.

The pages that meet the search criteria are listed in the large field on the right. The end user can now select a page to jump to that page. The Back button takes the user back to the page he/she came from.

The Reset button erases the words from the search fields.

History

Dragging the History template into your project gives it a History page of all the pages that have been visited so far.
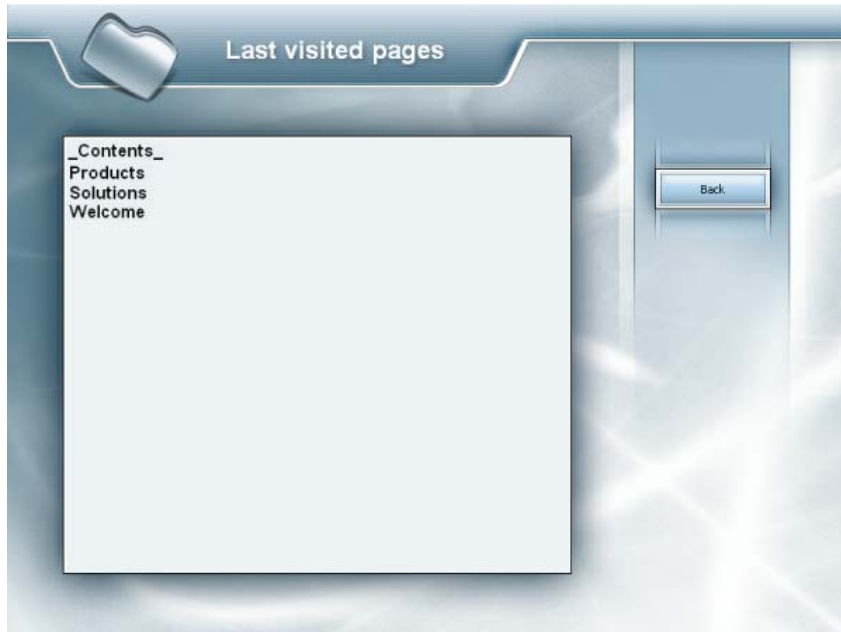
The end user can select a page to jump to that page. The Back button takes the user back to the page he/she came from.

Creating interactivity

Using events and actions

Events and actions are responsible for all the activity in a Mediator project.

- An **event** is something that can happen to a page or to an object. For instance an object may be clicked, the mouse pointer may be moved over it, it may receive a right click and so on.

  Most events can occur on all objects, although some objects have specific events that are unique to them.

  Other events, such as 'On Page Ready', are only available for pages.

  For a complete list of the events available to both pages and objects, see "Events" in the Reference section.

- An **action** is an operation you perform when a particular event occurs on a page or on an object. For instance, you may want to display another page when the user clicks a button, or play a sound when a picture appears.

  There are many different actions available. Each one of them is described in detail in the Reference section of this documentation.

This topic describes how to use the Events dialog to combine events with actions.

Objects for which events and actions have been defined are identified in the Object list by a yellow dot.

Opening the Events dialog

You can open the Events dialog in various ways:

- To open the Events dialog related to the currently selected page, choose **Page | Interactivity | Events** or press **F9**.

- To open the Events dialog related to a particular object, click the object and choose **View | Interactivity | Events**.

    You can also right-click the object and choose **Events** in its local menu.

You close the Events dialog by clicking the Close button or the X in the top right corner.

💡 *You do not have to close the Events dialog every time you have "programmed" an object. If you need to program several objects, simply leave the Events dialog open and click the next object to which you wish to add functionality. The Events dialog always refers to the selected object. If no object is selected the Events dialog refers to the current page.*
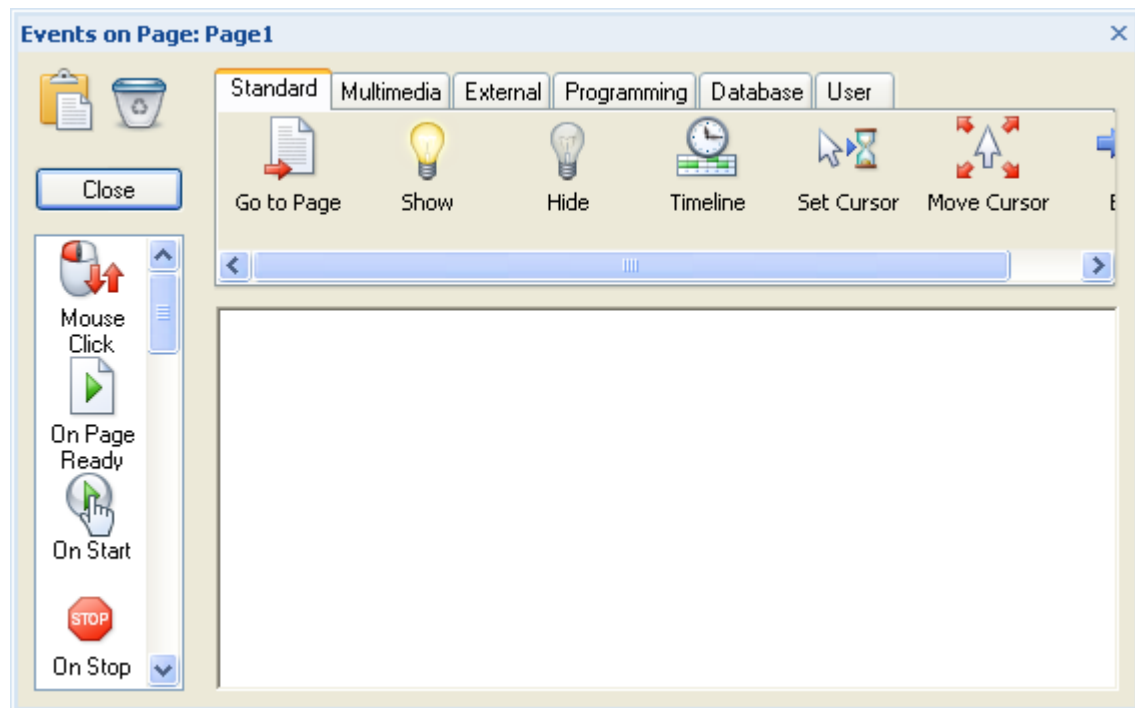
The Events dialog works in the same way for all pages and objects. The only difference is that some elements have more events available to them than others.

- The vertical field on the left contains the events applicable to the selected page or object.

- The area in the middle is called the "active field". This is where you associate particular actions with particular events.

- The actions are located in the horizontal bar above the active field. They are grouped in different tabs according to their function.

💡 *You can resize, dock and undock the Events dialog according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.*

📌 The User tab, located at the far right of the Events dialog, contains some predefined event combinations which are described at the end of this topic.

Attaching an action to an event

To attach an action to an event, you start by dragging the required event into the active field:

➢ Click the event and drag it into the active field.

➢ Click the tabs above the active field to browse through the actions. Some tabs (depending on the size of your Events dialog) have a scroll bar that you can use to reveal more actions.

➢ Once you have chosen the action you want to attach to the event, drag it into the active field immediately to the right of the event. You cannot drag an action unless you already have an event in the active field.

Most actions open a separate dialog as soon as they are dropped in the active field.

➢ Fill in the dialog and click OK to return to the Events dialog.

The action now appears in the active field with a descriptive label, which varies depending on the action.

➢ To specify your own description, right-click the action and choose **Description** in the local menu.

The actions available depend on the type of the document. Documents of type HTML or Flash do not have as many actions available as documents of type Standard. See the topic "Creating a document" for more information on the different document types. Please also refer to the "Mediator 9 feature list" for a complete list of all the actions available for each type of document.

Attaching several actions to the same event

You can attach several actions to the same event. In that case, they are placed in a horizontal line after the event and executed in order of appearance from left to right.

If the actions used do not make much use of the computer resources, it may seem that they are all executed simultaneously. To avoid this, or to execute the actions in a specific sequence, you can use a timeline action. Refer to the "Timeline" topic for more information.

The actions are started one after the other without any delay. This means that Mediator does not wait until an effect has finished, or a sound or video has played to the end, before starting the next action.

Defining several events

You can also place more than one event in the active field for any given object. You can drag any of the events listed in the events field under the events already placed in the active field, and attach actions to all of them.

When you work with multiple events, make sure that you place the actions to the right of the correct event in the active field.

Working in the active field

Placing events and actions in the active field can be a little confusing to start with, particularly if you use actions that open their own dialogs or if you need many combinations of events and actions.

Instead of recreating an entire event combination from scratch, it is often easier to copy an existing combination, paste it where needed and make the required adjustments.

The operations involved are described below.

Selecting actions

- To select an action, click it once.

- To select several actions, hold down the Ctrl key while clicking each action.

Selecting combinations

- To select an entire combination of actions with their event, just click the event.

- To select several combinations, hold down the Ctrl key while clicking each event.

- To select all the combinations of events and actions, right-click inside the Events dialog and choose Select All in the local menu.

Cutting, copying or deleting actions or combinations

- To **cut** actions or combinations from the active field, first select the elements you wish to cut as described above and drag them to the Clipboard icon in the top left corner of the Events dialog while holding the Shift key down. Let go when the pointer is on top of the Clipboard icon.

  You can also right-click the selected elements and choose **Cut** in the local menu.

- To **copy** selected actions or combinations, just drag them to the Clipboard icon (the shape of the mouse pointer changes to a + sign). The elements remain in the active field, but are also placed on the clipboard where they will stay until you replace them with something else.

  You can also right-click and choose **Copy** in the local menu.

- To **delete** selected actions or combinations, press the Delete key or drag them to the wastepaper basket .

  You can also right-click and choose **Delete** in the local menu.

  When you delete actions or combinations, they are removed from the active field and not placed on the clipboard. You can restore deleted actions and combinations by choosing **Undo** in the Quick Access Toolbar.

Pasting actions and combinations

You can paste back the actions or event combinations that you have just cut or copied, in the Events dialog of the same page or object, or in the Events dialog of a different page or object. To do this:

➢ Move the mouse pointer to the Clipboard icon , click and drag the elements back into the active field (the shape of the mouse pointer changes to a + sign).

  You can also right-click the active field and choose **Paste**.

Moving a combination

➢ To move an event combination (over or under other combinations), click the event to select the whole combination, then simply drag it to the desired location in the active field.

This has no effect on the functionality of the page or object, but can sometimes give a better overview of the combinations you have created.

Saving actions and combinations in the User tab

As the Windows clipboard, the Events dialog clipboard is only useful as temporary storage. Anything stored on the clipboard is lost as soon as something else is placed on it or when the computer is shut down.

You can however save actions and event combinations permanently in the User tab of the Events dialog. To do this:

➢ Open the User tab at the far right of the Events dialog.

> ➢ Drag the selected actions or event combinations from the active field to the User tab.

To re-use these saved actions and combinations:

> ➢ Open the Events dialog of the page or object you are programming.

> ➢ Drag the actions or event combinations from the User tab into the active field.

Saving actions and combinations in the Multimedia Catalog

You can also save your favorite actions and combinations for later use in the Multimedia Catalog. To do this:

> ➢ Open the Multimedia Catalog by choosing **View | Show/Hide | Multimedia Catalog**.

> ➢ Open the User Area of the Multimedia Catalog, and create or choose the required category.

> ➢ Drag the actions or event combinations from the active field into that category.

You can re-use these saved actions and combinations at any time simply by dragging them to the Events dialog of the page or object you are programming.

For more information about the Multimedia Catalog, refer to the section "The Multimedia Catalog".

Viewing the active field

The active field can be viewed in two different ways:

- The **Default View** displays all the actions belonging to a particular event in a row. You can see all the action icons and add a descriptive text underneath each one (right-click the action and choose Description). However the length of this descriptive text is limited by the space available between the icons. If your events have many actions attached to them, this view may become cluttered.
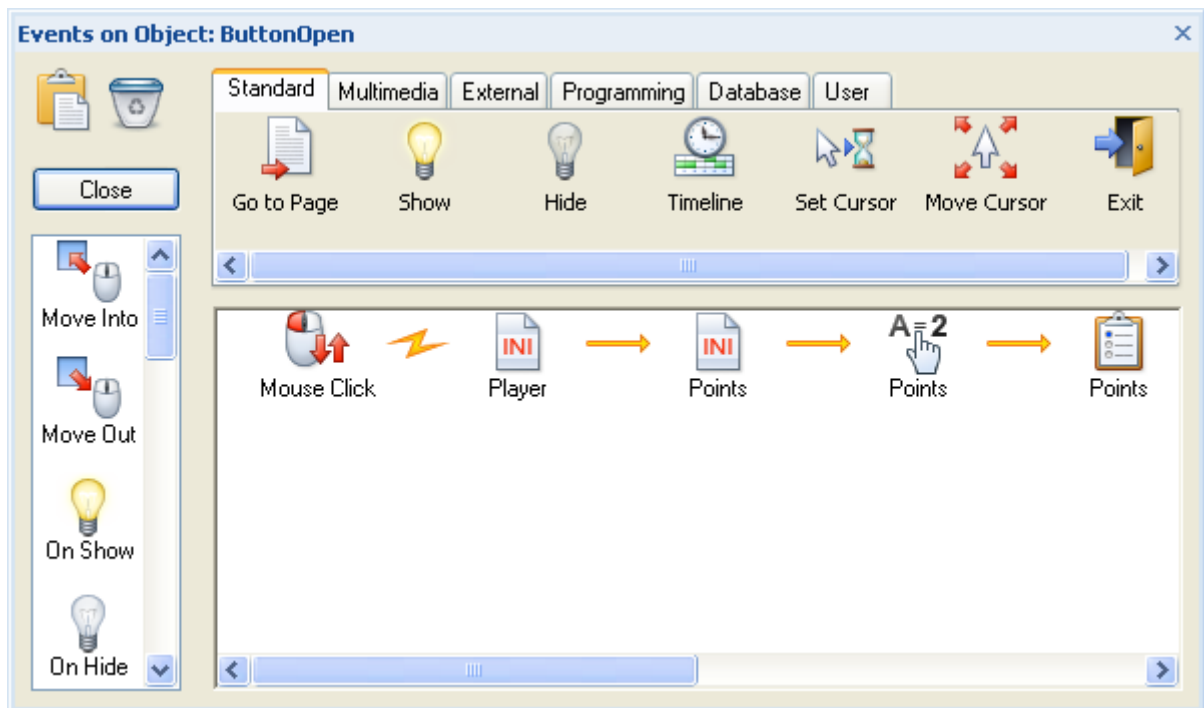
- The **Script View** (showing here the same content as above) displays each event and each action on a separate line, just like script code, and offers much more detail about the actions. To view these details in the Default View, you would need to open the related dialog by double-clicking the action icon.
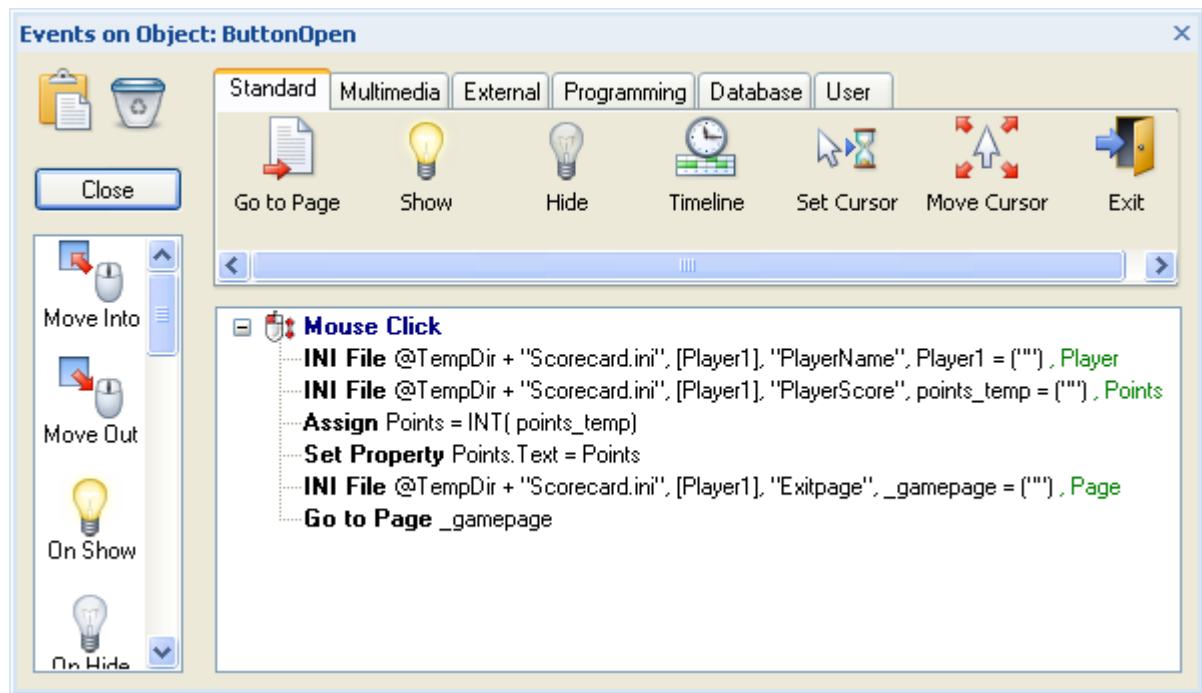
Placing and editing the actions is done in exactly the same way in both views. The only difference is the way they are displayed.

➢ To switch between the Default View and the Script View, right-click the active area of the Events dialog and check or uncheck **Script View**.

Disabling events and actions temporarily

Mediator allows you to disable particular events and/or actions while testing your project by "commenting them out". This is only operational in test mode. In the exported version of your project, events and actions are executed as normal, whether they are commented out or not.

To disable a particular action or event combination:

➢ Right-click the event or action which you want to disable temporarily.

➢ Choose **Comment Out** in its local menu.

A commented out event or action is identified by a red cross on top of the icon.
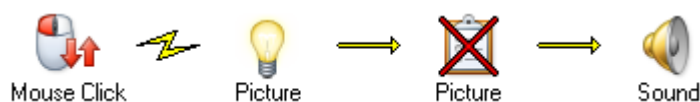
➢ To re-enable the event or action, just choose Comment Out again.

Using the predefined event combinations

Mediator offers some predefined event combinations, stored in the User tab of the Events dialog.

Click Here Cursor

 This combines the events Move Into and Move Out with a Cursor action. On Move Into the cursor is changed to a hand, on Move Out the cursor is changed back to normal. This combination lets you quickly set up a cursor change on buttons, hypertext, hotspots, etc.

Standard Drag & Drop

 This combines the events Mouse Down and Mouse Up with a Drag & Drop action. On Mouse Down the current object is selected as the object to drag (using the system variable @ThisObject). On Mouse Up the object is dropped. This combination saves you time when you want to create drag and drop functionality for a particular object.

Print Page

 This combines the actions Report and Open Doc to create a print function. Place this combination after a Mouse Click (or another event) to print the current page at runtime.
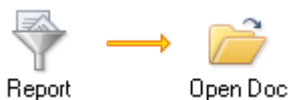
Using keyboard events

Mediator's keyboard events let you program particular actions depending on the key pressed by the user.

Pressing a key as two immediate effects:

- The **On Key Down** event is triggered.

- The **@Key** system variable receives the "value" of the key.

If for instance the user presses 'k', the system variable @Key is assigned the value 'k'. See "System variables" for more information on these variables.

The same goes for On Key Up. As soon as a key is released the system variable @Key is assigned the "value" of the released key.

The only difference between the two events is the moment the event is triggered:

- **On Key Down** occurs as soon as the key is pressed.

- **On Key Up** occurs as soon as it is released.

These keyboard events are triggered every time a key is pressed or released, except when an input object is active (since in that case the user is typing text which should not trigger any keyboard event).

You can choose to execute a particular action:

- **When the user presses any key**

    In this case simply drag one of the two keyboard events into the active field following by the desired action.

As soon as the user presses a key, the event will be triggered and the action executed.

- **When the user presses a particular key**

  This is still fairly simple. Drag one of the keyboard events into the active field followed by an If action (from the Programming tab).

  In the 'IF (Condition)' field, specify the key which the user must type in order for the action to be executed (if you want to perform a particular action when the user presses 'k', enter @key="k"). Place that action in the 'THEN (Do if condition is true)' field. You can also place an action in the 'ELSE (Do if condition is false)' field that will be executed if any key other than 'k' is pressed.
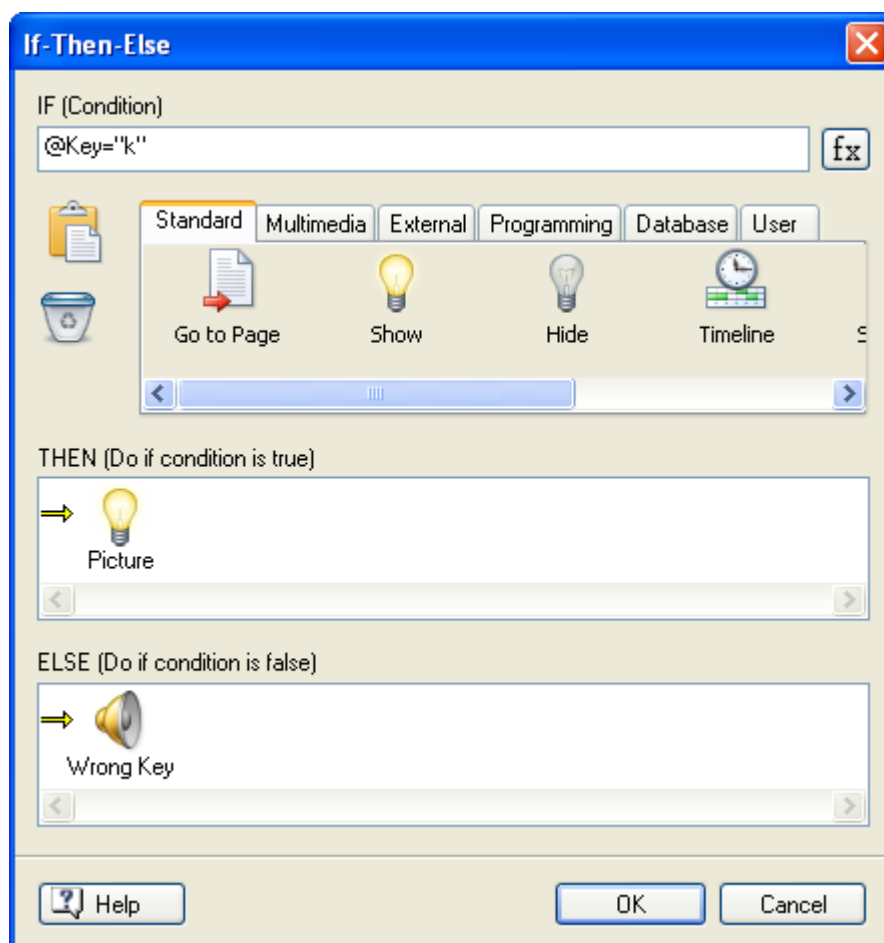
The keyboard events react to any normal keys, any combination using Shift or Ctrl and all the function keys F1, F2 etc. except F10. Letters and numbers will appear in the @Key variable between quotes: the letter a appears as "a", the number 6 appears as "6" etc.

When testing for key combinations such as Ctrl + C or Shift + X, you should use the On Key Down event.

Possible values of @Key:

Key	@Key
[a]..[z] , [0]...[9]	"a".."z" "0"..."9"
[Shift] + [a]..[z]	"A".."Z"
→ [Right Arrow]	"right"
← [Left Arrow]	"left"
↑ [Up Arrow]	"up"
↓ [Down Arrow]	"down"
[Ctrl] + [Up Arrow]	"ctrl+up"
[Ctrl] + [a]	"ctrl+a"
[Ctrl] + [Shift] + [a]	"ctrl+A"
[Page Up] [Page Down]	"page up" "page down"
[Delete] [Backspace]	"delete" "backspace"
[Tab]	"tab"
[Return] [Enter]	"enter"
[Esc]	"escape" (works only in runtime mode)
[F1]....[F12]	"F1".... "F12" (F10 does not work)
[Spacebar]	" " (space)

Using resources

Mediator lets you define resources on your pages.

A resource is nothing more than an action that you can pre-define and re-use. This simple enhancement of the action offers some new powerful possibilities. With resources you can make your objects blink, you can pause animations, you can create loops, and much more.

Resources can be compared to master pages. A master page lets you apply a particular set of objects to several pages in one go. Similarly, a resource lets you re-use several times on the page an action which you only need to define once.

If for instance you want to place the same action with the same parameters on different objects of your page, it is a good idea to create the action as a resource. If you then decide to change one of the parameters, you only have to do this once in the resource.

Quick example: You have 28 buttons on a page that all play the same sound when clicked. Then you decide to change the sound. Instead of changing it on all 28 buttons, you only need to change it in the resource.

Resources belong to the page in which they are created, and are only valid for that page.

Opening the Resources dialog

You can open the Resources dialog in various ways:

- Choose **Page | Interactivity | Resources** or **View | Interactivity | Resources**.

- Right-click the page and choose **Resources** in its local menu.

You close the Resources dialog by clicking the X in the top right corner.
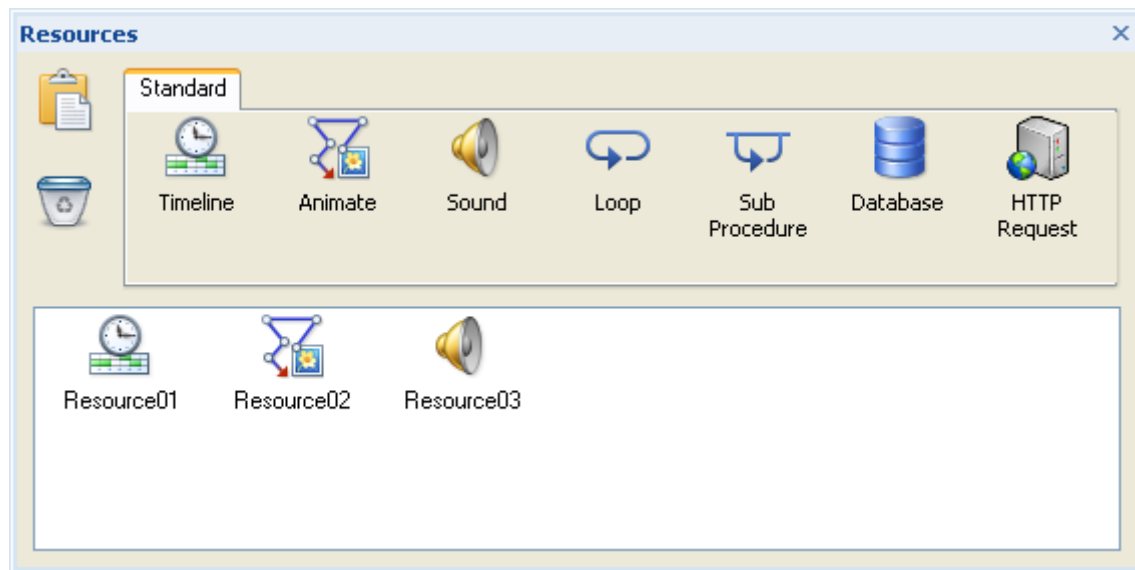
By default, the Resources dialog contains the following resources: Timeline, Animate, Sound, Loop, Sub Procedure, Database and HTTP Request.

Note however that you are not restricted to these preset resources since you can create a resource from any action by dragging it directly from the Events dialog to the Resources dialog.

- The **Timeline**, **Animate** and **Sound** resources are ordinary actions which can also be found in the Events dialog. They are particularly useful, and their advantages are described further down in this topic.

- The **Loop** resource lets you repeat an action or series of actions until interrupted by a Break action. See the topic "Loop/Break" for more information.

- The **Sub Procedure** resource lets you group several actions for re-use on different objects. See the topic "Sub Procedure" for more information.

- The **Database** resource is a special resource which lets you exchange data with a database. You can read more about it in "Using databases" and "The Database resource".

- The **HTTP Request** resource is also a special resource. See the topic "The HTTP Request resource" for more information.

Creating resources

➢ To create a resource, simply drag the icon required to the active field.

This opens the relevant dialog in which you can specify the parameters for that specific action/resource.

The default names Resource01, Resource02, etc. are not always convenient.

➢ To rename a resource, right-click it and choose **Rename** in its local menu.

Resources behave like actions.

➢ To edit a resource, double-click it.

Starting, pausing and stopping a resource

➢ To start a resource, simply place a **Start** action in the Events dialog of the object which is meant to start the resource, and specify the name of the resource.

➢ To pause it, use the **Pause** action.

➢ To stop it, use the **Stop** action.

Resource events

 In addition to the Start, Pause and Stop actions that you can use on other objects to manipulate the resource, you can also place actions on the resource itself using the **On Start** and **On Stop** events which are triggered when the resource starts or stops.

Using the Timeline resource

You can use the Pause action to pause a Timeline resource and a Start action to restart it.

You can also use the Pause action in the timeline resource itself so that it pauses itself. This is a useful feature when doing live presentations, where you place several Pause actions in the resource itself, and use a button to start the resource every time it has been paused. This way you can execute both the resource and the presentation in small steps.
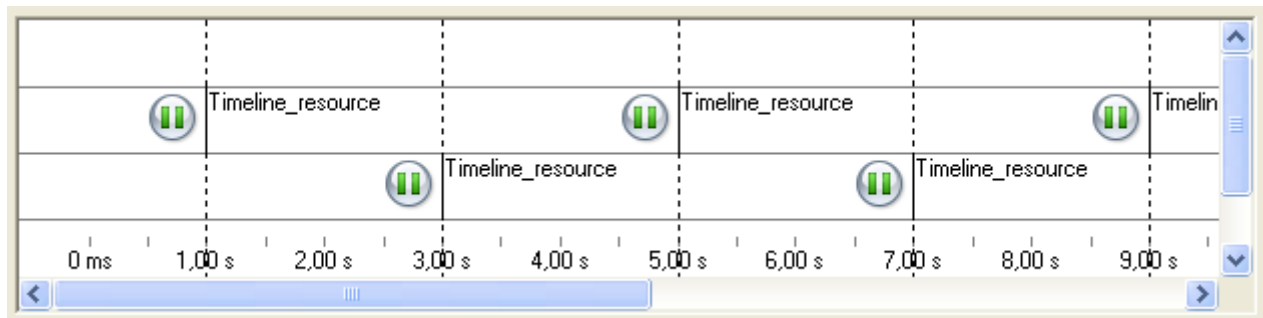
You can get a Timeline resource to restart itself, thereby creating a loop. Place a Start action on the Timeline resource where you wish to loop it. Select the resource itself as the object to start.

For a full description of the Timeline action, see the topic "Timeline".

Using the Animate resource

The advantage of this resource is that it lets you start, pause and stop the animation. You can also start it from many different objects as described above.

For a full description of the Animate action, see the topic "Animate".

Using the Sound resource

Since the Start, Stop and Pause actions all work with resources, you can use them to control a sound resource.

You can for instance create a button that starts a piece of music, one that pauses it, and one that stops it or starts another sound resource.

You can also use the Sound Volume action with the resource to control the volume and balance of the sound.

For a full description of these actions, see the topics "Sound" and "Sound Volume".

Using project variables

→ Advanced

x,y Mediator lets you create project variables that you can combine with other project or system variables to create expressions.

Creating a project variable

➢ Open the Project Variables dialog by choosing **View** | **Programming** | **Variables**.
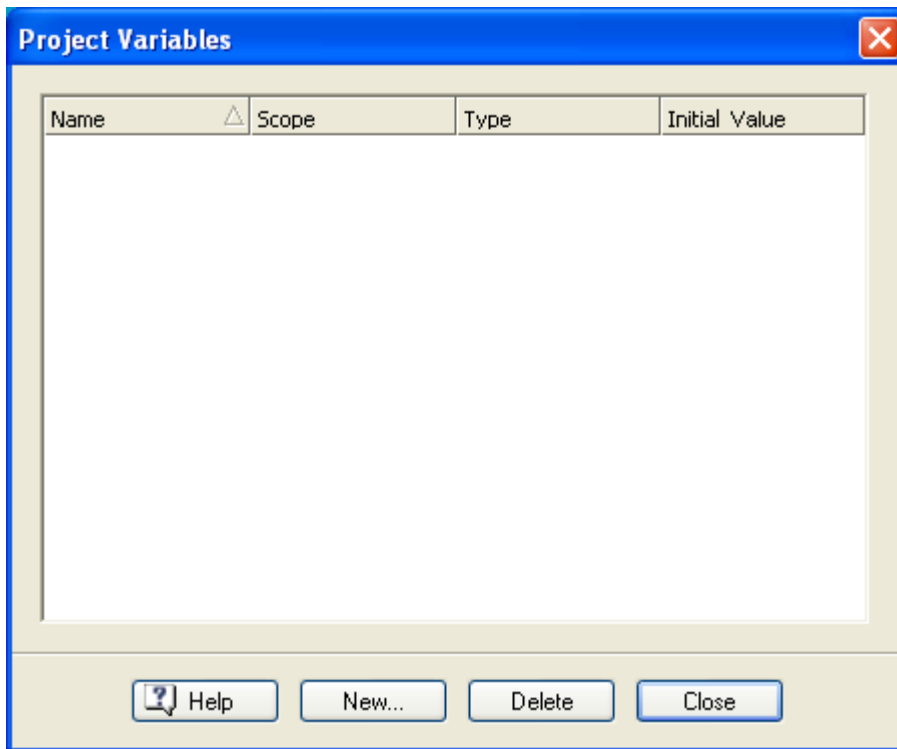
Here you can create new variables, change the type and scope of existing variables or delete them.

You can use the 'Initial Value' field to give an initial value to the variable.

Defining the variable scope

A project variable can be local or global:

- **Local variables** can only be used on the page where they are created.

  Use them for calculations that are only needed on specific pages.

  Local variables of the same name which are placed on different pages do not interfere with each other.

- **Global variables** can be accessed from any page in the project.

  If you want to present on a particular page the result of a calculation done on another page, you should use a global variable. Similarly, if you want to ask for the user name on one page so that you can use it on a different page, you should store it in a global variable.

  Global variables must have unique names.

Defining the variable type

Mediator supports six variable types:

- **Text**

  Any sequence of ASCII characters, normal letters, special characters and numbers.

Note that numbers that are stored in text variables cannot be used in calculations.

- **Floating point**

    These are decimal numbers in the range 3.4*10 to the power of -38 to 3.4*10 to the power of +38 (32 bit).

- **Integer**

    These are whole numbers in the range -2,147,483,648 to 2,147,483,647 (32 bit).

- **Boolean (True/False)**

    Unlike the other types, boolean variables can only have one value: 1 (True) or 0 (False).

    All comparisons result in a True/False expression.

- **Object**

    Object variables are variables containing a reference to an object. This allows you to modify an object at runtime without knowing its identity at design time.

    You can assign an object to an object variable in two ways:

    - Using the Mediator Assign action
    - Using the Assign statement in script

- **Array**

    Array variables let you store more than one value. They are described in detail below.

Only integer and floating point numbers can be used in number calculations.

Using arrays

An array is a variable with an index, enabling it to store more than one value.

In the example below, "Array" is the array variable name. The expression inside the square brackets [ ] is the index.

```
Array[0] = "test"

Array[1] = "abc"
```

It is not possible to initialize an array with values when creating the array variable in the Variables dialog.

Mediator arrays have only one dimension, which you do not need to specify as the array expands automatically as you add more values to it.

The data contained in the array is of variant type. You therefore do not need to specify a variable type (text, floating point, integer, boolean, etc.). Instead, each element of the array automatically inherits the type of the value you assign to it.

You can for instance assign the following values to the "Array" variable without having to specify their type:

```
Array[0] = "Test"

Array[1] = 512
```

Make sure you write the index immediately after the array name, without a space, i.e. Array[0], not Array [0].

The index of the array is implemented as a string. In the following example, each of the index values is converted to a string:

```
Array[0] = 400

Array["test"] = 500

Array["abc"] = "text"
```

This means that:

```
Array[0] = 5
```

is the same as:

```
Array["0"] = 5
```

The order in which the values are held internally is the order in which each index is added. This is only relevant if you use script to iterate through the indexes (keys).

Using arrays with the Assign action

- To assign a value to a specific element of an array, you specify the element and its index in the Variable field of the Assign dialog, e.g. Array["Test"], and fill in the assignment expression as usual.

- To remove a single element from an array, you specify the element and its index in the Variable field, and leave the assignment expression empty.

- To clear an array, just specify the array name in the Variable field, and leave the index and assignment expression empty.

Using arrays in Mediator objects

You can use arrays in list box objects and input objects:

- You can display the contents of an array in a list box by assigning the array to the list box using its DataArray property. In a Set Property action for instance, you would have:

  ```
  Listbox.DataArray = Array
  ```

  You do not need to specify the index of the array.

  You can also assign the contents of a list box to an array.

- You can perform similar operations with multiline input objects, using their TextArray property.

Using arrays in the HTTP Request resource

You can also refer to arrays in the Data field of the HTTP Request resource.

The Data field will expand automatically using the index as parameter name. So if you have:

```
Array["param1"] = "test"

Array["param2"] = "abc"
```

Data will expand to:

```
param1=test&param2=abc
```

Integration with script

The Mediator array does not correspond to an array in script, but to an object.

To access the array data the script can use the functions:

- Get(index)

- Put(index,data)

- Clear()

- Remove(index)

Additionally the array object implements a container interface so that you can use "For each" statements on the array.

"Keys" is a sub-object implementing a container interface for iterating the keys (index).

As an example, the code below will show a message box displaying each index:

```
For each index in myarray.Keys

    Msgbox index

Next
```

Using expressions

Many of the fields in Mediator actions, including most Duration fields, accepts variables and expressions.

An expression may be a combination of project variables, system variables, numbers, object properties in the *Object.Property* notation, functions and fixed text between quotes, all linked with operators.

Here are two examples showing the advantages of using variables and expressions in a Mediator project:

- Specifying a variable instead of a page name in the Go to Page action. The value of the variable is read when the action starts, and used as the page name to go to. This lets Mediator determine at runtime the name of the page to display, on the basis of the contents of the variable.

- Using an expression in the Duration field of an Animate action. The expression is only evaluated when the action starts. This lets Mediator determine the duration of the animation at runtime, on the basis of the contents of the expression.

Some of the fields that accept expressions are followed by an **Expression** button .

Clicking this button gives you access to all the elements you can use to build your expression, namely:

- **System variables**

  These are built-in variables that help you in a number of different ways. For instance, @Key holds the value of the last key pressed on the keyboard, @Date shows the current date, @TempDir holds the path to the user's temporary folder, etc. You can use any of these system variables in the expression field.

  For a complete list of the built-in system variables available, see "System variables" in the Reference section.

- **Functions**

  This list shows all the built-in functions you can use with variables, e.g. STRING, INT, COS, etc.

  For a complete list of the built-in functions available, see "Functions" in the Reference section.

- **Operators**

  This lists shows all the operators available. You can use operators to add values, multiply values, combine variables, check for larger than (>), smaller than (<) etc.

  For more information on operators, refer to "Using operators".

- **Project variables**

  This is a list of all the variables you have created in your project. It includes all local and global variables.

  For more information on project variables, refer to "Using project variables".

Using expressions to build file names

You can also use expressions to build file names and path names to external files. In that case, if you intend to export and distribute your project to other users, you will need to ensure that Mediator includes the files in the exported version, by using the command **Prepare | Additional Data Files** or **Prepare | Additional Program Files** prior to exporting. See "Adding data and program files" for more information.

Using object expressions

Object expressions are expressions of type object. They have the syntax:

> *Object.Property*

where *object* can be the name of a Mediator object or an object variable, i.e. a project variable containing a reference to an object.

Object expressions can be used in various ways:

- In Mediator actions that refer to objects: Show/Hide, Start/Stop/Pause etc.

- In Mediator expressions, in order to get or set properties with either:

  - *ObjectVar.Property* (object variable) or
  - *ObjectName.Property* (object constant)

- To transfer Mediator object references from Mediator to script code (parameters in the Script action)

Using operators

An operator allows you to perform an operation between two expressions. You can select an operator from a list by clicking the **Expression** button fx that appears in most programming dialogs, but it is often quicker to enter the operator manually.

Priority	Mediator	Function
1	()	Parentheses
2	^	Power
	*	Multiplication
	/	Division
3	+	Addition
	-	Subtraction
4	=	Comparison
	<>	Not equal
	<	Less than
	<=	Less or equal to
	>	Greater than
	>=	Greater or equal to
5	AND	And
	OR	Or

All operators within the same priority group have the same priority.

Operators in group 1, 2, 4 and 5 cannot be used on text expressions.

All operators in group 4 result in a true/false expression.

Examples:

10 + 5 * 2 = 20   (* has priority over +)

(10 + 5) * 2 = 30   (expression between parentheses is calculated before applying *)

2 ^ 3 = 8   (2 raised to the power of 3)

2 ^ 3 + 2 = 10   (^ has priority over +)

"Medi" + "ator" = "Mediator"   (addition of two text expressions)

10 < 20 = True   (comparison of two numbers)

Using control characters

→ **Advanced**

The character | is a special character in Mediator. It is referred to as an "escape character". You can use it in combination with other characters to insert new lines and other special characters in variables and text files.

The following is a list of useful combinations:

Characters entered	Resulting character	Comment
||			Since the character	has a special significance for Mediator, if you want to use this character in your text, you must enter two of them, e.g. ||
|"	"	To place quotes inside an expression enter |"
|r	Line feed (CR)	To go to a new line within an expression use |r
|n	Line feed (LF)	To go to a new line within an expression, you can also use |n

Examples

"This is a text constant"	Text placed between quotes in an Assign action
"A |"true|" constant"	To use quotes inside the assignment expression you must place a	in front of each ".
"This is on the first line. |r And this is on the second line."	The |r is equivalent to a line feed, so that the text will appear like this: This is on the first line. And this is on the second line.

Using o8o files

An o8o file is a Mediator file that contains single or multiple Mediator items. These items can be pages, objects, actions, events with actions and so on.

If you have created general purpose functions that you use often, you can save them as o8o files in order to reuse them easily.

A simple example is the sequence 'Move Into - Change cursor to hand' and 'Move Out - Change cursor back to normal'. As this combination of events and actions is frequently used, it is saved by default as an o8o file in the User tab of the Events dialog, under the name Click Here Cursor.

Creating an o8o file

➢ Set up the events and actions required, then select them all and drag the selection to your desktop, to a folder, to the User Area of the Multimedia Catalog or to the User tab of the Events dialog.

Mediator automatically creates an o8o file containing the events and actions. You can do the same with objects, for instance if you have a special object which you don't want to recreate every time. All the object functionality is included in the o8o file.

Using an o8o file

To use an o8o file, simply drag it from where you placed it back into your Mediator project. You can drop it on the workspace, in the Events dialog, in the Resources dialog and so on. Obviously you cannot drag an o8o file containing an object to the Events dialog.

Using o8o files with macros

o8o files are particular useful when using macros since objects or actions created from a macro script must be located in an o8o file.

To create a slideshow macro for instance, just predefine the picture object you want to use. Then let the macro insert it on the pages and change the file path in each object created with the macro.

Printing text and pictures

→ Advanced

One possibility for printing text and pictures from within a Mediator project is to use the **Open Doc** and **Execute** actions.

Printing text

The **Open Doc** action is well suited to printing any type of text document.

Its 'Action' field gives you access to the same commands as when you right-click the document on your computer. Selecting 'print' will therefore allow you to open, print and close the document. Note however that the actions available depend on the program associated with the file extension on the computer. The actions available to the end user may therefore not be the same as the actions available to you.

Here we have selected to print a Microsoft® Word file placed in the same folder as our Mediator project by using the @DocDir system variable.
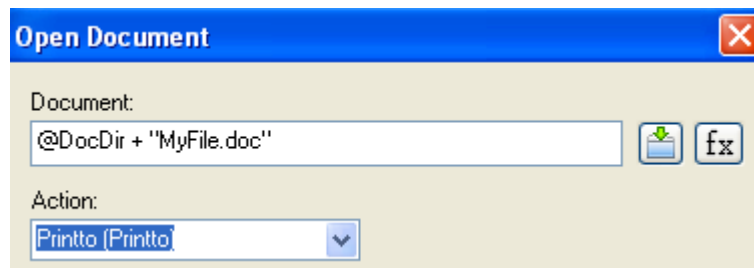
You can also use the **Execute** action with Notepad to print simple text files.

➢ Enter "Notepad /p" in the 'Application' field (with the quotes) and enter the file name, e.g. "MyTextFile.txt" in the 'Command line' field.

The Execute action will open Notepad, and the /p command will open, print and close MyTextFile.txt.
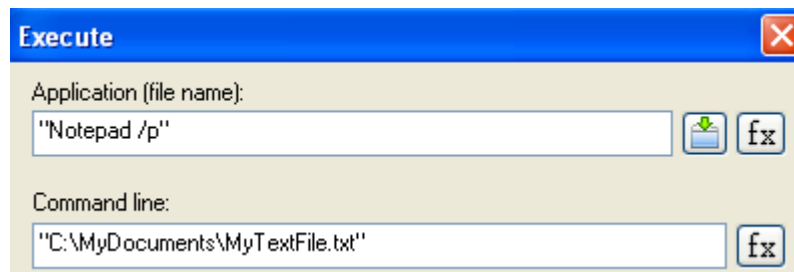
To print formatted text, use the Windows program WordPad rather than Notepad:

➢ Enter "Write /p" in the 'Application' field (with the quotes) and enter the file name, e.g. "MyTextFile.rtf" in the 'Command line' field.

Printing pictures

The **Open Doc** action also works very well with pictures.

➢ Enter the path to the picture.

➢ Select 'print' in the 'Action' field to open, print and close the picture.
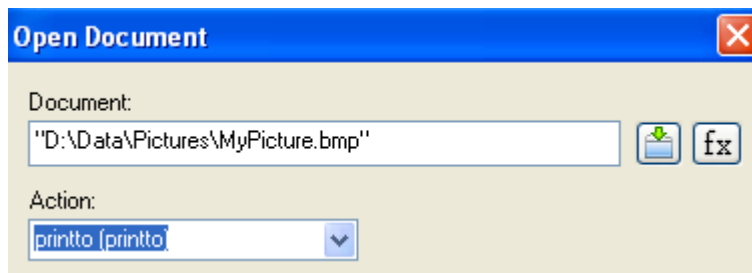
📌 If you are printing text or pictures that are not an integral part of a project that you intend to export and distribute to others, you need to add the files to the project to ensure that Mediator will include them when exporting the project. See "Adding data and program files" for more information.

Using the Search Manager

📄 Mediator allows your users to perform keyword and text searches on your project at runtime. For this purpose, Mediator maintains two internal search lists per project:

- A **Keywords** list

  This contains all the keywords you have added to your project. You can attach keywords to each page and each object via the Keywords field of their Properties dialog. Keywords should be separated with semicolons:

- A **Text search** list

  This list is maintained automatically by Mediator. It contains all the words appearing in the project's page descriptions, text objects, headline objects and buttons.

  📌 For a word to be added to this list, both the object and the page it belongs to must have their 'Searchable' property set to True.

Maintaining the search lists

The purpose of the Search Manager is to help you remove insignificant words (such as "and", "or", "the", "it", etc) from the two search lists in order to optimize search speed.

➢ Choose **Review | Search | Search Manager** to open the Search Manager dialog.
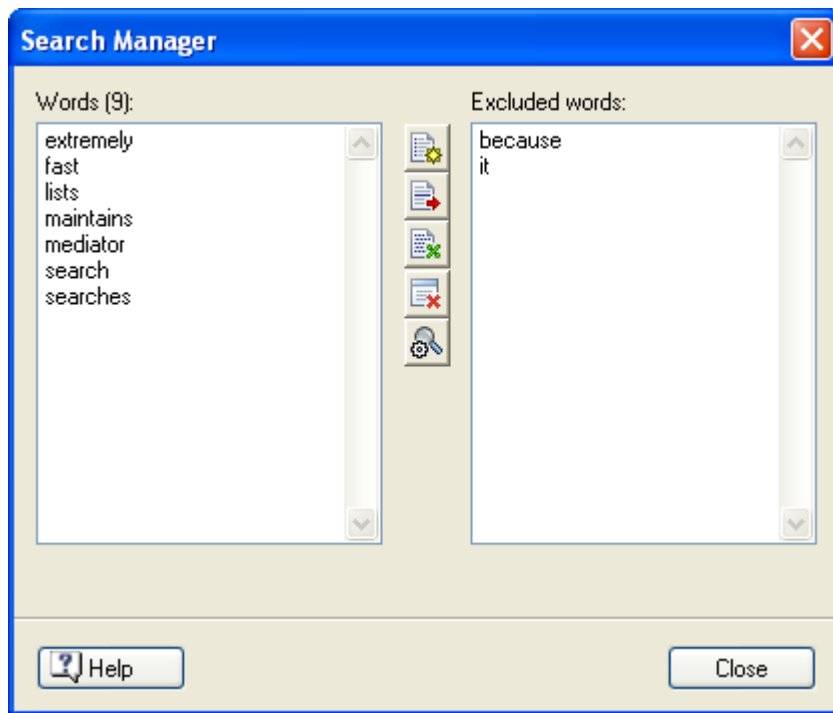
In this dialog, the left field lists all the words contained in the Keywords list and the Text search list added together, whereas the right field contains the list of words that are excluded from the search.

The icons in the middle allow you to perform operations on the lists:

- Clicking empties the list of excluded words.

- Clicking moves the word(s) highlighted in the search lists on the left to the list of excluded words on the right.

- Clicking lets you exclude words according to their frequency of use within the project.
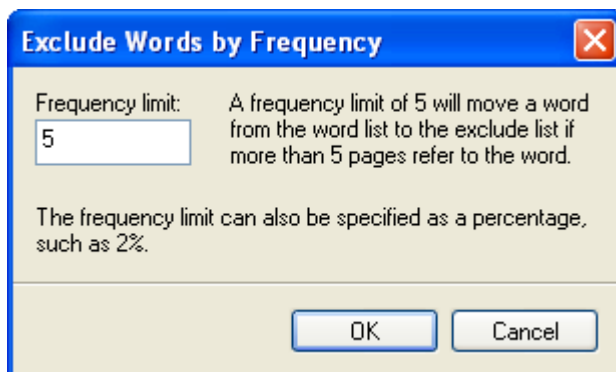
Entering the value 5 in the 'Frequency limit' field would exclude any word appearing on more than 5 pages from the search.

You may also specify this value as a percentage. Specifying the value 2% for instance would exclude any word appearing on more than 2% of the pages.

- Clicking removes the highlighted word(s) from the list of excluded words, which means that the word(s) will become searchable again.

- Clicking recreates the search lists. This process may take a long time for large documents. You can interrupt it if necessary, but this will of course prevent the search lists from being fully refreshed.

120

To select several words in one of the lists press and hold the Ctrl key while selecting the words.

Searching for keywords or text at runtime

Mediator gives you two ways of letting the user search your project for particular words at runtime:

- **Using a list box**

  A list box of type 'Index' lists all the words contained in the project's Keywords list, whereas a list box of type 'Search word' lists all the words contained in the Keywords and/or Text search list.

  You can then decide what action to take depending on the word selected by the user in the list box.

  For more information on these list boxes, refer to "List Box properties: List box tab".

- **Using a ready-made page**

  You can include one of Mediator's ready-made Index or Search pages into your project. In addition to listing the contents of the Keywords and Text search lists, these pages have the necessary functionality to let the user click a word and go automatically to the page containing that word.

  For more information on these ready-made pages, see "Using the dynamic templates".
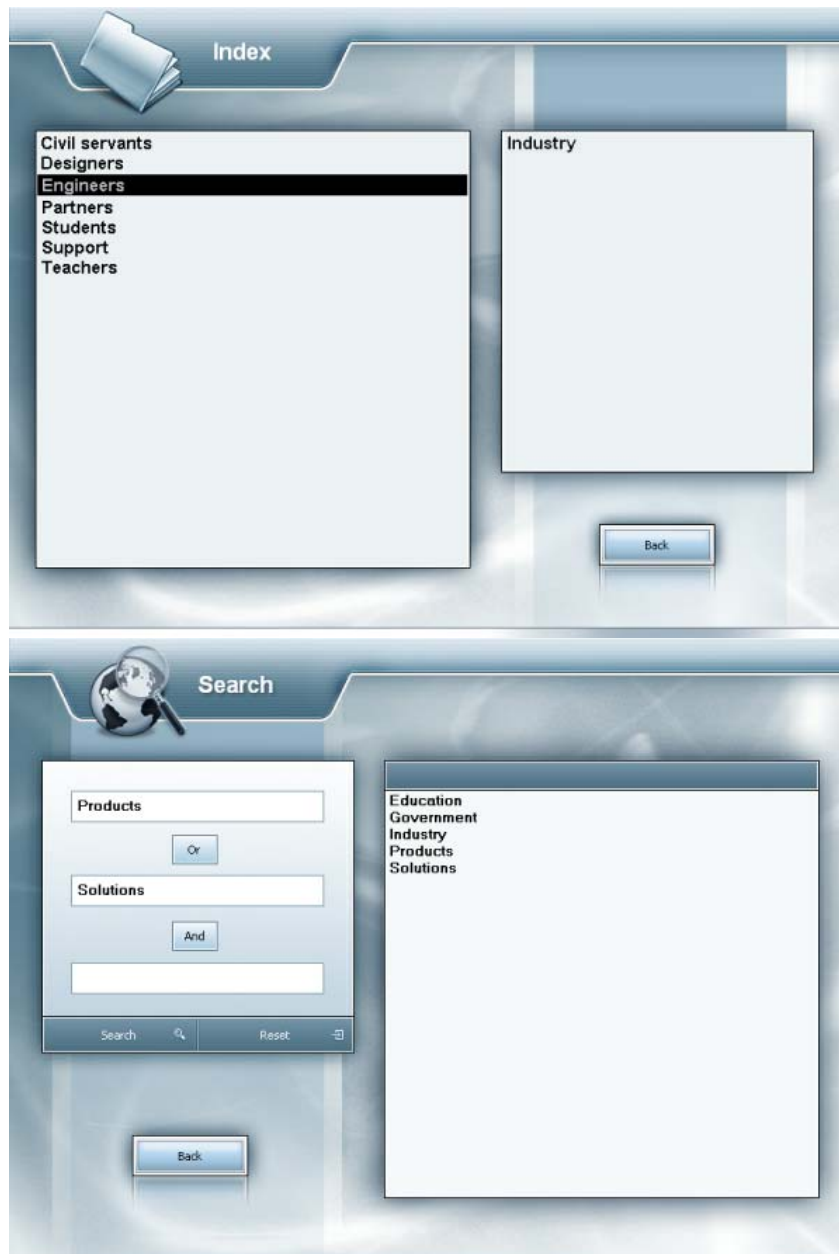
The Multimedia Catalog

Using the Multimedia Catalog

The Multimedia Catalog can help you apply a professional design to your project very quickly. It contains a vast collection of high quality multimedia elements organized in different categories and themes.

It gives you fast access to clipart, navigation bars, players, photos, backgrounds, sounds and much more. All the Multimedia Catalog elements are free for you to use in your projects.

You can also store your own elements in the Multimedia Catalog. This enables you to re-use them whenever needed by dragging them from the Multimedia Catalog into your projects.

Finally, you can connect one or more of your user categories to a folder on your hard disk or to a shared network folder in order to view and use their contents. This feature is particularly useful when several users want to make use of the same multimedia elements stored on a shared network folder.

➢ If the Multimedia Catalog is not already visible, choose **View | Show/Hide | Multimedia Catalog** to open it.
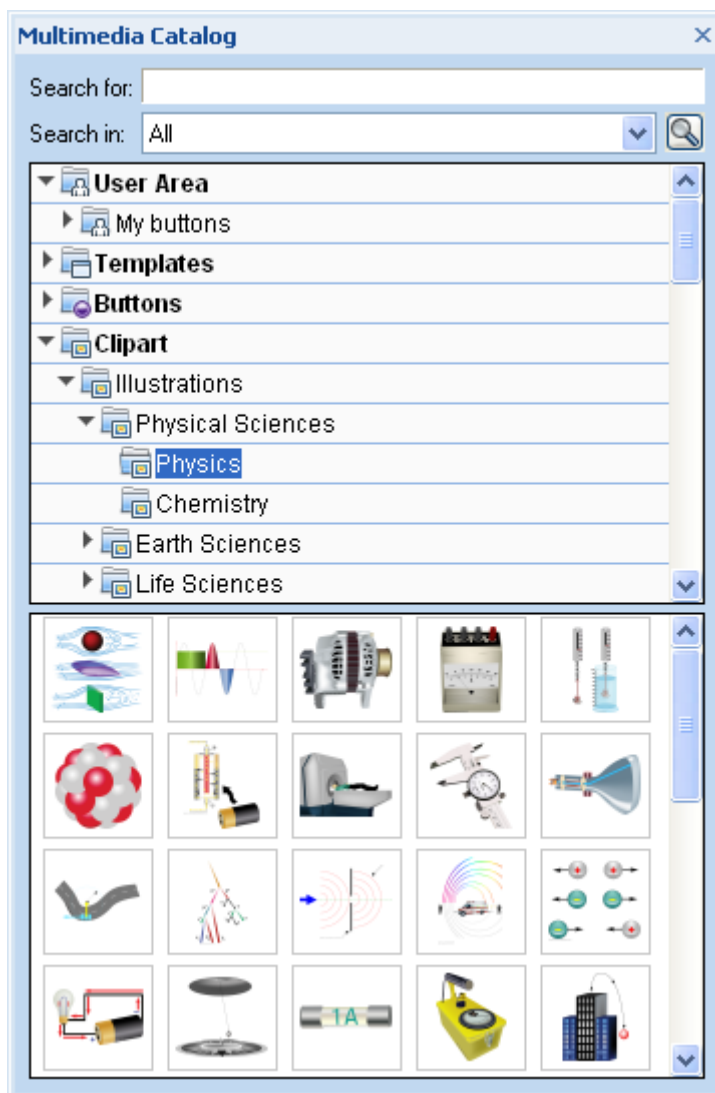
You can resize, dock and undock the Multimedia Catalog according to your needs. See "Using the Mediator panels" in the topic "Setting up your workspace" for more information.

Overview of the Multimedia Catalog

The Multimedia Catalog consists of different categories, some of which contain sub-categories:

- **User Area:** This area is reserved for your own use. You can add or drag any element to it, create as many sub-categories as needed and even connect one or more of your user categories to an external folder. See "Adding elements to the Multimedia Catalog" below for more information.

- **Templates:** Contains navigation bars and player bars which you can drop directly onto your page.

- **Buttons:** Contains all the buttons used in the page layouts available when creating a page, numerous square and round buttons in different colors, and a full range of push buttons.

- **Clipart:** Contains over 1500 high quality illustrations covering many different educational fields, as well as business and web-related illustrations. Also includes animated GIFs, photos, all kinds of different backgrounds and bump maps.

- **Sounds:** Contains a broad range of different sounds which you can drop directly onto your pages or objects, creating the relevant Sound action automatically.

- **Preloaders:** Contains a number of Flash preloaders.

- **Favorites:** You can place in this category any element you want to be able to find again quickly.

- **Recent:** When you add a Multimedia Catalog element to your page, this element is automatically copied to the Recent category. This allows you to quickly find recently used multimedia elements in case you want to use them again.

- **Search Results:** This category only appears once you have done a search in the Multimedia Catalog. It shows all the elements of the catalog that correspond to your search criteria.

See the topic "Contents of the Multimedia Catalog" for more information about how to use some of these contents.

Important: The Multimedia Catalog only shows elements compatible with your document type. If for instance you have selected the document type HTML when creating your project, multimedia elements that are not supported in HTML export are not shown in the Multimedia Catalog. The document type is normally defined when you create a document, but you can choose a different document type at any time later (see "Document properties"). In that case, Mediator displays a message advising you to check that all the elements already inserted in the project are compatible with your new choice of document type.

Browsing the Multimedia Catalog

➢   To see the contents of a category, select it by clicking it or by pressing the up or down arrow key on the keyboard.

A small right-pointing arrow next to a category name indicates that this category contains sub-categories.

➢   Click this arrow or press the right arrow key on the keyboard to show the list of sub-categories.

You can collapse a category again by clicking its arrow or by pressing the left arrow key on the keyboard.

You can examine a particular multimedia element more closely by placing the mouse pointer over it. This shows an enlargement of the element as well as relevant information such as the name of the element and its size.

Meeting
Meeting.png
77 KB
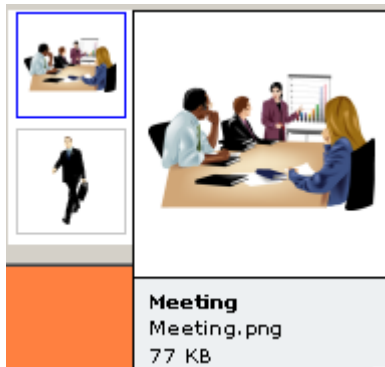
Using elements from the Multimedia Catalog

➢ To insert a Multimedia Catalog element on your page, just drag it from the catalog.

Some Multimedia Catalog elements actually consist of several objects grouped together as one. When the element is dragged from the Multimedia Catalog onto the page it appears as a group in the Object list ⊞ 🖼.

You can access a grouped object (for instance to edit the text on a button) in two ways:

- Open the group in the Object list (click the + sign) and select the object in the group you wish to edit.

- Press and hold the Ctrl key, then click the object you wish to edit.

Using the Favorites category

If you often use the same elements, placing them in the Favorites category allows you to find them again very quickly. You can do this in two ways:

- Right-click the relevant element and choose **Add to Favorites** in its local menu.

- Drag the element from one of the Multimedia Catalog categories to the Favorites category.

The element is now copied to the Favorites category. If you want to remove it from this category at a later stage, right-click it again and choose **Remove from Favorites** in its local menu.

Searching the Multimedia Catalog

If you need an element related to a particular topic (for instance Europe) or a particular type of element (for instance a button), you can search the entire catalog for all the relevant elements:

➢ Type a search word in the **Search for** field. For instance, if you are working on a map describing various countries and want to insert their flags on the map, start typing the word "flags". As soon as you enter the 3rd character (i.e. the letter "a"), pictures of flags appear in the Search Results category.

➢ (optional) If you want to restrict the search to a particular category, select this category in the **Search in** field and click the Search icon 🔍 to restart the search.

➢ Scroll down the Search Results category until you find the flag you require.

💡 *During a search, the Search icon changes to* 🔍*. You can interrupt a search at any time by clicking this icon.*

Searches in the Multimedia Catalog are keyword-based. Many different keywords have been associated with the Multimedia Catalog elements to help you find rapidly what you need. By way of example, here are some of the many different keywords you can search for:

people, men, women, children, buildings, symbols, countries, maps, flags, animals, plants, computing, transport

If you are looking for particular elements, for instance arrows or buttons in a specific shape or color, you can search the Multimedia Catalog by typing relevant keywords, such as "arrows" or "purple".

When you enter the first few characters of a word or a full word in the 'Search for' field, Mediator goes through all the keywords that have been associated with the Multimedia Catalog elements. All the elements which have one or more keywords containing the characters you entered appear in the Search Results category.

You can view the keywords associated to a particular element and even add your own as follows:

➢ Right-click the element in the Multimedia Catalog display area.

➢ Choose **Properties** in its local menu.

The Properties dialog appears.
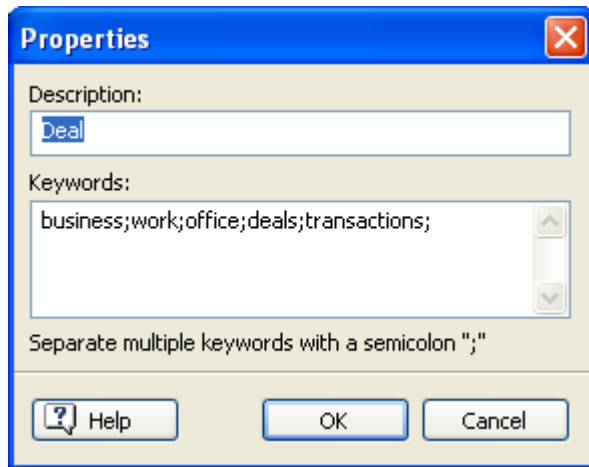
➢ Type the new keywords you want to associate with this element, separating them with semi-colons.

 The Properties dialog also lets you edit or remove unwanted keywords or change the description that appears when you view an enlargement of the element.

Adding elements to the Multimedia Catalog

You can keep your own elements in the Multimedia Catalog for future use, either in an existing category or in the User Area. You are also free to create your own categories within the User Area, to rename them or to delete them.

- Any element you add to one of the existing categories of the Multimedia Catalog is identified by a little shortcut icon, indicating that the element is not actually copied to the Multimedia Catalog, but only inserted as a link to the actual element.

- Any element you add to one of the User Area categories is identified by a small gray arrow.

There are different ways of adding an element to the Multimedia Catalog. Here is one of them:

➢ Select the category to which you want to add the element.

➢ Right-click the category and choose **Add Element** in its local menu.

➢ Choose the required element in the Open dialog.

You can also add elements by dragging them from your desktop, provided that their file type matches the contents of the category in which you are trying to place them.

In addition, you can copy the following Mediator elements directly into any of the User Area categories you might have created:

- Mediator objects

- Mediator pages

- Mediator actions or combinations (i.e. an event and all the actions associated with it)

This allows you to store these elements for future re-use. The detailed procedure is described below.

Mediator elements are added to the Multimedia Catalog with the extension ".o8o", which is specific to Mediator.

Copying Mediator objects into the User Area

➢ Open the Object list.

➢ Select the required User Area category.

➢ Drag the object(s) from the Object list to the User Area category.

Important: You cannot drag an object directly from the Mediator page to the Multimedia Catalog. You must select the object in the Object list and drag it from there.

You can also right-click an object and choose **Edit | Save in Multimedia Catalog**. In that case the object is placed in the root of the User Area.

Copying Mediator pages into the User Area

➢ Select the page or set of pages in the Page list and drag it to the required User Area category.

You can also right-click a page and choose **Save in Multimedia Catalog**. In that case the page is placed in the root of the User Area.

Copying Mediator actions and combinations into the User Area

➢ Open the Events dialog for the object whose events and/or actions you want to copy.

You can now either:

- Drag an event into the required category to copy the event and all its associated actions, or

- Select one or more actions and drag them to the required category.

You can also copy actions and combinations from the Timeline dialog into the User Area.

To drag several elements simultaneously from Mediator, press and hold the Ctrl key down while selecting the elements required, then drag the selection into the relevant category. The selection is added as a single ".o8o" file, named after the first selected element but containing all the elements. When you drop such a file back into Mediator, all the elements you selected are extracted from it.

Renaming an element

You can give relevant names to all the elements you add to the Multimedia Catalog or rename existing elements as follows:

➢ Right-click the element you wish to rename and choose **Properties** in its local menu.

➢ Enter a new description for the element.

The new description will appear when you view an enlargement of the element.

Deleting an element

You can delete any element you have added to the Multimedia Catalog as follows:

➢ Right-click it and choose **Delete** in its local menu or select it and press Delete.

Creating a category within the User Area

You are free to create your own categories within the User Area as follows:

➢ Right-click the User Area or the sub-category of the User Area in which you want to create a category.

➢ Choose **Create Category** in the local menu.

➢ Type the new category name in the white box that appears.
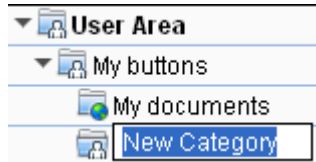
You can also rename or delete any category in the User Area by right-clicking it and choosing Rename Category or Delete Category respectively in its local menu.

Resetting the Multimedia Catalog

You can restore the original contents of the Multimedia Catalog at any time:

➢ Click the **Mediator Button**.

➢ Click **Mediator Options**.

➢ Click **Preferences** on the left.

➢ Click **Reset Multimedia Catalog**.

This will leave your User Area untouched, but will remove all the elements you might have added to any other category.

Connecting a category to an external folder within the User Area

Mediator allows you to connect one or more of your user categories to a folder on your hard disk or to a shared network folder. This feature is particularly useful when several users want to make use of the same multimedia elements stored on a shared network folder.

➢ Right-click the main User Area or one of its sub-categories.

➢ Choose **Connect to Folder** in its local menu.

The Connect Category to Folder dialog appears.
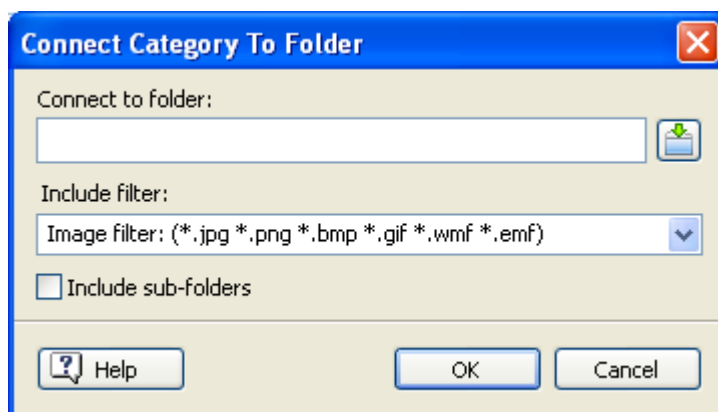
➢ Type the path of the folder you want to connect to or use the Browse button 📥 to locate it.

➢ Choose the required filter. If for instance you only want to view the available videos, choose the Video filter.

Note that you can also type your own filter, such as *.bmp; *.jpg (separating the formats with a semi-colon as shown here) to see only pictures using these file formats or *.* to view all the files contained in the connected folder.

➢ (optional) Check the 'Include sub-folders' option if you also want to see the contents of all the sub-folders of the connected folder.

A new category is now created within the User Area, filled with all the contents of the connected folder that match the filter you specified. The new category takes the name of the folder that you connected it to. It is identified by a special icon to show that it is a connected category.
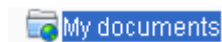
If the contents of the connected folder are likely to change while you are working with the Multimedia Catalog, for instance if the connected folder is a shared network folder to which other users have access, you can refresh the connected category to make sure you see the latest contents.

➢ Right-click the connected category and choose **Refresh** in its local menu.

Note that you can also refresh any of the sub-folders of the connected category.

If the connected folder is very large, the Refresh operation may take a long time. You can interrupt it by right-clicking the connected category and choosing Stop Refresh in its local menu.

Finally you can change the filter used to view the contents or even change the connection by connecting to a different folder as follows:

➢ Right-click the connected category and choose **Modify** in its local menu.

➢ Choose a different path and/or a different filter in the Connect to Category Folder dialog as described above.

You can disconnect a connected category at any time as follows:

➢ Right-click the connected category and choose **Disconnect** in its local menu.

Disconnecting a connected category removes the link between your User Area and the folder you connected to, but does not affect the external folder or its contents in any way.

Contents of the Multimedia Catalog

The Multimedia Catalog contains a vast collection of high-quality multimedia elements organized in different categories and themes. It gives you fast access to clipart illustrations, templates, navigation bars, clipart, preloaders and much more. All the Multimedia Catalog elements are free for you to use in your projects.

If you need an element related to a particular topic (for instance Europe) or a particular type of element (for instance a button of a particular shape or color), you can search the entire catalog for all the relevant elements. For more information, see the paragraph "Searching the Multimedia Catalog" in the topic "Using the Multimedia Catalog".

Templates

Navigation Bars: This category holds top bars, side bars and generic menus that you can drop directly onto your pages and use to setup the links you require via the Events dialog.

Player Bars: This category holds buttons that can be used to start and stop videos and sounds.

Buttons

Here you will find a vast collection of predefined buttons, including alpha channels, transparent colors and so on.

The only functionality attached to the Multimedia Catalog buttons is a Set Cursor action used to change the pointer from its standard shape to the hand shape when it is placed on the button. Once you have dragged your chosen button on the page, you will need to apply the functionality you require using the Events dialog.

Template Buttons: This sub-category contains all the buttons used in the page layouts available when creating a page.

Square Buttons: Here you will find a range of square buttons in various colors, some containing text, some containing only icons.

Round Buttons: Here you will find a range of round buttons.

Push Buttons: Here you will find a range of push buttons.

Clipart

Illustrations: This category contains over 1500 high quality illustrations covering many different educational fields, as well as business and web-related illustrations.

Animated GIFs: Holds a variety of animations that you can use in your projects.

Photos: Contains 200 photos on a variety of themes.

Backgrounds: Here you will find pictures of scenery and many different textures that you can drag onto your page. When dropped, the background is scaled to cover the whole page, but you can resize it as any other object by pulling its handles.

Bump Maps: Holds Bump Map buttons and shapes that will apply a 3D design to your pages and objects.

Sounds

This category contains a broad range of sounds organized in different categories. To preview a sound, just place the mouse pointer over it in the Multimedia Catalog.

You can drop these sounds directly onto your pages or objects, creating the relevant Sound action automatically in the process:

- If you drop the sound onto a page, the Sound action is created after an On Page Ready event.

- If you drop the sound onto an object, the Sound action is created after a Mouse Click event.

- If you drop the sound on the right of an event in the Events dialog, the Sound action is created after the event.

Preloaders

This category contains a number of Flash preloaders (animated GIFs).

A preloader should be placed on each and every page that needs to display it. Note that when changing from one page to another, it is always the current page that shows the preloader until the new one is ready for display.

To insert a preloader on your page, just drag it from the Preloaders category. Make sure its name appears as "Preloader" in the Object list for the page.

Unless loading is under way, the preloader will be hidden regardless of whether its Visible property is set or not. If it is set to repeat, it will loop continuously until loading is finished. If not set to repeat, it will "flick" through its frames until loading is complete, so that it always ends on the last frame just before loading is finished.

Since the preloader GIF file of the first page in a project must be loaded before it can be shown, it should be as small as possible so that the user gets visual feedback as soon as possible.

Using the Drawing tool

Drawing tool: Overview

The Drawing tool is a very powerful built-in module which allows you to draw all kinds of different shapes, using more advanced editing functions than with the Polygon tool.

You can create simple shapes, such as ellipses, stars or polygons using the tools provided. You can also create freeform shapes and curves using the Bezier and Pencil tools and edit the points that define those shapes.

Although you can export your drawings from the Drawing tool in a variety of file formats, they are stored in Mediator as vector graphics. Vector graphics (such as EMF or WMF files) describe images by considering the geometrical shapes, lines and curves that make them up. This mathematical technique makes it possible to scale vector graphics to any size without losing detail.

By contrast, bitmap graphics (such as JPG files) represent images as a collection of pixels arranged in a grid. They usually appear jagged when enlarged.

The other advantage of vector graphics is that they are much smaller than bitmap graphics, which makes them particularly interesting for Flash projects.

Antialiasing is applied to all shapes within the Drawing tool.

The Drawing tool is fully described in this section of the documentation.

Drawing tool: Creating a drawing

➢ To create a drawing with the Drawing tool, choose **Insert | Illustrations | Drawing** and drag out a frame for your drawing just as for any other object.

The Drawing Object dialog appears.

New Drawing Object

⦿ Create new drawing
○ Open existing drawing

[? Help]   [OK]   [Cancel]
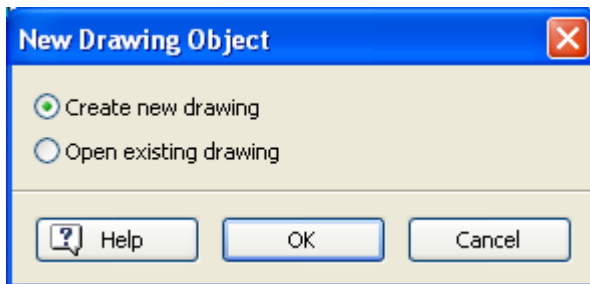
This lets you either:

- Create a new drawing

  Click **Create new drawing**, select a file name and folder where to save your new drawing and click Save.

- Open an existing drawing previously created with the Drawing tool

  Click **Open existing drawing** and browse for the required drawing. When you click Open, the drawing is inserted in the Mediator workspace. You can either leave it as it is or double-click it to modify it in the Drawing tool.

Mediator drawings are created and saved with the extension .vdpr, specific to Mediator.

The Drawing tool window contains a menu bar, toolbars, a Properties panel and the workspace in which you create your drawings.

By default, the Properties panel is docked to the right of the workspace. You can however position it anywhere on the screen by dragging its title bar or double-clicking it. You can also undock each tab separately or recombine it with the other tabs by dragging its title bar.

You can also customize the location of the toolbars and hide or show the various panels and toolbars using the **View | Toolbars** and **View | Properties Panels** menu.

By default, the contents of the Mediator window are shown in the background of the Drawing tool workspace, allowing you to draw over existing objects or trace their outlines. You can however change the level of opacity of this background, or choose your own picture as background by choosing **View | Background** in the Drawing tool.
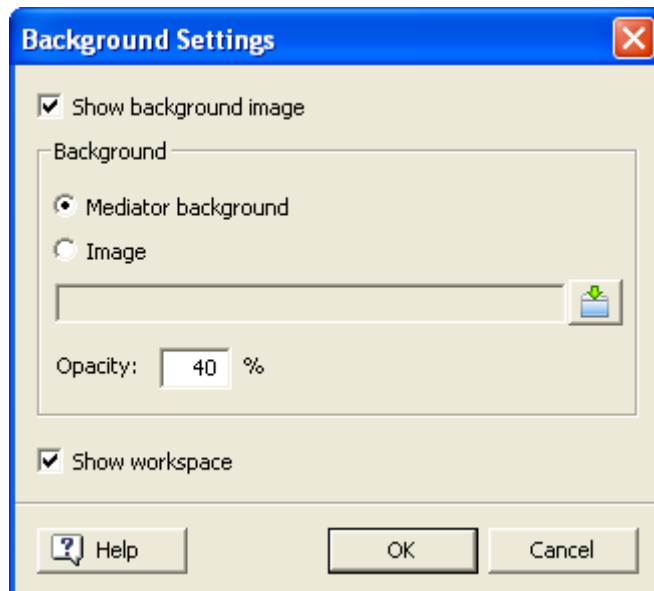
Creating or modifying a drawing

To create or modify a drawing, you use the tools located on the Toolbar to draw shapes and set properties for each shape using the Properties panel. All the shapes drawn make up a drawing object which will be inserted in your Mediator project when you return to Mediator.

Note that if you draw several shapes at one time within the Drawing tool, these shapes are inserted into Mediator as a single Drawing object. To insert multiple drawing objects into Mediator, you need to create each one separately by clicking the Drawing tool, creating the shape and then returning to Mediator before creating the next one.

For a complete description of all the shapes available in the Drawing tool as well as their properties, refer to "Drawing tool: Creating shapes".

➢ To save your drawing at regular intervals and continue working in the Drawing tool, choose **File | Save** or press **Ctrl + S**.

➢ Once you have finished working on your drawing, choose **File | Return to Mediator**.

If you have not saved your drawing yet, Mediator invites you to do so. Your drawing is then inserted in the Mediator page. You can edit it further at any time by double-clicking it to re-open the Drawing tool.

• While working in the Drawing tool, you can create a backup copy of your drawing under a different name by choosing the command **File | Copy To**.

• You can also import the contents of an existing drawing into your drawing by choosing the command **File | Copy From**. This will overwrite the current drawing with the imported drawing.

Exporting a drawing

The Drawing tool also lets you export your drawing in a variety of file formats. You can for instance export your drawing as a vector graphics EMF file and re-import it in Mediator as a picture object or as an image on a button object.

Replacing a drawing

You can replace the drawing displayed in a Drawing object by another drawing by modifying its Path in the Drawing tab of its Properties dialog in Mediator. See the topic "Drawing properties: Drawing tab" for more information.

Cloning a drawing

As with any other object, you can create a copy of a drawing in Mediator with the Edit | Duplicate command or the Copy and Paste commands. In this case, both objects refer to the same .vdpr drawing file (their Path property points to the same file). If you double-click one of these drawings and make changes to it using the Drawing tool, the changes are made to both objects.

You can however create a copy of a drawing in such a way that an identical copy of the .vdpr file is also created:

➢ Right-click the drawing in Mediator and choose **Create Clone** in its local menu.

This generates an identical copy of the drawing, but the new drawing refers to a separate .vdpr drawing file. You can now make changes to either drawing without affecting the other.

Drawing tool: Creating shapes

To create a drawing in the Drawing tool, you use the tools located on the Toolbar.

The toolbar contains the following tools:

- Selection tool

- Point Edit tool - containing the sub-tools Add Point, Delete Point and Split Point

- Bezier tool

- Pencil tool

- Rectangle tool

- Ellipse tool

- Custom Shape tool - containing sub-tools for Polygon, Star and Heart shapes

- Rotate tool

- Hand tool

- Zoom tool

Terminology

The drawing tools allow you to draw two kinds of shapes:

- **Predefined shapes**, such as rectangles, ellipses or custom shapes (polygon, star, heart)

- **Freeform shapes**, such as Bezier curves and Pencil lines that follow the direction of the mouse movements

All shapes are defined by an **outline**, which may be visible or invisible. A shape can be **opened** or **closed**. A closed shape may therefore also have a **fill**, which may also be visible or invisible.

By contrast with predefined shapes, the outlines of freeform shapes can be edited point by point.

It is however also possible to edit the outlines of predefined shapes by converting them first to Bezier curves.

The characteristics of each shape's outline and fill are defined in the corresponding tab of the **Properties** panel. See "Drawing tool: Properties" for a complete description of all the properties applicable to each shape.

Drawing rectangles

➢ Click the **Rectangle** tool ▭ or press M on the keyboard.

➢ Move the mouse pointer on the workspace, hold the left mouse button down and drag in the required direction.

- Holding down the **Shift** key while dragging will grow the shape by the same amount in the X and Y directions, thereby creating a perfect square.

- Holding down the **Alt** key while dragging will draw the rectangle from the center outwards.

- Holding down the **Shift** + **Alt** keys while dragging will draw a square from the center outwards.

➢ Release the mouse button when the shape has reached the required size.

Drawing ellipses

➢ Click the **Ellipse** tool ⬭ or press E on the keyboard.

➢ Move the mouse pointer on the workspace, hold the left mouse button down and drag in the required direction.

- Holding down the **Shift** key while dragging will grow the shape by the same amount in the X and Y directions, thereby creating a perfect circle.

- Holding down the **Alt** key while dragging will draw the ellipse from the center outwards.

- Holding down the **Shift** + **Alt** keys while dragging will draw a circle from the center outwards.

➢ Release the mouse button when the shape has reached the required size.

Drawing custom shapes

The Custom Shape tool lets you create polygons, stars and heart shapes.

➢ Click the **Custom Shape** tool ⬠ if its icon already depicts the shape you want to draw. If not, hold the mouse button down to display the custom shapes available, then click the sub-tool required. This sub-tool becomes the new default for the Custom Shape tool until you choose a different sub-tool.

➢ Move the mouse pointer on the workspace, hold the left mouse button down and drag in the required direction.

- Holding down the **Shift** key while dragging will grow the shape by the same amount in the X and Y directions.

- Holding down the **Alt** key while dragging will draw the shape from the center outwards.

- Holding down the **Shift** + **Alt** keys while dragging will draw the shape proportionally from the center outwards.

➢ Release the mouse button when the shape has reached the required size.

Drawing Bezier shapes

These are shapes that consist of a series of connected Bezier lines or curves. The resulting line or curve may be open (that is, it has non-connected ends) or closed (that is, its ends are connected so as to form a loop). Once created, these shapes can be edited point by point using the Point Edit tool. You can also reshape each curve as desired.

➢ Click the **Bezier** tool ✒ or press B on the keyboard.

To create a series of connected straight lines:

➢ Click and release to place the start point and move the mouse in the required direction.

➢ Click and release again to place the second point and repeat until your line is finished.

To end the shape, do one of the following:

- Right-click or press Esc to create an open shape.

- Click the first point to create a closed shape.
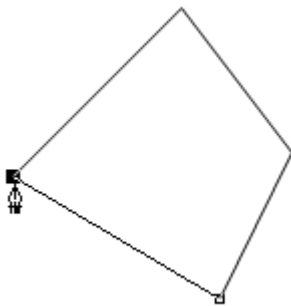
To create a curve:

➢ Click and release to place the start point and move the mouse in the required direction.

➢ Click and hold the mouse button down, then move the pointer away from the point you have just clicked.

You will see something like this:

A **handle** now extends from the second point, which you can manipulate by dragging the white circle situated at its end. The handle is not part of the curve itself, but determines its shape as follows:

- The position of the handle sets the direction of curvature and the angle at which the curve passes through the point.

- The length of the handle sets the amount of curvature.

➢ Now drag the handle some more, extending it and changing its position.
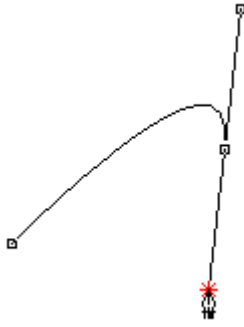
Notice that the curve is more accentuated, the direction of curvature has changed and so has the angle at which the line passes through the second point.

➤ Right-click or press Esc to end the shape.

To create a series of connected curves:

➤ Click and release to place the start point and move the mouse in the required direction.

➤ Click and hold the mouse button down, then move the pointer away from the point you have just clicked.

➤ Drag the handle until the first curve has the shape you require.

➤ Release the mouse button to place the second point, thereby ending the first curve.

➤ Move the mouse at the position where you want to place the third point.

➤ Click and hold the mouse button down and drag the handle until the second curve has the shape you require.

➤ Release the mouse button to place the third point, thereby ending the second curve.

➤ Repeat these steps as necessary to create all the curves you need.
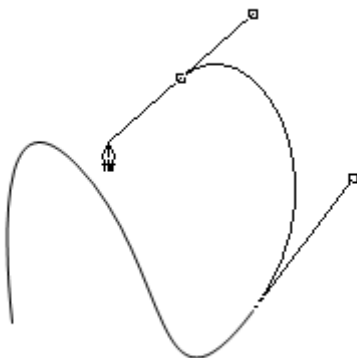
You can delete the last point drawn at any stage by pressing the Delete key.

To end the shape, do one of the following:

• Right-click or press Esc to create an open shape.

- Click the first point to create a closed shape.

When you create a series of curves in this way, the two handles of each point are mirror images of each other. You can however modify each handle independently later using the Point Edit tool. See "Drawing tool: Using the Point Edit tool" for more information.

Drawing Pencil shapes

These are shapes that consist of one long curve, created by "drawing" directly with the mouse. The resulting curve is open (that is, it has non-connected ends).

➢ Click the **Pencil** tool ✏ or press P on the keyboard.

➢ Click to place the first point of your curve, and without releasing the mouse button, drag the mouse on the screen. The tool will follow your mouse movement until you release the mouse button to end the shape.

Once created, Pencil shapes can be edited point by point in the same way as Bezier shapes. They can also be converted to Bezier curves. See "Drawing tool: Using the Point Edit tool" for more information.

Drawing tool: Working with shapes

The Drawing tool lets you manipulate the shapes you create in a number of ways. You can for instance select one or several shapes, move them, resize them, rotate them or group and ungroup them.

You can also arrange and duplicate selected shapes.

All these operations are described below.

Undoing actions

The **Edit | Undo** and **Edit | Redo** commands let you undo and redo up to 10 actions.

If the Undo or Redo commands are disabled, it means that there are no actions to undo or redo.

- Choose **Edit | Undo**, click the Undo icon ↩ or press **Ctrl +Z** to undo your last action.

- Choose **Edit | Redo**, click the Redo icon ↪ or press **Ctrl + Shift +Z** to redo the last action undone.

Selecting shapes

The most common method to select one or several shapes is as follows:

➢ Click the **Selection** tool ▶ or press V on the keyboard, then either:

- Click the specific shape you want to select, or

- Hold down the **Shift** key and click all the shapes you want to select.

If a shape has no fill, click its outline to select it.

💡 *If you are using another tool, you can enable the Selection tool momentarily by holding the Ctrl key down.*

Another method for selecting one or several shapes is to drag a frame on the screen so as to completely enclose all the shapes to be selected.

To select all the shapes on the workspace:

➢ Choose **Edit | Select All** or press **Ctrl + A**.

To deselect a shape:

➢ Click another shape or click an empty area in the workspace.

To deselect one of several selected shapes:

➢ Hold down the **Shift** key and click the shape to deselect.

Copying, pasting and cutting shapes

You can use the usual Cut, Copy and Paste commands and icons for performing the corresponding operations on one or more selected shapes within the Drawing tool.

Note that if you paste on the workspace one or more shapes previously copied, the pasted shapes are superposed to the original shapes. To see the original shapes again, you need to move the pasted shapes away from them.

Duplicating shapes

You can very quickly obtain a duplicate or one or more shapes by selecting the shapes which you want to duplicate and choosing **Edit | Duplicate** or pressing **Ctrl + D**.

Deleting shapes

➢ Select the shape or shapes to be deleted.

➢ Choose **Edit | Delete** or press the Del key.

Moving shapes

You can use different methods to move selected shapes:

• Drag the selected shape or shapes with the mouse. If a shape has no fill, drag it by clicking its outline.

• Use one of the arrow keys to move the selected shape or shapes one pixel at a time in the direction of the arrow.

• Hold the **Shift** key down while using one of the arrow keys to move the selected shape or shapes 10 pixels at a time in the direction of the arrow.

• Change the X and Y properties of the shape (single shapes only) in the General tab of the Properties panel. See "Drawing tool: Properties" for more information.

Resizing shapes

You can use different methods to resize a single shape:

➢ Click the **Selection** tool or press V on the keyboard, then either:

• Move the pointer to one of the side squares of the frame surrounding the shape until it changes to a double arrow and drag in the direction required.
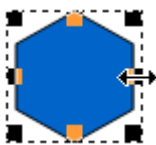
• Move the pointer to one of the corner squares of the frame surrounding the shape until it changes to a double arrow and drag in the direction required.

• Change the Width and Height properties of the shape in the General tab of the Properties panel. See "Drawing tool: Properties" for more information.

 You can resize several shapes simultaneously by grouping them first. See below for more information on grouping shapes.

To resize a shape proportionally:

➢ Hold down the **Shift** key while dragging the mouse pointer.

To resize a shape from its center:

➢ Hold down the **Alt** key while dragging the mouse pointer.

To resize a shape proportionally from its center:

➢ Hold down the **Shift** and **Alt** keys while dragging the mouse pointer.

Rotating shapes

One of the methods available to you to rotate selected shapes is as follows:

➢ Click the **Rotate** tool ⌖ or press R on the keyboard.

➢ Place the Rotate cursor ⌖ on the shape and move it around in the direction required.

➢ Release the mouse button when the required rotation angle has been reached.
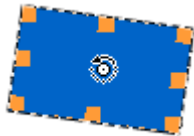
💡 *You can rotate multiple selected shapes simultaneously by placing the Rotate cursor on any one of them, then moving it around in the direction required.*

You can also rotate the selected shape or shapes by entering a value in the Rotation field or using the Rotation wheel in the General tab of the Properties panel. See "Drawing tool: Properties" for more information.

Arranging shapes

It may happen that the last shape you created covers partially or fully previously created shapes, thus preventing you from working on these other shapes.
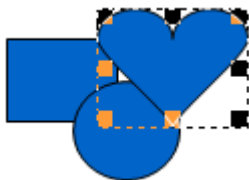
The Arrange commands let you change the order of your shapes:

➢ Select the shape or shapes whose display order you want to change.

➢ Choose **Arrange | Send Backward** to send the selected shapes one level below their current level.
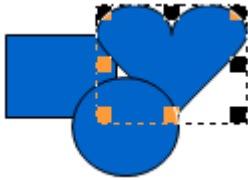
➢ Choose **Arrange | Send to Back** to send the selected shapes behind all other shapes.
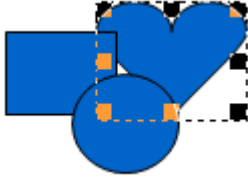
➢ Choose **Arrange | Bring to Front** to bring back the selected shapes in front of all other shapes.
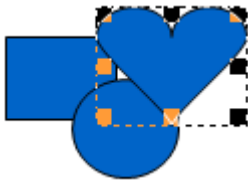
➢ Choose **Arrange | Bring Forward** to bring the selected shapes up one level from their current level.

Grouping shapes

The Drawing tool allows you to group shapes together so that you can treat them as a single unit:

➢ Select the shapes you want to group by clicking them one at a time while keeping the **Shift** key down.

➢ Choose **Edit | Group** or press **Ctrl +G**.

The Group command is only available when you have selected two or more shapes.

You can now move, resize and rotate these shapes as one unit.

➢ To separate a group back into its individual shapes, choose **Edit | Ungroup** or press **Ctrl + U**.

Drawing tool: Using the Zoom and Hand tools

Zooming in and out

The Drawing tool lets you zoom in or out to magnify or reduce your view, selected shapes or a particular area.

Note that the scaling of the rulers change as you zoom in and out to reflect the zoom factor.

Magnifying the view

You can choose between several methods to magnify your view by increments:

- Choose **View | Zoom In**.

- Hold the Ctrl key down and press the plus sign (**Ctrl +**).

- Click the **Zoom** tool , then click the workspace.

Conversely, the following methods allow you to reduce your view:

- Choose **View | Zoom Out**.

- Hold the Ctrl key down and press the minus sign (**Ctrl -**).

- Click the **Zoom** tool , hold the **Alt** key down and click the workspace.

Magnifying selected shapes

➢ Select the shapes to enlarge with the **Selection** tool .

➢ Choose **View | Fit Selection** or press **Ctrl + Alt + 0**.

This fits all the selected shapes within the boundaries of the workspace.

Magnifying an area

➢ Click the **Zoom** tool , then either:

- Click the area to enlarge.

- Drag a frame around the shapes to enlarge.

  This fits the framed area within the boundaries of the workspace.

Returning to the default enlargement

➢ Choose **View | Fit to Screen** or press **Ctrl + 0**.

Scrolling the view

As well as the scroll bars, you can use the Hand tool to reach different areas of the view.

➢ Click the **Hand** tool or press H on the keyboard, then drag the area of the view that you want to reposition within the workspace.

If you are using another tool, you can enable the Hand tool momentarily by holding the Space bar down.

Drawing tool: Using rulers and guides

You can use the rulers and guides provided by the Drawing tool to help you position and size your shapes.

Using rulers

Rulers help you place and measure shapes accurately. They appear at the top and at the left of the workspace, with large graduations denoting units of 100 pixels and small graduations denoting units of 10 pixels.

The rulers adjust as you scroll and zoom in the workspace. By default, the zero point is set at the upper left corner of the workspace.
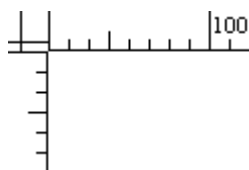
You can reset the rulers to their default position by choosing **View | Fit to Screen** or pressing **Ctrl + 0**.

Using guides

Guides are blue lines that help you draw and position shapes.

You can add, modify, and delete guides as needed and choose whether or not shapes should "snap" to the guides when you move them.

Adding guides

➢ Click the top left corner of the workspace (zero point of the rulers) and drag a set of guides on the workspace.
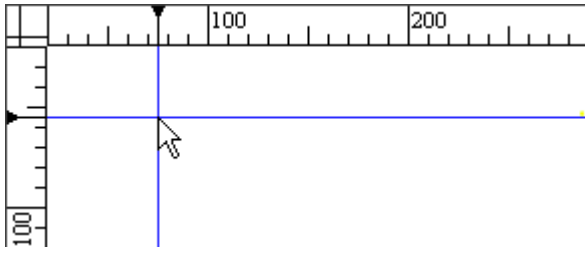
➢ If necessary repeat the operation to create further sets of guides.

➢ If the guides are not fully visible, choose **View | Guides | Show Guides** to show them. This command toggles between showing and hiding the guides. A check mark indicates that the guides are visible.

Modifying a guide

You can modify the position of a guide in two ways:

➢ Place the mouse pointer over the part of the guide located in the ruler until the pointer becomes a double arrow and then either:

• Move it in the direction required.
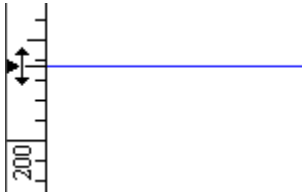
• Right-click it and choose **Set Position** in its local menu, then enter the new position for the guide.
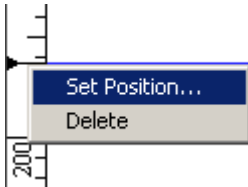
Deleting a guide

➢ Place the mouse pointer over the part of the guide located in the ruler until the pointer becomes a double arrow, and then either:

• Right-click it and choose **Delete** in its local menu.

• Move the guide back into the top left corner of the workspace (zero point of the rulers).

Making shapes snap to the guides

You can use the guides to help you align the top, bottom, right or left edge of your shapes manually, but you can also make your shapes align automatically with the guides.

When you move a shape within 10 pixels of a guide, the shape "jumps" so that it aligns automatically with the guide. This is called making the shape "snap" to the guide.

You can enable or disable this feature by choosing **View | Guides | Snap to Guides**. This command toggles between enabling and disabling the snapping of the shapes to the guides. A check mark indicates that the shapes will snap to the guides.

Drawing tool: Using the Point Edit tool

The Point Edit tool and its sub-tools allow you to edit point-editable shapes created with the Bezier tool or the Pencil tool or predefined shapes converted to Bezier curves. You can for instance:

• Select and move points and handles using the **Point Edit** tool

- Add points using the **Add Point** tool

- Delete points using the **Delete Point** tool

- Open a closed shape or split an opened shape into two by using the **Split Point** tool

- Modify the curves of Bezier shapes or any other shape converted to Bezier curves

All these operations are described below.

Whenever you select a sub-tool of the Point Edit tool, this sub-tool becomes the current default sub-tool.

Converting a shape to Bezier curves

You can convert predefined shapes and shapes created with the Pencil tool to Bezier curves. This enables you not only to edit their points with the Point Edit tool, but also to modify their curves by moving their handles.

Note that it is no longer possible to edit any of the original specific properties of a predefined shape once it has been converted to Bezier curves. If for instance you convert a polygon to Bezier curves, its 'Number of sides' property is no longer available in the Properties dialog.

You can use different methods to convert a shape to Bezier curves:

- Select the predefined shape or Pencil shape to convert and choose **Edit | Convert Selected Shape(s) to Bezier**.

- Right-click the predefined shape or Pencil shape to convert and choose **Convert Selected Shape(s) to Bezier** in its local menu.

- Click the **Point Edit** tool or press A on the keyboard and select the predefined shape or Pencil shape to convert.

If you use the third method, the Conversion to Bezier Curves dialog appears to warn you of the consequences of converting a predefined shape to Bezier curves.

If you disable the display of the Conversion to Bezier Curves dialog, you can re-activate its display at any time with **View | Preferences**.

You can undo a conversion to Bezier curves by clicking Edit | Undo or pressing Ctrl + Z.

Moving a point on a shape

Moving a point on a shape allows you to change not only the position of the point, but also the position and curvature of both curves connected to the point.

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool or press A on the keyboard.

Points are shown as black squares on the outline. Each handle is made up of a white circle with a line connecting it to a point. Unless it is positioned at the end of a line or curve in an open shape, each point has two handles, one for each of the curves that connect to it. The handles may be very short, or of zero length, in which case the white circles appear right next to the black square representing the point.
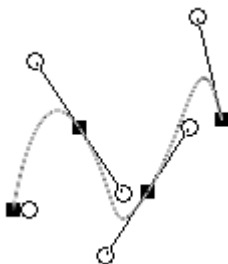
➢ Click the point that you want to move and hold the mouse button down.

The cursor changes to a cross with four arrows.
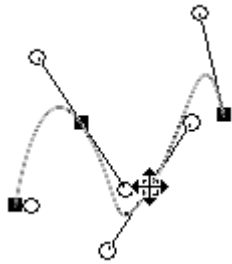
➢ Move the point in the direction required.
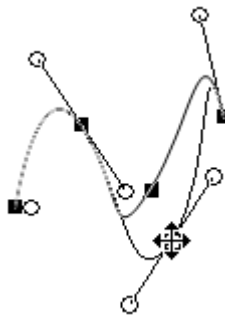
➢ Release the mouse button.

Note that the selected point is shown as a white square on the outline.

Modifying the curves making up a shape

As well as moving points, you can modify each end of the curves connecting to a single point by moving the relevant handle.

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool or press A on the keyboard.

➢ Click the handle that you want to move and hold the mouse button down.

The cursor changes to a cross with four arrows.
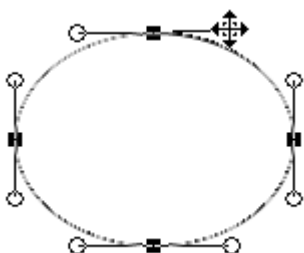
➢ Change the orientation and/or length of the handle.
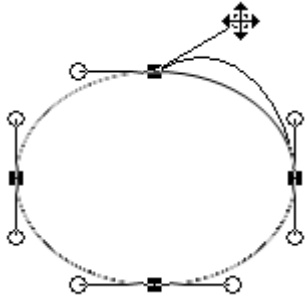
➢ Release the mouse button.

Note that if you want the curves connecting to a point to pass smoothly through it, the two handles that control the curves on either side of the point must be in line with each other.

This is most easily achieved by making both handles mirror images of each other:

➢ Hold down the **Shift** key while moving one of the handles.

The length and position of the other handle are automatically adjusted so that it becomes a mirror image of the handle you are moving.

Adding a point to a shape

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool and hold the mouse button down.

➢ Drag the pointer to the **Add Point** sub-tool and release the mouse button to select it.

  You can select the Add Point sub-tool temporarily by holding the **Alt** key down.

➢ Move the Add Point cursor   at the position of the shape's outline where you want to add a point.

➢ When a little square becomes visible on the outline, click to place the point.
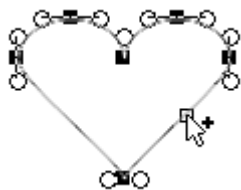
The new point and its two handles appear on the outline.
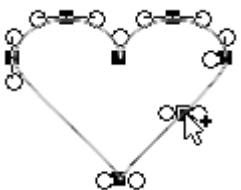
Deleting a point from a shape

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool and hold the mouse button down.

➢ Drag the pointer to the **Delete Point** sub-tool and release the mouse button to select it.

➢ Move the Delete Point cursor ![cursor icon] on the point of the shape's outline which you want to delete.
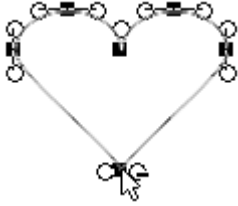
➢ Click the point to delete it.

The point disappears.
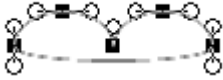
Another method for deleting a point is to use the Delete key as follows:

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool ![tool icon].

➢ Click the point to be deleted.

The selected point now appears as a white square.
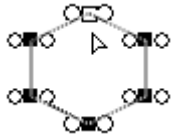
➢ Press the Delete key to delete the point.

Splitting a point into two points

The Split Point tool ![tool icon] allows you to split a point into two points. This works rather like a pair of scissors, opening up a closed shape or cutting an open shape into two separate sections.

Let us consider first the effect of the procedure on an open shape.

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool ![tool icon] and hold the mouse button down.

➢ Drag the pointer to the **Split Point** sub-tool ![tool icon] and release the mouse button to select it.

![pin icon] You can select the Split Point sub-tool temporarily by holding the **X** key down.

➢ Move the Split Point cursor ![cursor icon] on the point of the shape's outline which you want to split.
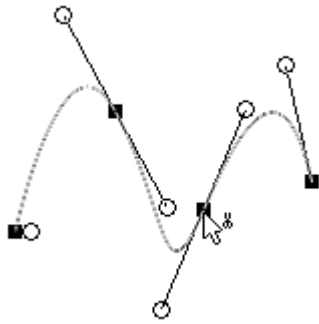
➢ Click the point to split it.
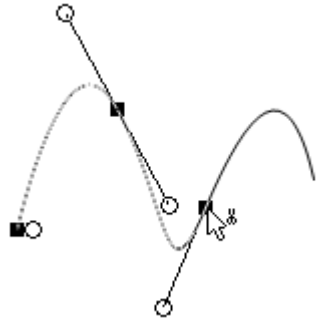
The point has now been split, which has the effect of disconnecting the curves at that point, each disconnected curve now ending with a separate point and handle. Only the part of the shape on the left of the point just split stays selected.

It is now possible to select this left part of the shape with the Selection tool and to move it away from the right part.
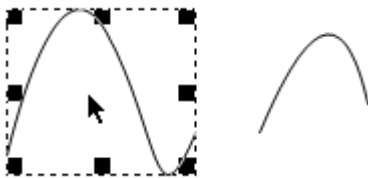
The two shapes are now independent from each other.

If you perform the same operation on a closed shape, the effect is to open the shape at that point, each end of the shape now ending with a point with one handle, as shown below.
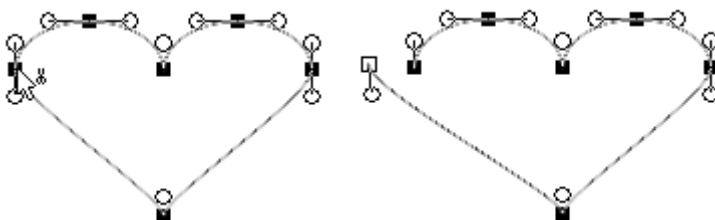
Making a point soft or sharp

If you want the curves connecting to a point to pass smoothly through it, the two handles that control the curves on either side of the point must be in line with each other. This can be done automatically by converting the point from "sharp" to "soft" as follows:

➢ Select the point to convert so that it shows as a white square.
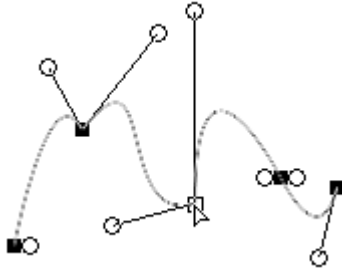
➢ Right-click it and choose **Make Selected Point(s) Soft** in its local menu.

The two handles of the point are now mirror images of each other.
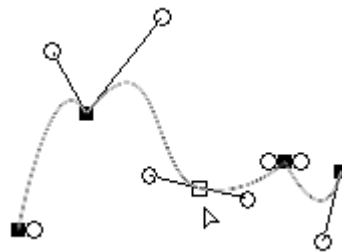
💡 *You can also keep both handles as mirror images of each other by holding down the Shift key while moving one of the handles.*

Conversely, you can "sharpen" a point, making the angle between the curves that connect to it as small as possible, as follows:

➢ Select the point to convert so that it shows as a white square.

➢ Right-click it and choose **Make Selected Point(s) Sharp** in its local menu.
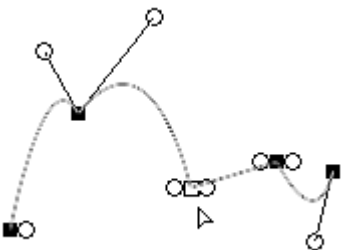
Selecting multiple points

Some of the operations described above, such as moving, deleting or converting a point from sharp to soft and vice-versa, can be performed on several points simultaneously. All you need to do is to start by selecting all the points that you want to act on.

➢ Click the required shape to select it.

➢ Click the **Point Edit** tool ⬚.

➢ Hold down the **Shift** key and click each of the required points one by one.

The selected points appear as white squares.

A quicker method for selecting multiple points on a point-editable shape is to drag a frame around the part of the shape containing the points. This has the effect of selecting all the points contained by the frame.

Drawing tool: Properties

The Properties panel of the Drawing tool contains three tabs:

- The **General** tab describes the properties applicable to the selected shape. It contains properties common to all shapes, as well as some properties specific to particular shapes.

- The **Outline** tab describes the properties of the selected shape's outline.

- The **Fill** tab describes the properties of the selected shape's fill.

You can change many of the properties below for several shapes simultaneously by selecting all these shapes first.

General properties
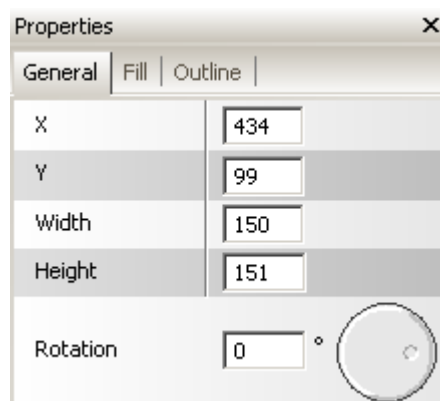
X, Y, Width, Height: These fields let you position and resize your shapes very accurately, down to one pixel. X and Y represent the top left corner coordinates of the shape. Enter new values in these fields to change the position of the selected shape. You can also use the up and down arrows on the right of the fields to change the coordinates one pixel at a time. The Width and Height fields are used to resize the shape. They work exactly as the X and Y fields.

Rotation: Use this field to enter a degree of rotation for your shape. You can also use the rotation wheel on the side. Just click the small circle and drag it in the required direction. The X, Y, Width, Height and Rotation fields are updated dynamically to reflect the new coordinates of the shape.

Round corner: This property is specific to rectangles. It allows you to create rectangles with round corners. Enter a value in this field or use the slider on the right side to specify the degree of roundness.
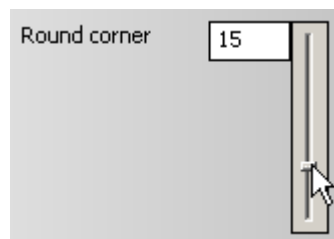
Number of sides: This property is specific to polygons. It lets you change the number of sides of your polygon from the default value of 6. Enter a value in this field or use the slider on the right side to define it. The lowest possible value is 3, which corresponds to a triangle. The maximum value, 50, corresponds to an ellipse.

Star points: This property is specific to stars. It lets you change the number of "branches" of your star from the default value of 6. Enter a value in this field or use the slider on the right side to define it. The lowest possible value is 3, which corresponds to a triangle.

Inner radius (%): This property is also specific to stars. It allows you to change the angle between the branches of your star from the default value of 50. The lower the value, the more pointed the branches are.

Smooth factor: This property is only applicable to shapes drawn with the Pencil tool. It allows you to smooth out sharp angles in the shape. Enter a value in this field or use the slider on the right side to define it.

Outline properties
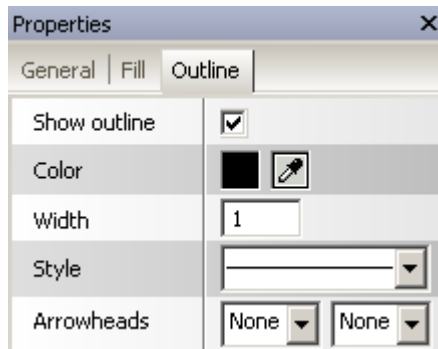
New Outline properties set in this tab affect the selected shape (if any) and any new shape you create.

Show outline: Check this option to show the outline of the selected shape and uncheck it to hide it.

Color: This defines the color of the outline. Click the color box to open the standard Windows Color dialog or use the Pipette to choose a color by "picking" it from the screen.

Width: You can use this field to enter a new value for the width of the outline of the selected shape.

Style: Click the down arrow on the right of this field to choose one of the styles available for the outline.

Arrowheads: This property only applies to opened shapes, such as lines and curves or predefined closed shapes that you have "opened" by deleting one of their points. Click the down arrow to the right of these two fields to choose the required arrow head.

Fill properties
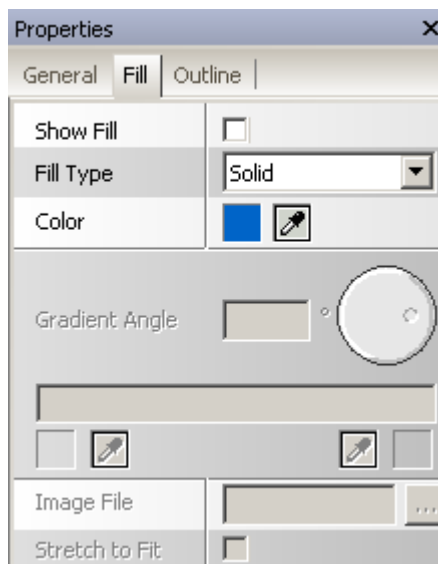
New Fill properties set in this tab affect the selected shape (if any) and any new shape you create.

Show fill: Check this option to show the outline of the selected shape and uncheck it to hide it.

Fill type: Click the down arrow to the right of the field to choose one of the available Fill types, namely:

- Solid - to fill the shape with a solid color
- Gradient - to fill the shape with a color gradient
- Image - to fill the shape with one of your own pictures

Color: This property is only active when you choose a fill of type Solid. It defines the color of the fill. Click the colored box to open the standard Windows Color dialog or use the Pipette to choose a color by "picking" it from the screen.

Gradient angle: This property is only active when you choose a gradient fill type. It lets you set the direction of the fill gradient. You can also use the rotation wheel on the side. Just click the small circle and drag it in the required direction.

Color bar: This bar is only active when you choose a fill of type Gradient. It represents the gradient of colors used in your shape. Use the two Color boxes placed underneath the bar to specify the colors to be used at each end of the gradient.

Image file: This property is only active when you choose a fill of type Image. Click the Browse button to the right of the field to choose the image you want to use inside your shape.

Stretch to fit: Click this property to resize the image to the dimensions of the shape.

Drawing tool: Shortcuts

The table below lists all the keyboard shortcuts provided by the Drawing tool.

Keyboard shortcut	Description
Ctrl + N	Create a new drawing
Ctrl + O	Open and browse for an existing drawing
Ctrl + S	Save the current drawing
Ctrl + C	Copy the selected data to the clipboard
Ctrl + X	Cut the selected data to the clipboard
Ctrl + V	Paste the data contained in the clipboard
Delete	Delete the selected element
Ctrl + Z	Undo the last action
Ctrl + Shift + Z	Redo the last action undone
Ctrl + A	Select all shapes in the workspace
Ctrl + B	Send selected shapes to back
Ctrl + F	Bring selected shapes to front
Ctrl + D	Duplicate selected shapes
Ctrl + G	Group all selected shapes
Ctrl + U	Ungroup selected group
Ctrl + 0	Zoom to actual size
Ctrl + Alt + 0	Fit selection to workspace
Ctrl + "+"	Zoom in
Ctrl + "-"	Zoom out
A	Select the Point Edit tool

B	Select the Bezier tool
E	Select the Ellipse tool
H	Select the Hand tool
M	Select the Rectangle tool
P	Select the Pencil tool
R	Select the Rotate tool
V	Select the Selection tool
X	Temporarily select the Split Point tool when the Point Edit tool is active
Z	Select the Zoom tool
Shift + Click	Select multiple shapes or multiple points
Shift + drag	Draw or resize a shape proportionally
Alt	Temporarily select the Add Point tool when the Point Edit tool is active
Alt + drag	Draw or resize a shape from the center outwards
Shift + Alt +drag	Draw or resize a shape proportionally from the center outwards
Shift + drag handle	Move both handles simultaneously, keeping each one a mirror image of the other
Ctrl	Temporarily select the Selection tool
Space	Temporarily select the Hand tool
F4	Show/Hide Properties panel

Using databases

→ Advanced

Mediator enables you to read from and write to Microsoft Access and MySQL databases.

The interface used to connect Mediator with databases is the **database resource**. Taking a Microsoft Access database as an example, this topic explains how to setup a database link using the database resource and how to navigate a database using the Mediator actions provided.

Setting up a database link

➢ To open the Resources dialog, choose **View | Interactivity | Resources**.

➢ Drag a **Database** resource in the active field to open the **Database Resource** dialog.

This dialog points to a special file called the DSN file, that contains information about which driver to use, what database file to use and so on. It is an ASCII file, which can be created with the ODBC Manager from the Windows configuration panel. However this method is quite complex, and it is usually much easier to create the DSN file using a simple text editor (e.g. Notepad), either from scratch, or by adapting an existing DSN file.

The DSN file for the Microsoft Access driver should look like this:

```
[ODBC]
DRIVER=Microsoft Access Driver (*.mdb)
UID=admin
UserCommitSync=Yes
Threads=3
SafeTransactions=0
PageTimeout=5
MaxScanRows=8
MaxBufferSize=2048
FIL=MS Access
DriverId=25
DefaultDir= (leave this empty)
DBQ=database filename.mdb (where database filename is the name of your
database)
```

➢ Once you have created the DSN file, copy both the DSN file and the MDB file to the project folder (containing the .md8 file) and follow the rest of the procedure below.

Connecting Mediator and the database

Once you have created a DSN file, either via the ODBC Manager or by typing the entries above in a text editor, you need to use it to connect Mediator with the database:

➢ Check the option **File (*.dsn)** in the **Database Resource** dialog.

➢ Type the path to the DSN file in the **Database** field or use the Browse button to select it.

This sets up the link to the database. The **Table structure** field should now list all the database fields.

You must now link the individual database fields to Mediator variables.

➢ Create a Mediator variable for each of the fields whose value you want to use in your project, making sure that the type of the variable matches the type of the field.

For a VARCHAR field for instance, you would define a variable of type text.

➢ In the Database Resource dialog, click the name of the first field you want to connect to a Mediator variable, then click the **Link To** button.

➢ In the **New Binding** dialog that appears, select the Mediator variable to be connected.

   This creates a link between the database field and the Mediator variable. The connection is indicated by a red dot on the left of the field. Fields that are still unconnected are identified by a green dot.

➢ Repeat this operation for all the fields that you want to connect to a variable.

Now that the database fields you want to use are connected to the corresponding Mediator variables, you need to display their contents. Here is one way to do it:

➢ Create an **input object** to show the contents of the first database field you want to use.

➢ Drag an **On Page Ready** event in the Events dialog of your Mediator page, followed by a **Set Property** action.

➢ Fill it as follows:

```
Object = input object
Property = Text
Value as expression = name of the variable you linked to the field
```

➢ Test the page to check that the value of the field corresponding to the variable is shown in the input field as expected.

➢ Repeat these steps for all the fields that you want to display via input objects.

For additional information about the database resource, see "The Database Resource".

Navigating the database

The **DB pointer** action lets you navigate through the database, as shown by this short example:

➢ Create a 'Next' button and open its Events dialog.

➢ Drag a Mouse Click event followed by a **DB Pointer** action (Database tab).

➢ Select the name of the database resource in **Database resource name**.

➢ Check **Next record** and close the dialog.

The variables are now updated, but their contents need to be transferred to the input objects.

➢ Add a **Set Property** action to the right of **DB Pointer** for each variable/input object as described above.

To be able to navigate the entire database, create three more buttons, e.g. Previous, First and Last and repeat the steps above, each time choosing a different option in DB Pointer, e.g. **Previous record**, **First record** and **Last record**.

Searching the database

The real value of a database is that it enables you to retrieve specific entries very easily. The **DB SQL** action lets you search the database.

➢ Create an input object and label it for instance 'Search'.

This will be used to specify the contents to be searched. The search will be executed whenever the user presses Enter in the input object or clicks away from it.

➢ Drag an **On Stop** event followed by a **DB SQL** action in the Events dialog of the input object.

➢ Select the name of the database resource in **Database name**.

➢ Enter the statement required in the **SQL statement** field.

Example: If you wanted to search for the word 'Tina' in the field FirstName of a table called DemoTable, you would execute the following SQL statement:

```
"SELECT * FROM DemoTable WHERE FirstName = 'Tina' "
```

To search for the name entered by the user in the input object, you would replace 'Tina' by 'Search.Text'.

The SQL statement is entered as an expression in Mediator to enable the use of variables.

```
"SELECT * FROM DemoTable WHERE FirstName = ' " + Search.Text + " ' "
```

Please note the use of quotes. This may be a little confusing as you have to use two types of quotes, the Mediator quotes (") and the SQL quotes (').

💡 *The use of spaces in the SQL statement is not significant. You can therefore put a space between Mediator and SQL quotes (" 'entry' " instead of "'entry'") to improve legibility.*

If you want Mediator to look for the search word in more than one field, for instance in the fields FirstName and LastName, the SQL statement should read:

```
"SELECT * FROM DemoTable WHERE FirstName = ' " + Search.Text + " ' OR
LastName=' " + Search.Text + " ' "
```

Tips on using the SQL syntax in Mediator

- The whole statement is set in double quotes.

  Example: **"**`SELECT * FROM DemoTable`**"**

- Database field names are written without any quotes or other signs.

  Example: "`SELECT * FROM DemoTable WHERE `***Fieldname*** `= … `"

- Input (of any sort) coming from Mediator is enclosed in SQL quotes (').

  Example: "`SELECT * FROM DemoTable WHERE FirstName = `**'**`Tina`**'**"

- Mediator text variables or *object.properties* of type 'text' are enclosed in Mediator quotes ("), additionally to the SQL quotes.

  Example: "`SELECT * FROM DemoTable WHERE FirstName = ' `**"** ` + Search.Text + ` **"** ` ' `"

- Mediator integer/floating point variables or *object.properties* of type integer/floating point do **NOT** have these Mediator quotes (").

  Example: "`SELECT * FROM DemoTable WHERE Age = ' + age.value + ' `"

- Mediator variables and properties in general are enclosed in + signs.

  Example: "`SELECT * FROM DemoTable WHERE FirstName = ' `**"** **+** ` Search.Text ` **+** **"** ` ' `"

As you will seldom use anything but Mediator variables or *object.properties* in a Mediator SQL statement, here is a quick guide about how to refer to them:

➢ Start with an SQL quote (') whenever you are quoting something from Mediator.

➢ Add a Mediator quote (") if it is a text variable or a text property. If it is of type integer or floating point, skip to the next point.

➢ Add a + sign and then type the name of the variable or the *object.property*.

Now follow the steps in the reverse order:

➢ Enter the + sign again (to "close" the name of the variable/property).

➢ If you have opened Mediator quotes ("), close them by entering a Mediator quote again.

➢ Close the SQL quotes (') by entering a SQL quote again.

Resetting the database

Once you have executed a search as described above, any future navigation operation is restricted to the set of records matching the search criteria. If only one record matched the search, the Next and Previous buttons would therefore no longer produce any results.

To make the entire DemoTable of our above example accessible again, you would use the following SQL statement:

```
"SELECT * FROM DemoTable"
```

Preparing for export

Checking the DSN file

Before exporting your project, you need to make sure that the DSN file you use does not contain full paths to the database files. This is particularly relevant if you have used the 'ODBC Manager' method above to create it.

➢ Use Notepad to view your DSN file, which may look like this:

```
[ODBC]
DRIVER=Microsoft Access Driver (*.mdb)
UID=admin
UserCommitSync=Yes
Threads=3
SafeTransactions=0
PageTimeout=5
MaxScanRows=8
MaxBufferSize=512
ImplicitCommitSync=Yes
FIL=MS Access
DriverId=25
DefaultDir=Drive:\Folder\Sub-folder\
DBQ= Drive:\Folder\Sub-folder\Database.mdb
```

As you can see, the entries DefaultDir and DBQ have full path names. Change them as follows by removing the paths:

```
DefaultDir=
DBQ=Database.mdb
```

(where *Database.mdb* is the file name of your database)

If you are going to use the project from a read-only media such as a CD-ROM or DVD-ROM, you must add the following line to the DSN file, for instance after the UID entry.

```
ReadOnly=1
```

Adding relevant files

Before exporting the project, you need to make sure that Mediator will include the database and all the associated files required in the exported version. If you are using the recommended Microsoft Access Driver, there is only one database file (.mdb). Other databases however may consist of more than one file.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Additional Data files**, and add all the necessary files, namely:

- The DSN file and the database file (*.mdb)
- Additional files like pictures and sounds that the database is pointing to

You are now ready to export the project in the usual manner.

Using SCORM

→ Advanced

SCORM is an acronym for Sharable Content Object Resource Model. It is a set of specifications meant to make it easier for educators to create, share and reuse e-learning courses.

This topic describes how you can create a SCORM compliant course with Mediator.

This feature is only available for documents of type HTML or Flash.

Definition of a SCORM system

In somewhat simplified terms, a SCORM system consists of a Learning Management System (LMS) that holds and catalogs various e-learning courses (SCOs, or Sharable Content Objects). The LMS also holds the student accounts that contain information about the students, such as their name, the courses they attend, and the score they received upon completing e-learning courses in the past. The details of the different LMS systems on the market vary and are beyond the scope of this documentation. A SCORM compatible LMS also incorporates a web server that allows the courses to be downloaded and displayed by the browser (e.g. Internet Explorer or Firefox) on the students computers.

To attend an e-learning course, the student sits at a remote computer with a web browser open, logs in to the system, and chooses a course. The course (SCO) is downloaded and displayed in the browser. (SCOs basically just consist of HTML files, Flash files, video files and other associated web files.)

Once the course is displayed in the browser, the browser sends a message back to the LMS, stating that the learning session has begun. Similarly, when the student exits the course, for instance by closing the browser or by navigating to another unrelated web page, the browser sends a message to the LMS, stating that the current learning session has now ended.

While the learning session is in progress, the SCO displayed in the web browser can communicate with the LMS. The SCO can for example retrieve a number of variables from the LMS such as the name and ID number of the student currently logged-in, and other information such as the student's preferred language. This allows the content author to customize the learning content to the particular student (for example by providing texts in both English and French at design time, and then dynamically determining which texts to display at runtime). The SCO can also send information to the LMS about the current student's progress in the course. This student specific information is stored on the LMS, so that teachers can later examine it to determine how well the student completed the particular course. Typical data sent to the LMS includes quiz scores, and how long the course took to complete. The content author can also allow the student to send plain text comments about the course.

Creating a SCORM compliant course

When creating a project in Mediator to be exported as a Flash or HTML SCO (that is, a SCORM compliant course), you don't need to do anything particular besides what you would normally do when creating any other course, quiz or tutorial for putting up on an ordinary web server. It is not a requirement to receive data (student name, student ID, etc.) from the LMS, nor is it necessary to send any data (score, completion time, etc.) to the LMS. The only required communication between the SCO and the LMS are the Initialize and Terminate messages that begin and end a learning session, and both of these messages are sent automatically by the SCOs created in Mediator.

➢ To export the SCO project in Flash or HTML, check **Create as SCORM compatible package** in the Flash or HTML Advanced Export dialog.
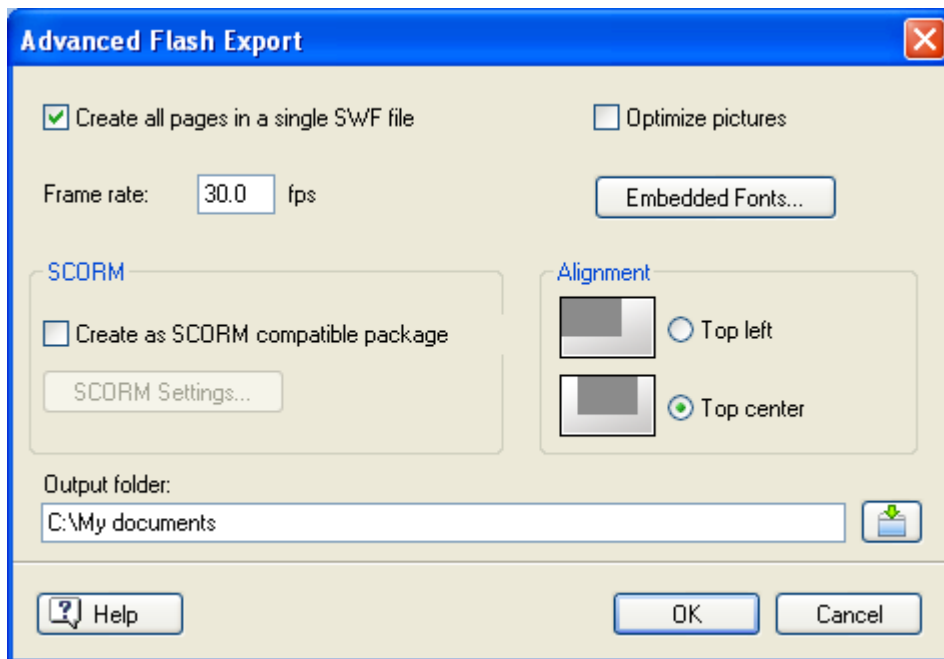
➢ (optional) Click **SCORM settings**.

The **SCORM Manifest Settings** dialog opens to let you specify additional information about the course.
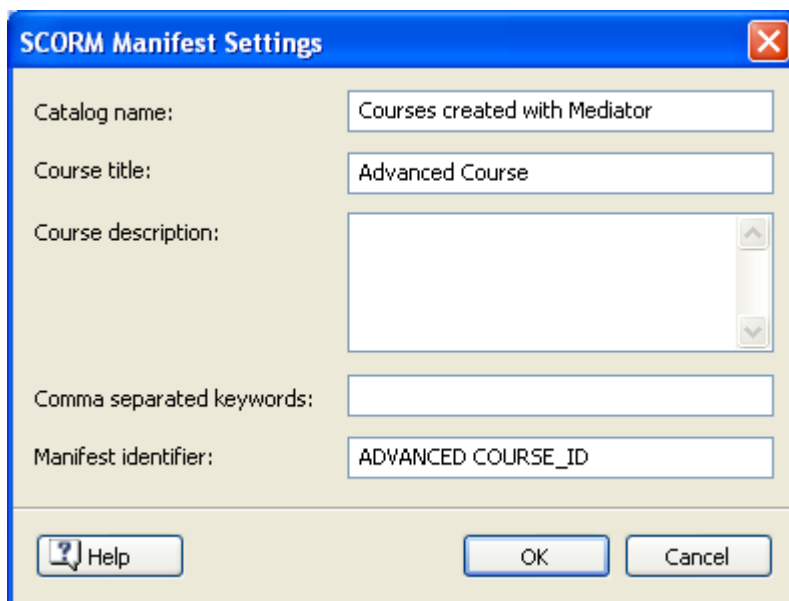
The SCORM Manifest file that is included in all SCO packages is automatically created by Mediator. Among other things, it includes details about the SCO course that are used by the LMS to catalogue the course, so that teachers and/or students can search for specific learning content with the use of keywords.

Catalog name: This specifies the name of the LMS group or category of courses (e.g. Maths, Physics, Chemistry, etc.) in which the SCO should be placed.

Course title: This specifies the name used to identify the course within the LMS.

Course description: This is used to provide a description of the course, and its intended use.

Comma separated keywords: This field can be used to enter keywords (which must be separated by commas) which the students and teachers will be able to use to locate the course once the SCO is deployed on the LMS.

Manifest identifier: This compulsory ID uniquely identifies the course among all the other courses (SCOs) deployed on the LMS.

➢ Click OK.

The output of the export will be a zip file containing all the Flash or HTML content and other SCORM related helper files. This package (which is technically speaking the SCO) can then be uploaded to the LMS (which must be SCORM 2004 compliant). How the SCO is placed on the LMS depends on the specific LMS, but generally it is done by a teacher using the web-based interface of the LMS. Please refer to the documentation of the LMS in question for information about this.

Using SCORM variables

A SCORM 2004 compliant LMS keeps track of a number of variables associated with each of the students following a course. They allow the SCO to save and/or retrieve information about each student and their progress in the course, and allow the teacher to collect information about the students performance.

All these SCORM variables have names that begin with "cmi.". Some of them are arrays that can contain a number of sub-variables, while others are just simple variables.

Some, such as "cmi.learner_id" and "cmi.learner_name" are "read only" from the point of view of the SCO. Others, such as "cmi.score.raw", are both readable and writable by the SCO. A few variables, such as the variable "cmi.session" and "cmi.exit", are "write only".

In Mediator, the SCORM tab of the Events dialog provides two specific actions which make use of all these variables:

- **Set SCORM Variable** lists all the writable variables and allows you to set their values.

  For a complete description of this action, see "Set SCORM Variable".

- **Get SCORM Variable** lists all the readable variables and allows you to retrieve their values.

  For a complete description of this action, see "Get SCORM Variable".

Detailing the purpose of all the SCORM variables is beyond the scope of this topic, but you will find a complete description in the SCORM_RunTimeEnv.pdf document available for free download on the "SCORM 2004 3rd Edition Documentation" page of http://www.adlnet.gov/scorm/.

Using script

Using runtime script

Using runtime script, you can create functions that would be very difficult or impossible to create in Mediator using only its icon-based drag & drop interface, objects, events and actions.

There is however a strong interface between Mediator and runtime scripts:

- You can call script functions directly from any Mediator expression.

- You can access and manipulate Mediator variables directly from the script.

- You can also manipulate object properties directly from the script.

Another important use of runtime script is to control the ActiveX object. You can find many ActiveX objects that provide anything from simple text/graphic effects to advanced database and video functionality. You can also create your own ActiveX objects to obtain exactly the functionality you need. This lets you expand Mediator beyond its built-in features.

Mediator uses ActiveX scripting. This means that you can use either Visual Basic Script or Java Script. Other companies even supply other script languages that can be used. Here we focus on Visual Basic Script since it is easy to use and available on most computers.

Document scripts and page scripts

You can place scripts either on the document or on the page.

- Scripts that are assigned to the document can access all the global variables, but not local variables or local objects.

    General scripts which you intend to access from many pages should be placed on the document. These scripts would typically consist of constants or global calculations that work in the same way on all pages and do not need to access local objects on individual pages. Document scripts cannot access local objects because these scripts are initialized when the document is loaded, at a time when the local objects are not yet "known".

- Scripts that are assigned to a page have access to all the variables and objects belonging to that page.

    If for instance you have a script that manipulates the same object name on five different pages you would just place that same script file on each of the five pages.

Creating a script

To create a script you start by creating the .mds file that will contain the code.

➢ Open the Scripts dialog via **View | Programming | Scripts**.

➢ Click the relevant tab (**Document** or **Page**) depending on the type of script you want to create.

➢ Click **New**.

The Save dialog appears, enabling you to browse to the folder where you want to place the script.

➢ Enter the name of the script file and save it.

➢ To edit the script, select it in the Scripts dialog and click **Edit** to open the Script editor.

➢ When you have finished editing, choose **Exit & Return to Mediator** to save the .mds file and close the editor.

You can obtain complete reference information about the VBScript Language by pressing F1 in the Script editor.

➢ Once the script is written and saved, you can execute it via the **Script** action (Programming tab of the Events dialog).
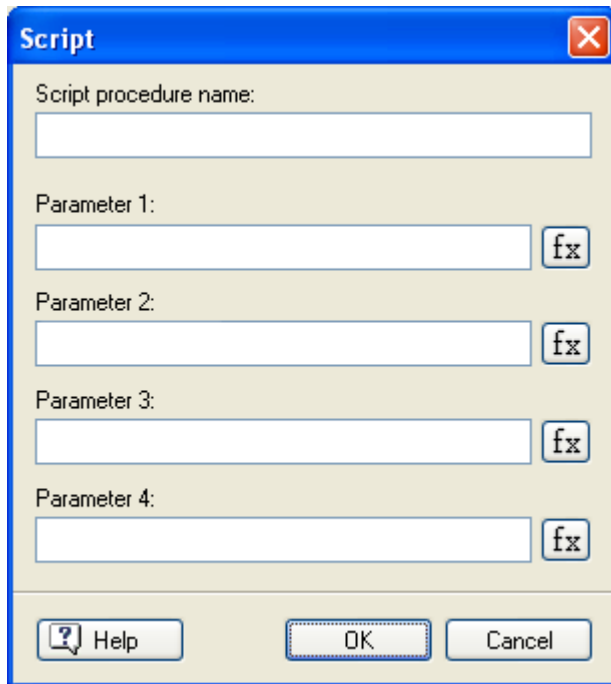
➢ Write the name of the function in the **Script procedure name** field and the necessary parameters in the parameter fields, in the correct order.

Accessing object properties

There are two ways of accessing the properties of a Mediator object from a script:

- You can access it statically by using its name:

    ObjectName.Property = Something

- You can access its properties dynamically by using an object variable. You create the object variable in Mediator and assign it the name of an object. Then you can change the property value from script:

    ObjectVar.Property = Something

See "Using project variables" and "Using expressions" for more information.

Structuring your scripts

Dividing your scripts into separate modules containing well-defined functions will enable you to re-use them easily. Think ahead and try to group your script functions cleverly so that you maximize re-use and do not lose the overview. Building a general library of scripts will save you a lot of time when you develop.

Optimizing the script duration

When you execute a script from Mediator, the script takes over all of Mediator's CPU time. Mediator is therefore blocked while the script is running. It also means that only one script can run at a time.

Why is this? If both Mediator and script were to access the same objects and variables at the same time, the potential for bugs would be much higher. On the other hand, implementing real multitasking is a task for highly experienced programmers. However the loss is not as serious as it may seem if you follow the simple rules below.

When you design your scripts make sure that they only last a very short time. Apart from sorting routines or similar functions, they should only perform very quick operations lasting less than a second. Let us suppose for example that you wanted to use a script to move an object across the screen. Such a script could run for several

seconds and therefore block Mediator. The best way to achieve this is to create a Mediator timeline resource that repeats itself (e.g. once every 0.1 sec.). Place the Script action that calculates the object position and moves the object on the timeline. This way the script is called repeatedly (you control how often on the timeline) but returns immediately each time, leaving Mediator free to carry out other tasks.

Script encryption

At design time all scripts are stored in simple text files with the extension .mds (which stands for "MeDiator Script"). You can therefore edit them very easily with any text editor you wish, including Notepad.

To avoid exposing your script code when you export your project, the script files are encrypted during the export.

An encrypted file has the extension .m8cs. You must not change this extension, otherwise Mediator will not recognize the file as an encrypted file.

When executing a script Mediator always looks for the .mds file first. If it does not find it, it then looks for the .m8cs file. Therefore if you are in the middle of a design session and for some reason both files are present, Mediator will find the design script first, in other words the most recent version.

Using macro script

Advanced

Macros are script files that you can create to automate operations you perform often while designing your projects.

Do not confuse macro scripts with runtime scripts, which are executed when the project is running, either in test mode or after export.

Macros can be programmed using Visual Basic Script or Java Script.

Creating a macro

To create a macro you need to start by creating the .mdm file that will contain the code.

➢ Open the Macros dialog via **View | Programming | Macros** and click the **Add** button.
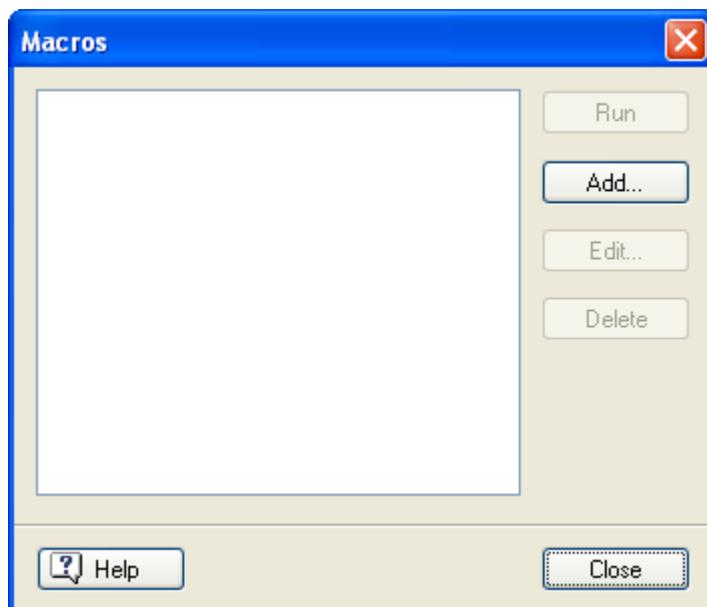
The New Macro dialog appears.

➢ Type the name of the new macro and click OK.

The Script editor appears with the new macro opened ready for editing.

➢ When you have finished editing, choose **Exit & Return to Mediator** to save the .mdm file and close the editor.

➢ To edit the macro at a later time, open the Macros dialog, select the required macro and click **Edit**.

You can obtain complete reference information about the VBScript Language by pressing F1 in the Script editor.

Collections

A group of objects, events, actions or other groups of similar items is referred to as a collection. A collection can be for instance all the pages in a Mediator project, all the objects on a Mediator page, all the events on an object or all the actions on an event.

All collections have the "Count" property and the "Item" member reference:

- **Count** is a read-only property that specifies the number of items in the collection.

- **Item** is a method that returns one object from the collection. Item has one parameter of the type integer, string or both depending on the collection.

In VBScript the "For Each" statement can be used to go through all items in a collection as follows:

```
For Each obj in Md8Objects

   obj.x = 10

Next
```

This runtime script sets the X property of all the objects in the Md8Objects collection to 10 (moving them to the X position 10).

Manipulating Mediator items

The diagram below shows how Mediator objects are linked. To access an object it is necessary to access it through the objects it belongs to.

If you want to add an object to a collection, the object must be available as an o8o object (see the topic "Using o8o files").

There are different ways of accessing an object but the dot notation is always used.

- Accessing an object using the index method (only for objects belonging to a collection):

```
Application.Window.Page.Objects.item(1)
```

- If the name of the object is known:

```
Application.Window.Page.Objects.item("ObjectName")
```

or

```
Application.Window.Page.Objects.ObjectName
```

Application

Document (ActiveDocument)

Pages

Page

Window (ActiveWindow)

☐ Object And Collection

■ Object Only

SelectedObjects

Object

Page

Objects

Actions (Resources)

Object

Events

Event

Actions
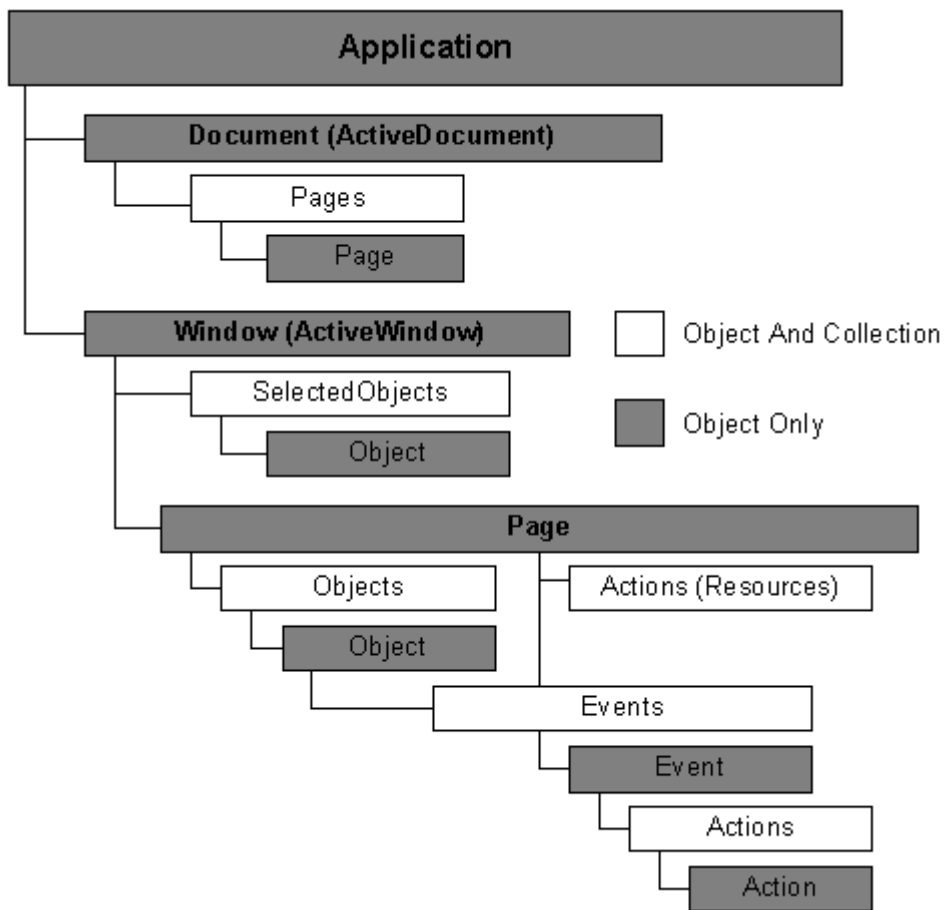
Action

An important method is how to make a page active in order to access objects belonging to it:

```
Application.Window.Page = "PageName"
```

or

```
Application.Window.Page = Application.Document.Pages.Item(1)
```

Example: A macro that is to access the object "Headline" on the "Intro" page in order to change the text to "Welcome" would look like this:

```
Application.Window.Page = "Intro"

Application.Window.Page.Objects.Headline.Text = "Welcome"
```

Executing a macro

As shown in the diagram above all items are accessed through either the Active Document or the Active Window. This means that it is necessary to have a document open for the macro to work upon.

To execute a macro in Mediator:

➢ Choose **View | Programming | Macros** to open the Macros dialog.

➢ Select the macro and click **Run**.

Spellchecking your project

Using the spellchecker

Mediator allows you to find and correct spelling errors in your entire project as well as on individual pages. The Mediator spellchecker is able to check for misspelled words and automatically correct common misspellings in the following objects:

- Text

- Headline

- Button

In addition to looking up words in its own dictionaries, the spellchecker also references **custom dictionaries** to determine whether a particular word is correctly spelt or not. You can customize these dictionaries by adding, replacing or deleting words.

The spellchecker also uses an **AutoCorrect list** to correct common mistakes automatically. Again, you can customize this list by adding, replacing or deleting word pairs.

Finally the spellchecker allows you to spellcheck your projects in **several languages**, including American and British English, French, German, Italian, Spanish, Dutch and Danish.

Spellchecking as you type

By default, Mediator checks for spelling errors as you type, underlining in red any mistakes found.

You have the option of correcting the mistake straight away by right-clicking the misspelled word.

This opens the local menu, in which you can choose any of the following commands:

- **Corrections**

   This lets you choose one of the suggestions listed, which then replaces the misspelled word.

- **Ignore All**

   Choose this command to ignore the currently highlighted occurrence of the word and all other such occurrences in the project and any other project opened during this Mediator session.

- **Add to Dictionary**

   Choose this command to add the underlined word to your default custom dictionary, thereby making it a valid word which the spellchecker will no longer report as a mistake. See the topic "Spellchecking options" for more information on custom dictionaries.

- **AutoCorrect**

   This lets you choose one of the suggestions listed. In addition, the misspelled word and its corrected equivalent will be added to the AutoCorrect list. This means that whenever you type this misspelled word in the future, it will be automatically replaced by its corrected equivalent. See the topic "Spellchecking options" for more information on the AutoCorrect list.

- **Spelling**

   This opens the Spelling dialog, which allows you to spellcheck the entire object.

Spellchecking a page

➢ Choose **Review | Proofing | Spellcheck Page** or press **Ctrl + F7**.

 Mediator goes through all the objects on your page that contain text, looking for spelling mistakes. As soon as it detects a spelling mistake in one of the objects, Mediator selects the object in question and opens the Spelling dialog.
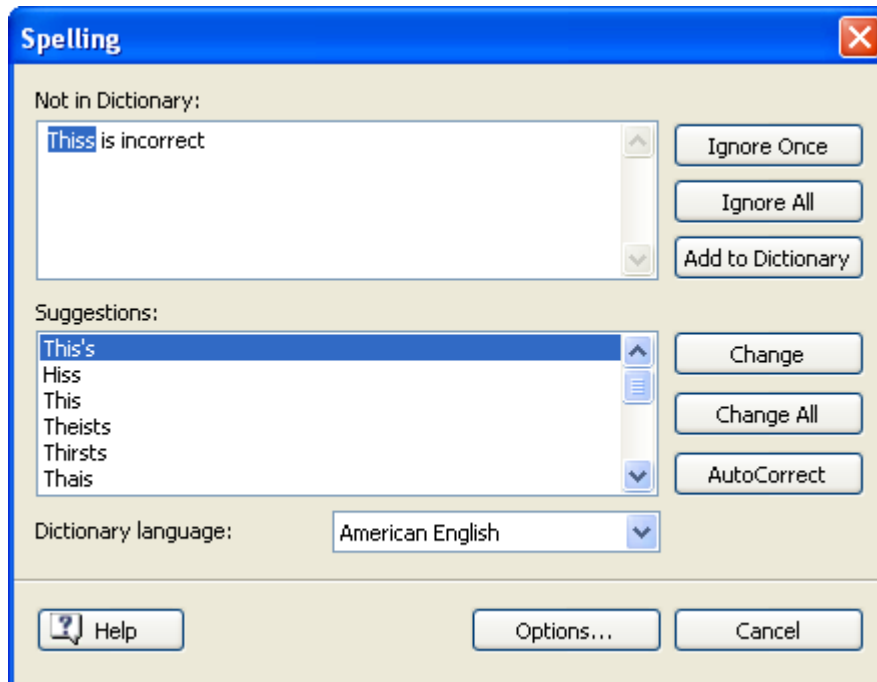
The top field shows the contents of the object, with the first misspelled word highlighted. The bottom field shows a list of suggestions from which you can choose an alternative spelling for the highlighted word.

You can choose one of the following options:

- **Ignore Once**

  This will ignore the currently highlighted occurrence of the word.

- **Ignore All**

  This will ignore the currently highlighted occurrence of the word as well as any other such occurrences during the entire Mediator session.

- **Add to Dictionary**

  This will add the misspelled word to your default custom dictionary.

- **Change**

  If you have edited the misspelled word in the top field, this replaces it with the edited word. Otherwise the misspelled word is replaced by the alternative spelling chosen in the Suggestions field. Only this occurrence of the misspelled word is corrected. If you also want all following occurrences of the word replaced, click Change All.

- **Change All**

  If you have edited the misspelled word in the top field, this replaces it with the edited word. Otherwise the misspelled word is replaced by the alternative spelling chosen in the Suggestions field. This replaces all the occurrences of the misspelled word on the page.

- **AutoCorrect**

  This replaces the misspelled word by the alternative spelling chosen in the Suggestions field. In addition, the misspelled word and its corrected equivalent are added to the AutoCorrect list.

- **Dictionary language**

  This lets you choose a different language for the spellchecker to use to check your project.

- **Options**

  This opens the Spellchecking Options dialog, which lets you set various options to control the way the spellchecking is done. See the topic "Spellchecking options" for a full description of this dialog.

Spellchecking a document

➢ Choose **Review | Proofing | Spellcheck Document** or press **F7**.

ABC

Mediator goes through all the pages of your project, examining any object containing text for spelling mistakes. As soon as it detects a spelling mistake on one of the objects, Mediator displays the relevant page, selects the object containing the mistake and opens the Spelling dialog described above.

Once you have processed all the spelling mistakes reported by the spellchecker and closed the Spelling dialog, Mediator returns to the page you were working on when you started the spellchecking.

Spellchecking options

ABC

This dialog contains various options which you can set to determine the type of errors reported by the spellchecker.

You can access it in several ways:

- By choosing **Review | Proofing | Spelling Options**.

- By clicking **Options** in the **Spelling** dialog.

- By clicking the **Mediator Button**, then **Mediator Options** and **Proofing**.

☑ Check spelling as you type
☐ Ignore words in UPPERCASE
☑ Ignore words with numbers
☑ Ignore Internet and file addresses
☑ Phonetic suggestions (English only)
☑ Typographical suggestions
☑ Case sensitive

☑ AutoCorrect
☑ Correct TWo INitial CApitals
☑ Capitalize first letter of sentences

[AutoCorrect List...]

[Custom Dictionaries...]

Default language:

[American English ▾]

Check spelling as you type: If you disable this option, the misspelled words will not be automatically underlined in red as you type them. You will need to use the Spellcheck commands to spellcheck your objects after their creation.

Ignore words in uppercase: When enabled, this option causes any word written entirely in upper case to be ignored by the spellchecker and skipped. It is useful to keep this option enabled if your document contains many acronyms.

Ignore words with numbers: When enabled, this option causes any word containing numbers to be ignored by the spellchecker and skipped. It is useful to keep this option enabled if your document contains many words or symbols including numbers, such as Q4.

Ignore Internet and file addresses: When enabled, this option causes any words that appear to make up an Internet domain name, a URL or an email address to be ignored and skipped.

Phonetic suggestions (English only): When enabled, this option causes suggestions to be made on the basis of their phonetic similarity to the misspelled word. This option tends to improve suggestions for badly misspelled words.

Typographical suggestions: This is the default option. It causes suggestions to be made on the basis of the similarity of their spelling to that of the misspelled word. Note that the spellchecker does not offer suggestions if you disable both this option and the 'Phonetic suggestions' option.

Case sensitive: When enabled, this option causes the spellchecker to distinguish between capitalized and non-capitalized letters. The word "europe" for instance would be considered as a mistake. If you disable this option, "europe" and "Europe" would be considered identical and both regarded as correct.

AutoCorrect: If you disable this option, even if a misspelled word is included together with its correct equivalent in the AutoCorrect list, the misspelled word will not be automatically replaced by its equivalent.

You can also click **AutoCorrect List** or **Custom Dictionaries** to open the corresponding dialogs. Both dialogs are described below.

Default language: This lets you choose the default language which you want the spellchecker to use to check your projects.

Using the AutoCorrect list

This list contains all the misspelled words which you have corrected by using the AutoCorrect feature described above. Each line is made up of the originally misspelled word in the 'Replace' column on the left, together with the suggestion you chose to replace it with in the 'With' column on the right.

Replace:	With:
abbout	about
abscence	absence
accesories	accessories
accidant	accident
accomodate	accommodate
accross	across
acheive	achieve
acheived	achieved
acheiving	achieving
acommodate	accommodate
acomodate	accommodate
additinal	additional
addtional	additional
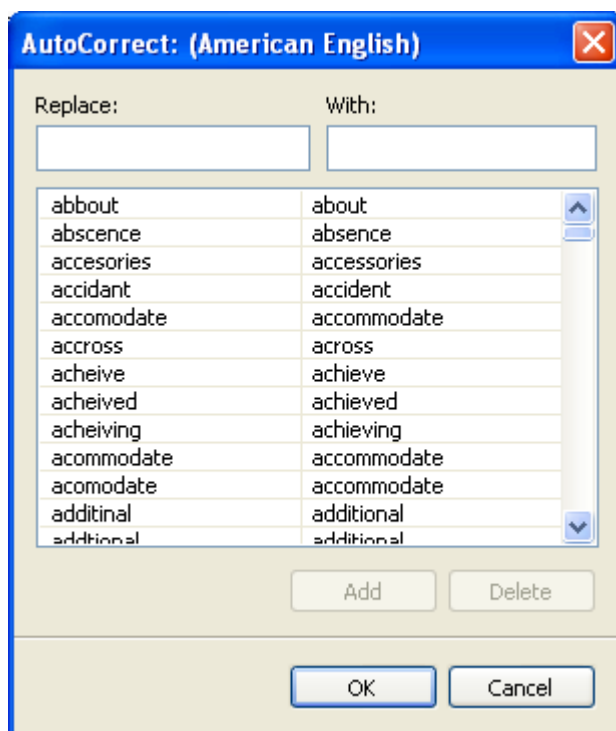
If you work with different languages, the spellchecker maintains one such AutoCorrect list per language.

You can customize the AutoCorrect list in various ways:

- You can add new AutoCorrect pairs by typing a commonly misspelled word in the 'Replace' field followed by its correct equivalent in the 'With' field and clicking **Add**.

- You can replace the correct equivalent of a misspelled word by selecting this misspelled word in the 'Replace' list, typing the new equivalent in the 'With' field and clicking **Replace**.

- You can delete an AutoCorrect pair by selecting the corresponding row in the list and clicking **Delete**.

Using the custom dictionaries

This dialog contains a list of all your custom dictionaries as well as several buttons allowing you to customize them.
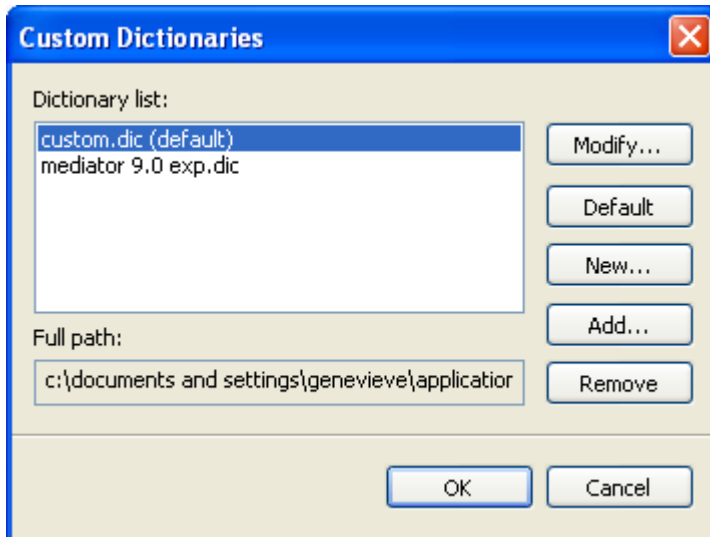
Custom dictionaries contain all the words reported as misspelled by the spellchecker that you decided to accept as valid by clicking Add to Dictionary during spellchecking. This means that a word included in any of the custom dictionaries is no longer reported as a misspelling by the spellchecker.

The Custom Dictionaries dialog allows you to:

- Modify one of the custom dictionaries by clicking it, then selecting **Modify**. You can then add new words to the dictionary or remove existing words.

- Set one of the custom dictionaries as default by selecting it and clicking **Default**. Any new word you now accept as valid by clicking Add to Dictionary while spellchecking will be automatically added to this dictionary.

- Create a new custom dictionary by clicking **New**.

- Add an existing custom dictionary by clicking **Add**.

- Remove an existing custom dictionary by selecting it and clicking **Remove**.

Testing your project

Even if you are experienced, it is quite likely that you will make a few mistakes while designing your project. You might for instance create a picture object without linking it to an actual picture, or specify an incorrect picture path. You might create a Show action and forget to indicate which object to show. Or you might create a Go to Page action, but at some later stage delete the page to go to.

The **Test** group of the **Review** tab gives you various tools to help you test that your project works as intended:

- **Run Document** (**F5**)

  This starts a runtime simulation of your project beginning on the first page in the Page list. Mediator uses the screen mode you have selected in the New Document dialog to give you a preview of what the project will look like in "real life".

  To exit test mode, just press the Esc key.

- **Run Page** (**F6**)

  Similar to Run Document, except that Mediator starts the simulation from the current page.

- **Preview Page (Shift + F6)**

  This only applies to documents of type HTML or Flash. Click it to obtain a real preview of the current page in your default Internet browser.

- **Check Document** (**F11**)

  Checks the entire project for errors such as missing files, illegal page turns, missing links, etc.

- **Check Page** (**Ctrl + F11**)

  Checks the current page for errors such as missing files, illegal page turns, missing links, etc.
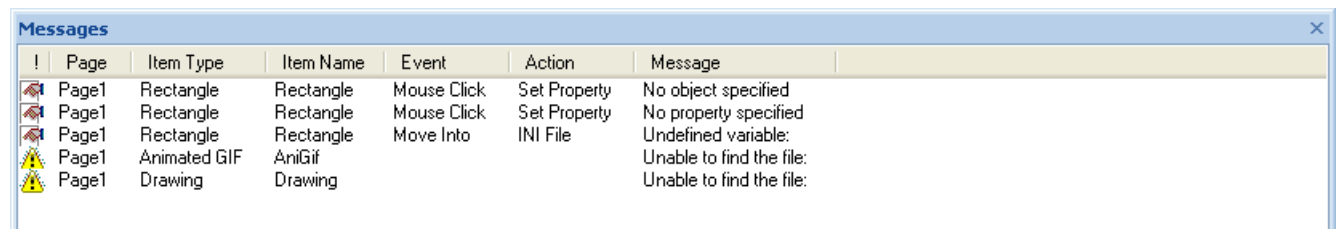
Using the Messages window

Any error that Mediator detects while checking the document or the current page is displayed in the Messages window.

➢ If the Messages window is not already open, choose **Review | Test | Messages**.

Here is an example of what the Messages window might look like.

The first column shows an icon.

Means that you can fix the problem straight away by double-clicking the line in the Messages window.

Indicates a problem which you can correct by going to the specific page.

✔ Denotes a problem that you have corrected from within the Messages window.

The various columns contain the following information.

Page: The page on which the error occurs.

Item Type: The type of the object causing the error.

Item Name: The name of the object.

Event: The event name if applicable.

Action: The action name if applicable.

Message: A description of the error.

When you click a line in the Messages window, Mediator automatically jumps to the relevant page and highlights the object causing the error.

There are errors that Mediator is not able to detect, particularly in advanced expressions. You may for instance have specified an object name that does not exist, or built an expression that does not give a valid result at runtime.

The Debug window may help you identify and resolve these problems.

Using the Debug window

→ Advanced

🐛 This tool enables you to track the actions and their parameters in real time while testing your project.

➢ Choose **Review | Test | Debug** to open the Debug window.

The list on the left displays the variables and their values. New values being assigned are highlighted in red briefly, enabling you to check that the change occurs as expected and when expected.

The track list on the right denotes the start of each new page with an empty line.
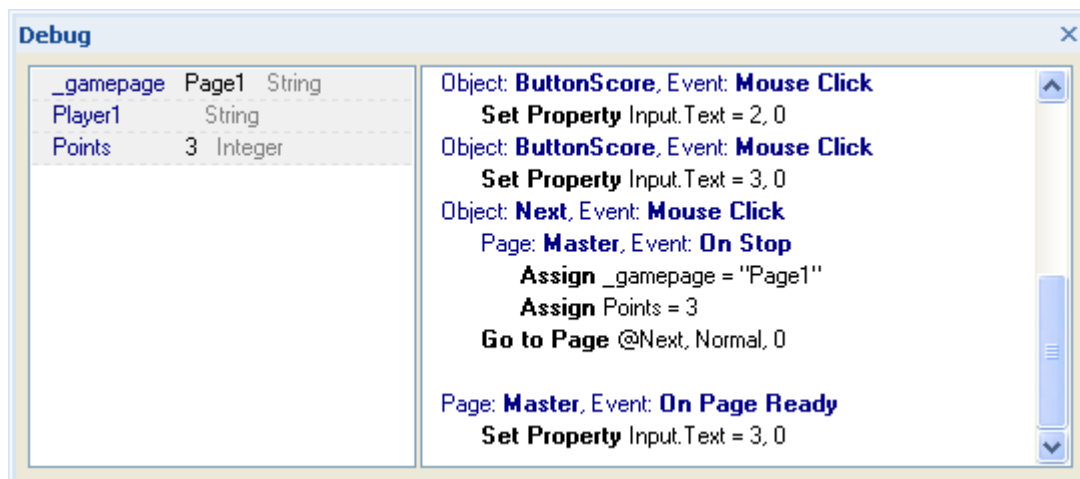
Troubleshooting a problem

If the problem remains and you have checked all the help options mentioned in "Getting help", try to pinpoint it as follows:

➢ Locate the page on which the problem occurs. This is normally straightforward, but in rare occasions, for instance while exporting, the procedure might stop without identifying the page causing the problem.

In this case you must start deleting pages (always make a safe copy of your project first) until you find the page giving the error. This can be quite a task since you also have to remove any links to the pages you delete. Normally you should have an idea about which section of your project is more likely to cause problem so that you can concentrate on it.

> ➢ Locate the object or action causing the problem. You can use the same approach as for finding the troublesome page. Simply start removing objects and actions until the problem disappears.

HTML restrictions

Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose, and only shows the features, options and export formats that are relevant to it. In particular, HTML projects do not have as many tools, effects, events and actions available as projects of type Standard.

Please refer to the "Mediator 9 feature list" for a complete list of all objects, events and actions supported in HTML projects.

This topic describes additional restrictions applicable to HTML that you should be aware of when creating projects for HTML export.

Alpha channels

The use of another picture as alpha channel is not supported on the web.

Pictures with embedded alpha channels are converted to PNG files when exported to HTML. This ensures that their edges will be antialiased.

Glow and Shadow

The glow and shadow effects set during design are supported, but cannot be changed at runtime.

Rotation

The rotation effects set during design are supported, but objects cannot be rotated at runtime.

Hotspots

Mediator hotspots can follow moving or scrollable objects. This feature is not supported on the web. To make hotspots place transparent rectangles on top of the picture instead of using the hotspot object.

Unclickable transparent areas

When you insert a picture in Mediator you may define one of its colors as transparent. In a standard Mediator project transparent areas on pictures do not respond to mouse events. This feature is not supported on the web. The entire object frame will become clickable, not just the visible area.

Transition effects

Mediator only supports a limited number of show/hide object transition effects in Internet Explorer and Mozilla Firefox.

Picture formats

The only picture formats used on HTML pages are GIF, JPG and PNG because of the good compression level they offer. All other picture formats will be converted to PNG.

JPG should be used as much as possible, particularly for large photos. Do not however choose this format if you want to use the transparent color option to define one color as transparent. Choose instead either GIF, where you can define one exact color as transparent, or PNG with an alpha channel.

Audio and video formats

The recommended formats are the Microsoft® WMA (audio) and WMV (video) streaming formats. Files using these streaming formats can start playing as soon as a minimum buffer size of data is loaded. The rest is downloaded while playing.

Text objects

Only one type of bullet lists and numbered lists is supported, depending on the chosen font.

Embedding of images is not supported.

Input objects

The On Stop event is only triggered when the user clicks a different object. It is not triggered when the user presses the Enter key.

The Password option is not supported in HTML export.

Message Box action

When using this action in HTML export, only the text is exported. It is not possible to choose an icon to represent the type of message conveyed and the only button available is the OK button.

HTTP Request resource

Some restrictions apply with this resource. See "The HTTP Request resource" for more information.

Functions

The following functions are supported in HTML export:

ABS
ARCCOS
ARCSIN
ARCTAN
COS
FLOAT
FORMAT
INT
LOWER
LEN
LOG
NOT
RGB
RND
SIN
STRING
SUBPOS
SUBSTR
SQR
TAN
UPPER

System variables

The following system variables are supported in HTML export.

@Date
@DateDay
@DateMonth
@DateYear
@Time
@TimeHour
@TimeMin
@TimeSec
@CursorXpos
@CursorYpos
@ScreenXsize
@ScreenYsize

Flash restrictions

Because some of the features and effects available in Mediator are not supported on the Internet, Mediator automatically adapts its user interface to the document type you choose, and only shows the features, options and export formats that are relevant to it. In particular, Flash projects do not have as many tools, effects, events and actions available as projects of type Standard.

Please refer to the "Mediator 9 feature list" for a complete list of all objects, events and actions supported in Flash projects.

This topic describes additional restrictions applicable to Flash that you should be aware of when creating projects for Flash export.

Glow and Shadow

The glow and shadow effects set during design are supported, but cannot be changed at runtime.

Opacity

When setting opacity to 0 for an object, a faint outline of the object sometimes remains. This is only a problem when the screen resolution is set to 16 bit colors.

Color

Only polygons, rectangles and headlines can have their color property set at runtime (using the Set Property action). Polygons and rectangles have both an outline color and a fill color. In Flash export however, outline and fill color cannot be changed separately. Changing the outline color will also change the fill color and vice-versa.

Hotspots

Mediator hotspots can follow moving or scrollable objects. This feature is not supported in Flash export. To make hotspots place transparent rectangles on top of the picture instead of using the hotspot object.

Unclickable transparent areas

When you insert a picture in Mediator you may define one of its colors as transparent. In a standard Mediator project transparent areas on pictures do not respond to mouse events. This feature is not supported on the web. The entire object frame will become clickable, not just the visible area.

Transparent colors are not supported for jpg pictures.

Effects

Only a limited number of transition effects are supported in Flash export.

Text and fonts

Only TrueType fonts are supported in Flash export.

Fonts embedded in Flash export will not always appear quite as they do in Mediator. This is most noticeable with smaller font sizes. Sometimes changing the font size a little can yield a significant quality difference in the Flash export.

The positioning of characters may differ by up to a few pixels as compared to their appearance in design mode.

Non-character fonts (such as Symbol and Wingdings) are not supported in bold and italic versions, and won't appear in the Flash export.

Text object hyperlinks only support the event Mouse Click.

Text object hyperlinks cannot change color.

If the text object has a Mouse Down or Mouse Click event, the event will be triggered even when the mouse pointer is positioned over a hyperlink.

Pictures / Bump maps

Picture and bump map objects behave differently in Flash export when resized at runtime.

In Mediator the individual tiles do not change size, so increasing the object size will result in more visible tiles than before. In Flash export, the entire graphical content of the object is resized, meaning that each tile changes size when the object is resized.

Picture objects that differ only by their alpha channel and their transparent color will not share data in Flash export. This is because the alpha channel and transparent color must be embedded in the image data. This results in larger file sizes in Flash export if pictures have different alpha channels, but the same image file.

If a picture is tiled and has an alpha channel, the picture will be tiled at export time (and not at runtime). This will result in a larger file size than a tiled picture without alpha channel.

Sound

Only *.wav and *.mp3 audio file types are supported in Flash export.

WAV file formats are supported as long as they are 8 bit or 16 bit files with one of the following sample rates: 5.5 k Samples/sec, 11.025 k Samples/sec, 22.050 k Samples/sec, and 44.100 k Samples/sec. No other sample rates are supported.

MP3 is the recommended format for all sounds, except very short sound effects.

MIDI (*.mid) and WMA sound files (*.wma) are not supported in Flash export.

Sound actions/resources in Flash export have the following limitation:

Any one sound (from the same file) cannot be played more than once at a time. If the same sound is started by different events, the extra sound actions are ignored while the sound started by the first event is still playing.

The only files that can be streamed (that is, only downloaded to the player when the sound is played) are MP3 files. If a MP3 sound has its 'Use streaming' option set in the corresponding Sound action, this sound cannot be looped. See the topic "Sound" for more information.

Note that even if the 'Create all pages in a single SWF file' option is selected during export, any MP3 sounds with the 'Use streaming' option enabled will still reside in their individual .mp3 files. They will not be embedded in the single .swf file as this would prevent their streaming.

Text objects

Not all text object formatting options are exportable to Flash.

Numbered lists are not supported. Only one type of bullets are supported in bulleted lists, usually round bullets, although this depends on the chosen font.

The appearance of lists and indents may not be the same as in design mode. Justifying text is not supported.

Embedding of images is not supported.

Text color is supported, but setting a specific background color for individual characters/words/sentences is not supported. The strikeout format attribute is not supported. Increasing and decreasing indent levels for paragraphs is not supported, although tabs are. Tables are not supported.

Video objects

- The video must be a .FLV file, since this is the only video format supported by the Flash player.

- The properties 'Load on show' and 'Discardable' are not supported, since FLV videos are always streamed to the Flash player.

- The properties 'Enable transparent color', 'Transparent color' and 'Always on top' are not supported, since it is not technically possible.

- The properties 'Auto start' and 'Repeat' cannot be read or changed at runtime.

Animated GIF objects

If the frame rate of the Flash file is lower than that of an animated GIF contained in the Flash file, the frame rate of the animated GIF is lowered to match that of the Flash file.

Flash objects

- Not all .swf files, especially if they use complex scripting, are guaranteed to work. Therefore you are advised to use .swf files containing simple non-interactive graphics that do not use fonts.

   .swf files created by Mediator contain complex scripts that make them unsuited to being used in a Flash object in another Mediator Flash project.

- The .swf file selected must exist locally. It cannot be located at a remote URL.

- You cannot access the properties of the Flash file in the Flash object through programming actions or script.

- The .swf file that is used in the Flash object will run at the same frame rate as the Flash project as a whole. Therefore the Flash object may run faster or slower than intended if the two frame rates differ.

  Advanced users

  The external .swf file should not contain ActionScript that uses absolute paths to internal objects/variables. The reason for this is that a .swf file, when played independently, is loaded into the "_root" namespace of "_level0". This is not necessarily the case when the .swf file is loaded into a Flash export from Mediator. Therefore ActionScript using references like "_root.MyVariable = 17" or "_level0.MyObject = Something" will have undefined (and quite likely undesirable) effects. This kind of script may prevent the entire Mediator exported Flash project from functioning correctly.

  In general, you should only use external .swf files that work when loaded into a MovieClip (in a different Flash project) using the "loadMovie( )" ActionScript function.

Input objects

There are some small differences between the regular Mediator input object and the Flash export version:

- The Flash input object does not support horizontal scrollbars.

- Single-line Flash input objects will always auto-scroll horizontally.

- Multi-line Flash input objects will always auto-scroll vertically. Horizontal auto-scroll can be disabled.

- If the input object loses focus because the mouse is pressed on another object, then this other object's Mouse Down, Mouse Up and Mouse Click events will trigger before the input object's On Stop event triggers.

- Pressing the Enter key in a single-line input object will trigger the On Stop event, and the input object will lose focus.

- In multi-line input objects a new line is added when pressing Enter.

- Setting the ' Flash device fonts' property to True lets you use the three built-in Flash fonts (Arial, Times New Roman, and Courier New). These fonts do not need to be embedded, thus reducing the size of the exported file. It is advisable to always use device fonts. This is particularly relevant for input objects and list box objects, where it is impossible to know ahead of time which character will be entered. Because of this, the entire alphabet for the chosen font would otherwise need to be embedded in the file.

List box objects

- The 'Selected background color' property is not supported, and the background color of the selected item is only visible while the list box has focus.

- A selection is considered to have been made in the list box not when the mouse button is pressed, but when it is released.

- As for the input object (see above), setting the ' Flash device fonts' property to True lets you use the three built-in Flash fonts (Arial, Times New Roman, and Courier New).

- The properties that can be read and set at runtime are: Height, Width, Data, DataArray, SelectedIndex, SelectedString, Size, Visible, X, Y.

Timeline

When a timeline is used as a resource the Pause action cannot be used. The Start and Stop actions work as in a regular Mediator project.

HTTP Request resource

Some restrictions apply with this resource. See "The HTTP Request resource" for more information.

Keyboard events

A Flash project running in a browser may not always react to keyboard events. This is because the Flash player (in the browser) does not have focus. Clicking the browser window will give focus to the Flash player, and the On Key Up and On Key Down events should then work as designed.

- The F1 - F12 function keys are not supported.

- Combination keys using Ctrl + key or Shift + key are not supported.

- Certain keys such as Esc may only trigger the On Key Up event (but not On Key Down). This depends on the platform on which the Flash player is running (Windows, Mac, etc.) and the browser (Internet Explorer, Firefox, etc.).

- When pressing certain keys on keyboards that differ from the standard English keyboard layout, the @Key variable will be set to the character that corresponds to the English version of the key being pressed.

Functions

The FORMAT function is not supported in Flash export. The following functions are supported:

ABS
ARCCOS
ARCSIN
ARCTAN
COS
FLOAT
INT
LOWER
LEN
LOG
NOT
RGB
RND
SIN
STRING
SUBPOS
SUBSTR
SQR
TAN
UPPER

System variables

The following system variables are supported in Flash export.

@DateDay
@DateMonth
@DateYear
@TimeHour
@TimeMin
@TimeSec
@Timer
@CursorXpos
@CursorYpos
@ScreenXsize
@ScreenYsize
@Key

Preparing for export

Viewing and replacing data files

Data files are pictures, videos and sounds that you use in your project.

As your project grows, it is sometimes useful to see the list of all such files with their complete path.

The Data Files dialog can be used for this purpose. It also lets you replace a data file by another on all the pages where it is used.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Data Files**.

The following dialog appears.
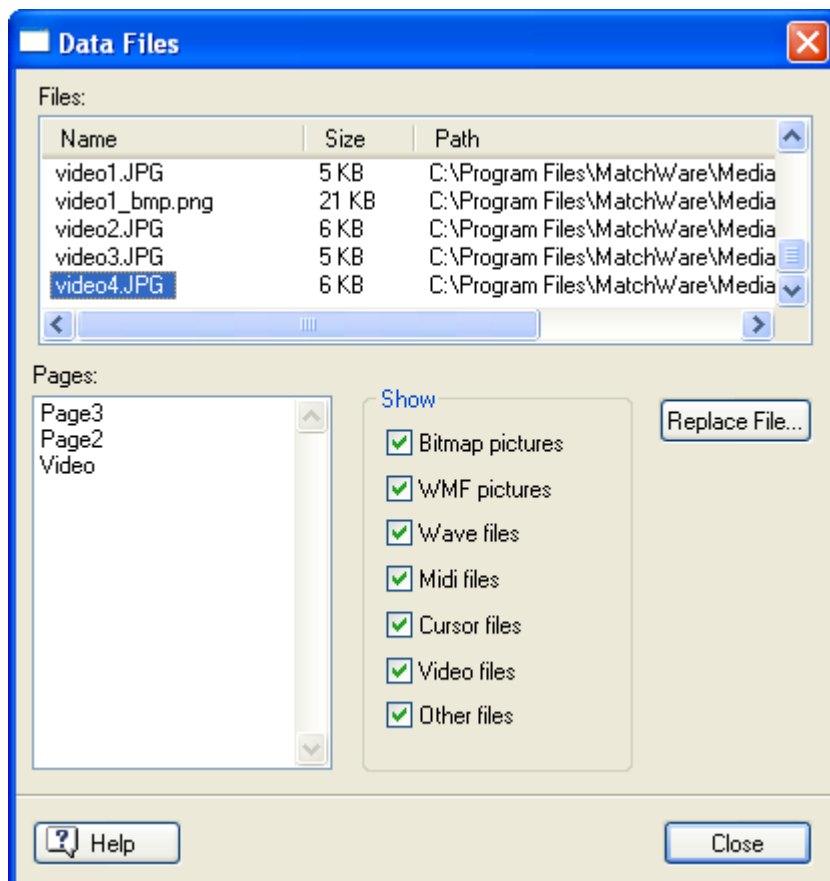
By default, all file types are shown.

- To exclude unwanted file types from the list, remove the corresponding checkmark in the **Show** group.

- To see a list of the pages where a particular file is used, click the file in the **Files** list. If you then click one of the pages listed in the **Pages** list, Mediator displays that page automatically, without closing the Data Files dialog.

- To replace one of the data files listed by another file, select the file to be replaced, click **Replace File** and select the new file. Mediator will replace the file reference on all the pages where it is used, saving you the trouble of editing each reference manually.

Adding data and program files

When you export your project, Mediator automatically collects and includes in the exported version all the external files you have used in the project. However, this is only true for files that are visibly part of the project (pictures, videos, GIFs etc.), not external files such as programs, forms, spreadsheets, INI files, databases etc. that you might refer to in the various actions or in the Embedded Document object.

Additional data files

To ensure that Mediator will include these additional data files in your exported version, you must specify them in the Additional Data Files list. When generating the exported version, Mediator copies all the files that are listed in the Additional Data Files list to the folder containing the Mediator project file.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Additional Data Files** to open the following dialog:
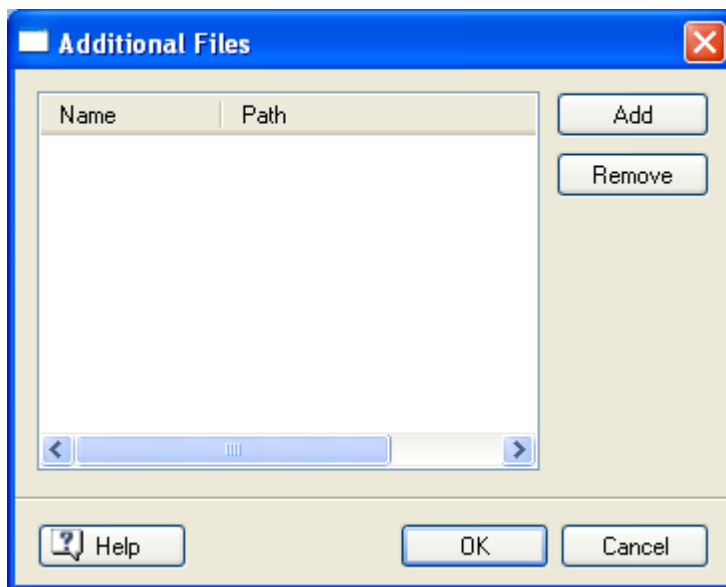
➢ Click the **Add** button to select the file you wish to include in the export.

💡 *You can select multiple files with the standard Windows combinations Shift + click (to select consecutive files) and Ctrl + click (to select non consecutive files).*

When running your exported version, Mediator always starts by looking in the Mediator project folder for external data files referred to by the project. Therefore if you have used actions or expressions that refer to external data files, as well as including them in the Additional Data Files list, you must make sure that their path in these actions and expressions does indeed point to the Mediator project folder.

When working on documents of type Standard, Mediator provides a system variable called @DocDir that you can use in actions and expressions to refer to the Mediator project folder.

If for instance your Mediator project file is stored in the folder "C:\MyProjects\Data" on the end user's computer, the expression @DocDir + "MyDocument.doc" will be equivalent to the path name "C:\MyProjects\Data\MyDocument.doc".

You can also use @DocDir to build other path names relative to the project folder. In this case, you will need to reproduce your relative folder structure in the project folder by copying the relevant folders and files manually after the export.

See "System variables" for more information on @DocDir.

Additional program files

→ Advanced In addition to external data files, Mediator also allows you to include external program files via the Additional Program Files dialog. When generating the exported version of your project, Mediator copies all these files to the program folder containing Mediator Viewer (md8rntm.exe).

This is only applicable to documents of type Standard.

➢ Click the **Mediator Button**.

➢ Choose **Prepare | Additional Program Files**.

Self-registering ActiveX controls that are used in the project should be contained in OCX files in order to be registered by Mediator. You should also include these OCX files in the Additional Program Files dialog.

As well as including external program files in the Additional Program Files list, you must make sure that the path of any external program you refer to in actions and expressions does indeed point to the program folder containing Mediator Viewer. Mediator provides a system variable called @ProgramDir for this purpose.

Notes:

* Many programs require .dll files as well as the main .exe. You should also include these additional files in the Additional Program Files list.

* You do not need to add applications that are part of Windows (e.g. WordPad, Paint etc.)

* When including other programs in your project make sure you do not violate any copyright laws.

Optimizing the pictures

Pictures can be selected and inserted quickly in Mediator, in picture objects or on buttons.

Their resolution however is often much higher than necessary. This slows down the project at runtime, as Mediator needs extra time to load them and resize them.

When you work with web sites (HTML or Flash) it is particularly important to keep the resolution of your pictures as small as possible, to minimize the download time of your online projects and maximize their performance.

To help you optimize your projects Mediator includes a built-in **Image Optimizer®**.

You can access the Image Optimizer in two ways:

* Before exporting your project, by clicking the **Mediator Button**, then choosing **Prepare | Optimize**.

* During the export procedure, by checking **Optimize pictures** in the **Advanced Export** dialog.

The first window of the Image Optimizer lets you choose between two modes, further described below:

* **Automatic:** Mediator optimizes your pictures automatically using the default JPG quality level shown.

* **Manual:** You customize the process yourself in the next screens.
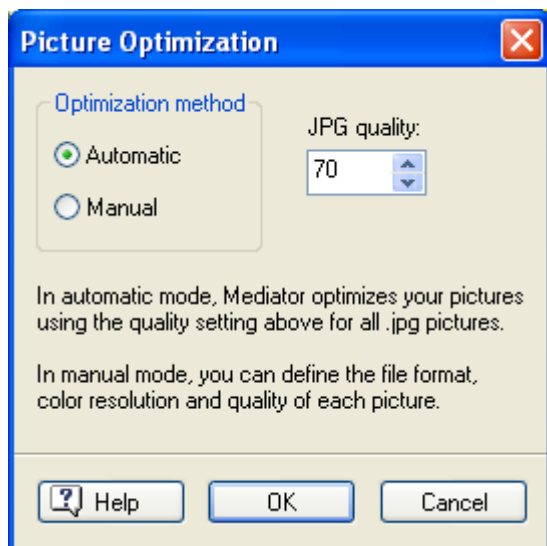
When you check the 'Optimize pictures' option in Quick export, Mediator uses the automatic mode with the default JPG quality level of 70%.

The Image Optimizer starts by creating copies of the original pictures and places them in a folder called Optimized. Once optimized, the pictures are kept in this folder. The Optimized folder is created in the same folder as your project file (the md8 file) and should not be moved.

You are strongly advised not to place more than one md8 file in the same project folder if you wish to use the Image Optimizer, as it may cause problems for two or more md8 files to share the same Optimized folder.

Your original pictures are of course not changed or moved during the optimization process. Mediator uses the optimized copies of your pictures in the exported version.

Automatic mode

When you select Automatic and click OK, Mediator quickly runs through all your pictures, resizing and optimizing them as required.
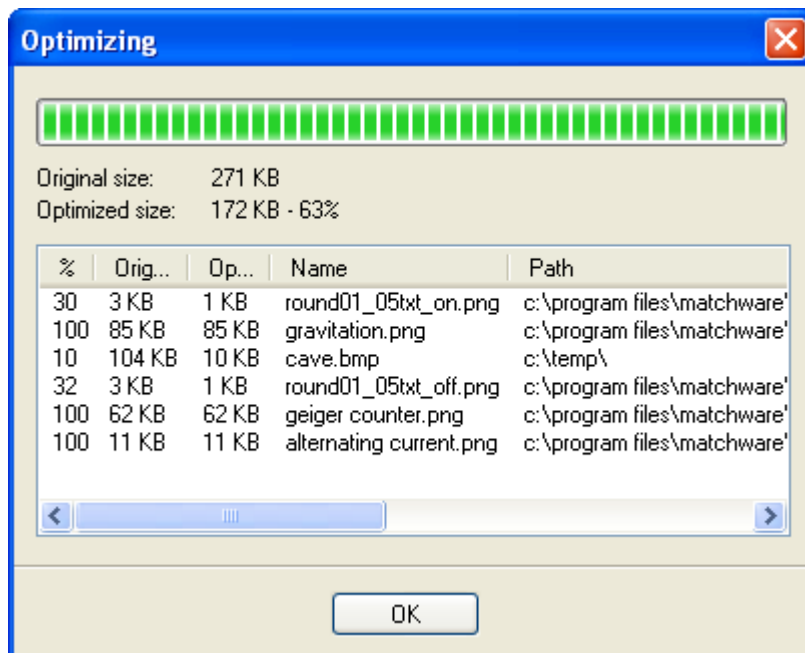
By default, the JPG quality level is set to 70%. This value ensures a good level of quality, but you may lower it to further compress the pictures, and therefore reduce the file size. To get an idea of how much you can compress them while still retaining an acceptable level of quality, run the Image Optimizer in manual mode on a few of your pictures until you find a level of compression that you are satisfied with.

Manual mode

In manual mode, Mediator opens the following dialog.
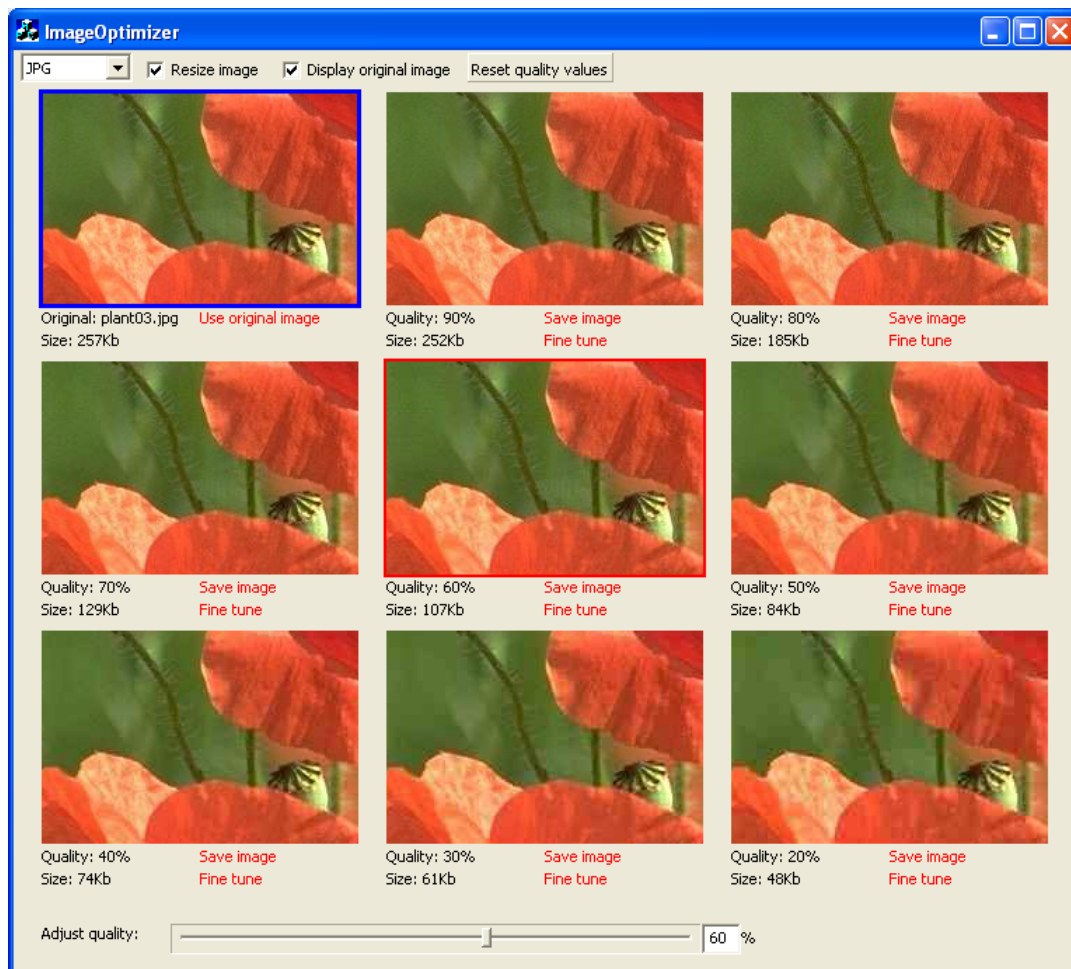
Image Optimizer opens up the pictures one by one, and lets you select the format and quality you wish to use for each one. The nine thumbnails show you how different levels of compression affect the picture.

The top left thumbnail shows the original image. The other eight show compressed versions, ranging from an image quality of 90% to an image quality of 20%.

The thumbnails only show a part of the image. You can move the image within the thumbnail by dragging it.

➢ To see a bigger representation of a compressed image, double-click the relevant thumbnail. Click the **Close** button ✖ or press **Esc** to return to the Image Optimizer.

Use original image: To skip to the next picture without optimizing the current one, click 'Use original image' below the original image (top left corner).

Save image: To save one of the compressed versions, click its 'Save image' label to create an optimized copy of the image in the Optimized folder.

Fine tune: To find the perfect compression factor for your image, select the thumbnail that comes closest to what you need, then click its 'Fine tune' label to see 8 new compression factors within 10% of the initial compression rate. Select a thumbnail and click 'Fine tune' again to zoom into 8 further compression factors differing by just 1%. You can save the image at any time during this process.

Adjust quality: You can also use the 'Adjust quality' slider to change the level of compression. This slider appears at the bottom of the Image Optimizer when you click one of the thumbnails. Drag the slider to increase of decrease the quality of the image in the selected thumbnail. Then click 'Save image' to create a copy of the image in the Optimized folder, or 'Fine tune' to update all 8 compression thumbnails.

Adjust quality:	———————————[ ]———————	60 %
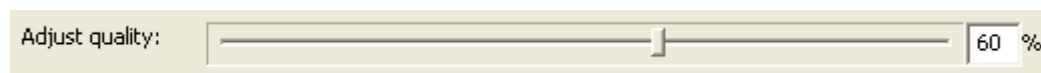
Menu options

The Image Optimizer menu bar contains the following options:

JPG ▼	☑ Resize image	☑ Display original image	Reset quality values

Format: Choose between JPG and PNG. If a picture uses a transparent color, PNG is the only picture format available, as the JPG format does not handle single-color transparency very well.

Resize image: When this option is checked, Image Optimizer resizes the picture to the same size than the picture object or button in which it is placed.

If you have used the same picture more than once in your project in different object sizes, Image Optimizer optimizes it to the largest size used, giving you optimal quality for all the objects that refer to the given picture file.

Display original image: When this option is checked, the original image is shown in the top left corner.

Reset quality values: Click to reset the compression thumbnails to range from 90% to 20% in quality.

Exiting Image Optimizer

➢ To exit Image Optimizer before having optimized all the images in your project, click the **Close** button ⊠.

Optimizing for CD-ROM export

There are various points to bear in mind at the design stage in order to optimize your project for CD-ROM distribution. This topic is relevant to projects that you intend to export with the CD-ROM (without installation) method, e.g. without installation on the end user's hard disk.

The transfer speed of a CD-ROM is lower than that of a hard disk. Consequently, you must bear in mind that the performance obtained when the project is run from a CD-ROM will not be as high as when you test it on your hard disk.

The other factor likely to affect performance is the search time. This is the time it takes to move from one track to another, for instance when searching for all the files needed to display a Mediator page. The search time is usually significantly lower on a CD-ROM than on a hard disk. You can minimize the total search time by limiting the number of files that have to be loaded when displaying a new page, for instance by enabling the 'Load on show' option. See "Object properties: graphic properties" for more information on this property.

If this is a concern, it is a good idea to create a "dummy" project with all the elements that might affect performance, export it to CD-ROM and test it under real conditions before getting too advanced in the design.

Spread out the contents of your project on different pages whenever possible. Rather than placing a large number of objects on a small number of pages, it is far better to create new pages to distribute the contents. Not only does this reduce the volume of data to be loaded when displaying each new page, but it usually improves the project overview. The Mediator Active Page Management system ensures that a large number of pages does not negatively affect performance.

Data folders in large CD-ROM projects

→ Advanced This topic describes how to control the folder structure used for the data files of large CD-ROM projects.

When you export your project to CD-ROM, all the files (pictures, sounds, videos, etc.) that you have included in your project are copied to a folder named Data on the CD-ROM. When your project is run on the end user's computer, the files are read from this Data folder on the CD-ROM.

This method works fine for most projects, but may impact performance for extremely large projects with thousands of data files. The more files the Data folder contains the longer it takes Mediator to find and open a specific file.

You can however overcome this problem, and take the opportunity to improve the organization of your project at the same time, by placing all the files you require in different sub-folders at design time.

You can for instance place all the picture files in a sub-folder named Pictures, all the sound files in a sub-folder named Sounds, etc.

Here we have created 4 sub-folders, but you can use as many as you like, and name them according to their content or any other characteristic.

Here is the procedure to follow:

➢ Save your .md8 project into an empty folder of your hard disk.

➢ Create within that folder a folder structure of your choice (e.g. a sub-folder for the pictures, another for the sounds etc.). You can even create sub-sub-folders if required.

➢ Place all the files (e.g. pictures, sounds etc.) in the relevant sub-folders before integrating them to the Mediator project. This will ensure that all the file paths in the project will point to one of these sub-folders.

➢ When you have completed your project, export to CD-ROM in the normal way. See "Exporting to CD-ROM (without installation)" for the detailed procedure.

➢ Once the exported version is created on your hard disk, but before burning the CD, delete the contents of the CDROM\Data sub-folder created on your hard disk during the export and replace them with the contents of your own project folder (i.e. the folder of your hard disk where you placed the .md8 project and all your data sub-folders).

➢ Burn the CD-ROM with the contents of the CDROM folder.

Your folder structure will now be maintained when the end user runs your project from the CD-ROM.

Notes:

- If you move files from one data sub-folder to another during the design phase, you must also change the path names of all the files concerned in the Mediator project.

- If you rename one of the sub-folders, you must also make the relevant changes in the Mediator project for all the files contained in that sub-folder.

- You can add more sub-folders to the structure at any time during design.

- This procedure will also work if you have used the Prepare | Additional Data Files command to add external data files (INI files, PDF files, databases and so on) to your project.

Exporting your project

Introduction

Mediator lets you export your project in various formats for distribution to other users.

The export formats available depend on the type of your document, e.g. **Standard**, **HTML** or **Flash**.

The document type is normally defined when you create the document, but you can choose a different document type at any time later by clicking the **Mediator Button** and choosing **Prepare | Properties**. For more information, see "Document properties".

Note that if you change the document type from Standard to HTML or Flash, you will need to check that all the elements, objects, actions and other features you have used in your project are indeed supported by the HTML or Flash format.

Whenever possible, Mediator informs you of any such compatibility problems during export.

Please refer to the topic "Mediator 9 feature list" for a complete list of all objects, events and actions available in Mediator for each document type. You will also find a detailed list of the restrictions applicable to HTML and Flash in "HTML restrictions" and "Flash restrictions".

If you are referring to external data or program files in your project, you need to make sure that Mediator will include them in the exported version. See "Adding data and program files" for more information.

Once you have chosen your preferred export format, specified an output folder and filled in the relevant dialogs, Mediator starts by checking your project. If no errors are found, it collects all the files making up your project to create the exported version and adds the Mediator Viewer if necessary.

The Mediator Viewer is the cut-down version of Mediator that allows your users to view your project once exported. It is automatically packaged with your project when you export it to any format other than HTML or Flash. When exporting to HTML or Flash, the Mediator Viewer is not needed as the project is viewed via the Internet browser.

Mediator stores the exported version in the output folder you specified, ready for you to copy it to the appropriate distribution medium.

Export formats

The various export formats available in Mediator are as follows:

- **CD-ROM (without installation)**

  Only for projects of type Standard. See "Exporting to CD-ROM (without installation)" for more information.

- **CD-ROM (with installation)**

  Only for projects of type Standard. See "Exporting to CD-ROM (with installation)" for more information.

- **Self-executable EXE**

  Only for projects of type Standard. See "Exporting as self-executable EXE file" for more information.

- **Zip'N'Run**

  Only for projects of type Standard. See "Exporting as Zip'N'Run file" for more information.

- **HTML**

  Only for projects of type HTML. See "Exporting to HTML" for more information.

- **Flash**

  Only for projects of type Flash. See "Exporting to Flash" for more information.

- **Copy to Folder**

  For all project types. See "Copy to Folder distribution" for more information.

The "myMediator.com" option, available in the Education version of Mediator, allows you to create a Flash version of your project and upload it to the Mediator School Server in one step. Please refer to the topic "myMediator.com" for more information.

Export modes

Some of the export formats listed above can be used in two modes:

- **Quick export**

  The Quick export allows you to export your project quickly, using the Mediator defaults.

- **Advanced export**

  The Advanced export allows you to set various export settings in the Advanced Export dialog.

Exporting to CD-ROM (without installation)

This topic describes how to export your project to CD-ROM (or other removable storage medium), without including an installation program.

This export format is only available for projects of document type Standard (as opposed to HTML or Flash). To find out how to change the document type of your project, refer to "Document properties".

With this export format, all your project files (.md8 file, all data files and Mediator Viewer) are copied onto the CD-ROM and remain on the CD-ROM at all times. Whenever the user wants to run the project, he/she needs to insert the CD in the CD-ROM drive. None of the project files are copied on the end user's hard disk.

This export format is therefore a good choice for large projects containing many pictures, videos, sounds and so on. For advice about performance and folder structure for very large projects, see "Optimizing for CD-ROM export".

If you want to create a CD-ROM containing an installation program so that the entire project can be installed on the end user's hard disk, see "Exporting to CD-ROM (with installation)".

Quick export

➢ Click the **Mediator Button**.

➢ Choose **Export | Quick Export**.

➢ Select **CD-ROM (without installation)** in the Quick Export dialog.

You can also press Ctrl + Q to access the Quick Export dialog.

➤ Check **Optimize pictures** to let Mediator optimize automatically the pictures contained in your project.

   If your project contains many pictures, it is advisable to let Mediator optimize them, as pictures are often much larger than they need to be. Optimizing them reduces the size of your project and maximizes its performance.

➤ Specify an output folder. By default, this is the folder containing your project.

   Enter a new folder name or click the Browse button to select another folder.

➤ Click OK.

Mediator creates a sub-folder called CDROM in your output folder and copies to it all the files making up your project, the auto-run files and the Mediator Viewer.

➤ To view the contents of the CDROM folder, click **Open File Folder** when the Export Finished dialog appears.

➤ Copy all the files and folders from the CDROM sub-folder to the root of your CD using your CD burner software.

➤ Distribute the CD to your end users. As auto-run is always included on the CD, the project will start as soon as the user inserts the CD in the drive.

Advanced export

➤ Click the **Mediator Button**.

➤ Choose **Export | Advanced Export**.

➤ Select **CD-ROM (without installation)** in the Advanced Export dialog.

- ➢ Choose the export settings required. These settings are described in "Advanced export settings".

- ➢ Specify an output folder. By default, this is the folder containing your project.

   Enter a new folder name or click the Browse button 📥 to select another folder.

- ➢ Click OK.

Mediator creates a sub-folder called CDROM in your output folder and copies to it all the files making up your project, the auto-run files if requested and the Mediator Viewer.

- ➢ To view the contents of the CDROM folder, click **Open File Folder** when the Export Finished dialog appears.

- ➢ Copy all the files and folders from the CDROM sub-folder to the root of your CD using your CD burner software.

- ➢ Distribute the CD to your end users.

   - If you have included auto-run on the CD, the project will start as soon as the user inserts the CD in the drive.

   - If not, instruct your users to double-click 'Start.exe' to start your project.

Exporting to CD-ROM (with installation)

This topic describes how to export your project to CD-ROM (or other removable storage medium), with its own installation program.

📌 This export format is only available in Advanced export, for projects of document type Standard (as opposed to HTML or Flash). To find out how to change the document type of your project, refer to "Document properties".
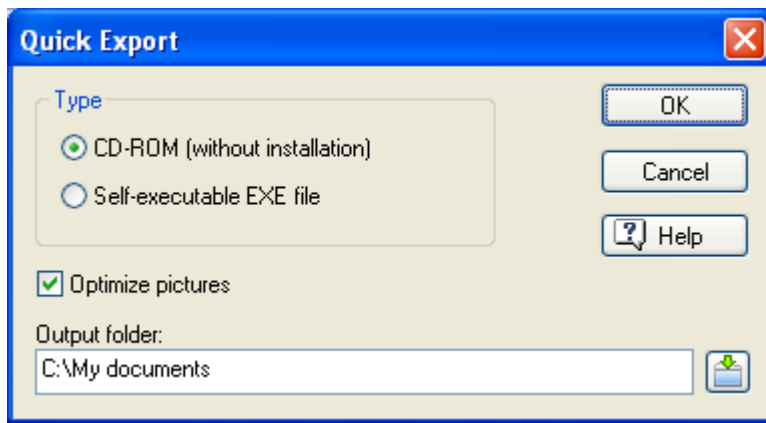
As the CD-ROM (without installation) export format, this export format lets you create a CD-ROM containing all your project files (.md8 file, all data files and Mediator Viewer) for distribution. The end user however needs to install the project on his/her hard disk in order to view it.

This export format is therefore suitable for large projects where speed of execution is particularly important

Advanced export

- ➢ Click the **Mediator Button**.

- ➢ Choose **Export | Advanced Export**.

➢ Select **CD-ROM (with installation)** in the Advanced Export dialog.
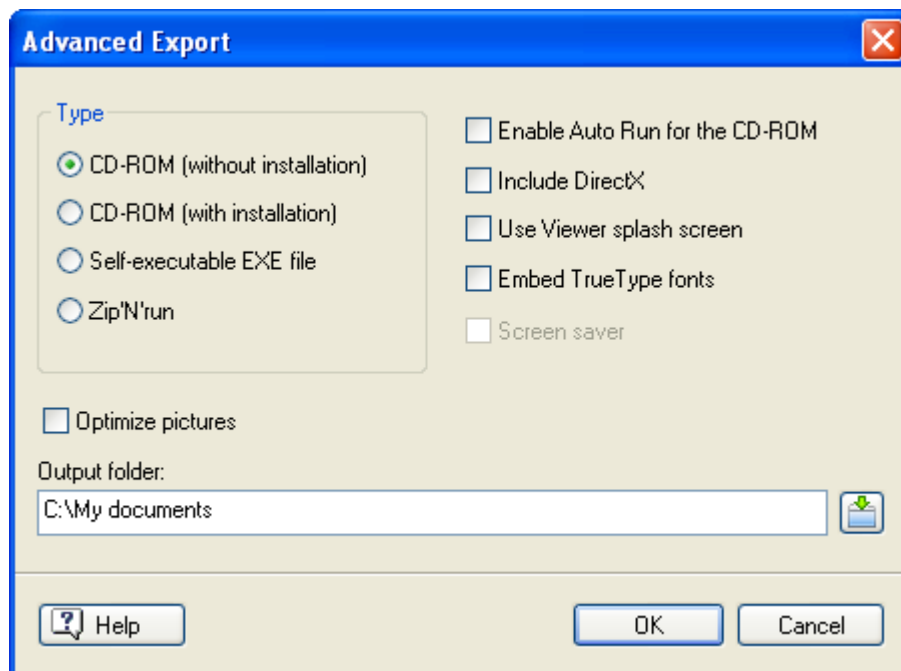
➢ Choose the export settings required. These settings are described in "Advanced export settings".

➢ Specify an output folder. By default, this is the folder containing your project.

Enter a new folder name or click the Browse button 📥 to select another folder.

➢ Click OK.

Mediator creates a sub-folder named CDROM in your output folder, compresses your project and saves it in this sub-folder.

It then starts a separate module called InstallMaker to create an Install program for your project. You can define different installation settings and customize the design and the messages of the Install dialogs. Refer to "Using InstallMaker" for more information.

➢ Click **Close** in the last InstallMaker dialog once the installation files have been created.

➢ To view the contents of the CDROM folder, click **Open File Folder** when the Export Finished dialog appears.

➢ Copy all the files and folders from the CDROM sub-folder to the root of your CD using your CD burner software.

➢ Distribute the CD to your users and instruct them to double-click 'Install.exe' to install your project on their hard disk.

The Install program creates a folder for the project on the end user's hard disk, as well as two shortcut icons in Start | Programs: one for running the project and one to uninstall it. Clicking the Uninstall icon removes all the program files, data files, folders and shortcuts related to the project.

Exporting as self-executable EXE file

This topic describes how to export your project as a self-executable EXE file.

This export format is only available for projects of document type Standard (as opposed to HTML or Flash). To find out how to change the document type of your project, refer to "Document properties".

With this export format, all the project files (.md8 file, all data files and Mediator Viewer) are embedded in a single self-executable file (.exe), using your project name as file name. When the end user double-clicks the .exe file to run the project, rather than being decompressed, the files are streamed and read directly from the .exe file. This ensures an optimum speed of execution regardless of the project size.

This method has two main advantages:

- Speed

  The project is executed directly from the .exe file. There is no decompression, and therefore no waiting time.

- Protection

  As all pictures, sounds, videos etc. contained in the project are embedded in the .exe file, they are not visible to outsiders and therefore cannot be copied.

This export method has some restrictions:

- Video and sound files being played back in the Media Player object, files used within the Embedded Document object, Flash files being shown in the Flash object and Databases cannot be accessed directly from the exported .exe file at runtime. Mediator therefore does not embed them in the .exe file, but copies them separately in the same folder as the .exe file. If you are creating an .exe file for distribution via CD-ROM and do not mind leaving these files unencrypted, just copy them along with the .exe on the CD, and Mediator will find and use them as intended.

- Picture files inserted in a text object will not be accessible from the exported .exe file.

- The 3D page and object transition effects available in Mediator require DirectX 9 or later including the Microsoft D3DX utility library. This library is not available in Windows Vista by default and is not installed by Windows Update. Although Mediator includes DirectX 9 in the exported .exe file, it cannot embed the D3DX library in the file. The 3D effects will therefore work on Windows Vista only if this library is already available on the computer.

The icon used to identify the .exe file is the same as the icon used to represent your project. You can replace this icon if you wish. See "Document Properties" for more information.

Quick export

➢ Click the **Mediator Button**.

➢ Choose **Export | Quick Export**.

➢ Select **Self-executable EXE file** in the Quick Export dialog.
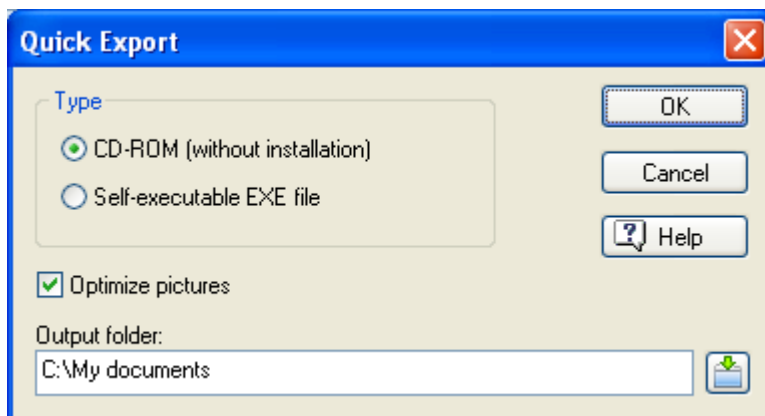
*You can also press Ctrl + Q to access the Quick Export dialog.*

➢ Check **Optimize pictures** to let Mediator optimize automatically the pictures contained in your project.

If your project contains many pictures, it is advisable to let Mediator optimize them, as pictures are often much larger than they need to be. Optimizing them reduces the size of your project and maximizes its performance.

➢ Specify an output folder. By default, this is the folder containing your project.

Enter a new folder name or click the Browse button to select another folder.

➢ Click OK.

Mediator creates a sub-folder called EXE in your output folder and copies to it the .exe file (as well as any other data files that cannot be embedded, as described above).

The Export Finished dialog appears.
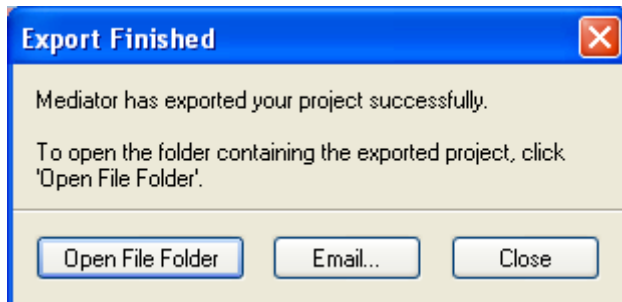
- To view the contents of the output folder, click **Open File Folder**.

- You can also click **Email** to send the .exe file via your default email program.

You can now send the .exe file to your end users via e-mail or post it on your web site. All the end user has to do to run the project is to double-click the .exe file.

Advanced export

The only difference between Quick and Advanced export is that Advanced export allows you to choose various export settings in the Advanced Export dialog. These settings are described in "Advanced export settings".

Creating an auto-run file

If you intend to distribute the .exe file on a CD-ROM you may also want to create an auto-run file that will automatically start the project when the end user inserts the CD into the CD-ROM drive.

➢ Open Notepad.

➢ Type the following:

[autorun]

open=*yourfile*.exe (where *yourfile* is the name of your .exe file)

➢ Save the Notepad file as Autorun.inf.

➢ When you burn your CD, place the file in the root of the CD along with the .exe file.

Exporting as Zip'N'Run file

This topic describes how to export your project as a Zip'N'Run file.

This export format is only available in Advanced export, for projects of document type Standard (as opposed to HTML or Flash). To find out how to change the document type of your project, refer to "Document Properties".

With this export format, all the project files (.md8 project file, all data files and Mediator Viewer) are compressed and saved in a self-extracting executable (.exe), using your project name as file name.

All the end user has to do to run the project is to double-click the .exe file. This extracts the project files to a temporary folder on the hard disk, from which the project is then executed. When the user exits the project, all its files except for the .exe file are deleted from the hard disk. As the decompression step may take time, this export format is only recommended for small projects limited to a few megabytes.

The advantage of this method is that it encrypts all the files, including the additional data files, thereby keeping the data safe from unwanted user access.

The icon used to identify the .exe file is the same as the icon used to represent your project. You can replace this icon if you wish. See "Document Properties" for more information.

Advanced export

➢ Click the **Mediator Button**.

➢ Choose **Export | Advanced Export**.

➢ Select **Zip'N'Run** in the Advanced Export dialog.
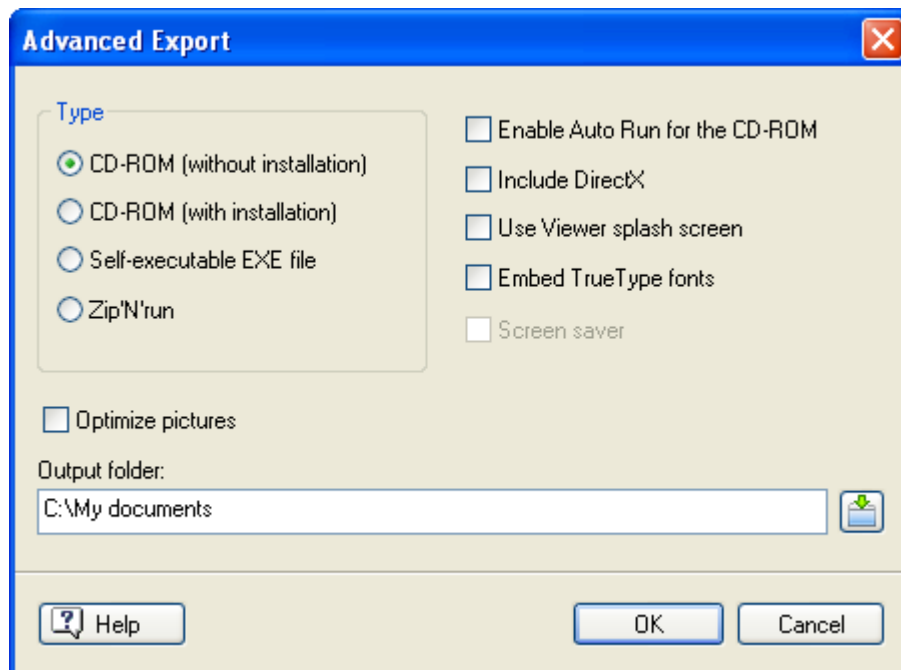
➢ Choose the export settings required. These settings are described in "Advanced export settings".

➢ Specify an output folder. By default, this is the folder containing your project.

Enter a new folder name or click the Browse button ![browse] to select another folder.

➢ Click OK.

The following dialog appears.
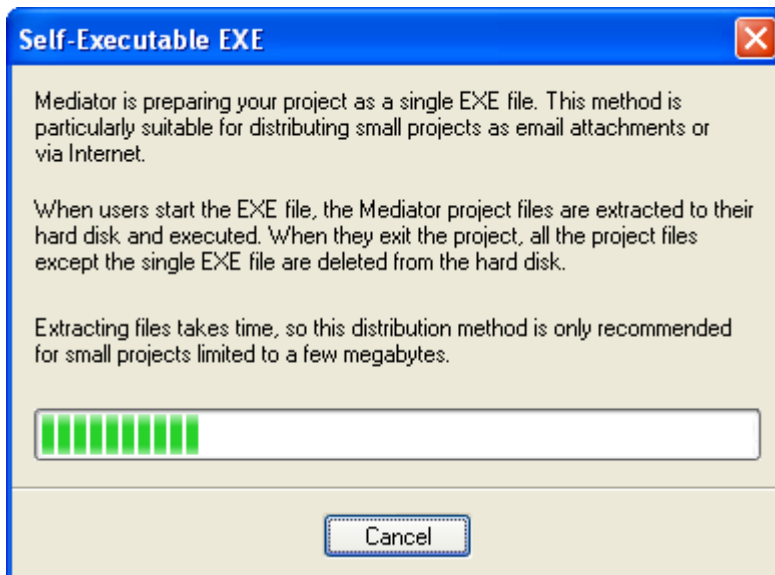
The Export Finished dialog appears.
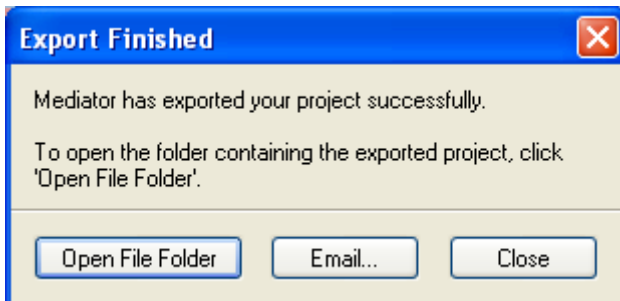
- To view the contents of the output folder, click **Open File Folder**.

- You can also click **Email** to send the .exe file via your default email program.

You can now send the .exe file to your end users via e-mail or post it on your web site. All the end user has to do to run the project is to double-click the .exe file.

Exporting to HTML

This topic describes how to export your project to HTML.

 This export format is only available for projects of document type HTML (as opposed to Standard or Flash). To find out how to change the document type of your project, refer to "Document properties".

Please refer to the topic "Mediator 9 feature list" for a complete list of all objects, events and actions available in HTML export. You will also find a detailed list of the restrictions applicable to HTML in "HTML restrictions".

All the HTML code produced by Mediator when exporting to HTML is validated according to the W3C HTML 4.01 standard.

This ensures that all the common browsers will render the page content as expected.

Note however that this only applies to HTML code generated by Mediator. HTML code inserted directly by yourself in the project, for instance in the HTML object or in the HEAD meta-tag (via Prepare | Properties) is not validated by Mediator. It is your responsibility to ensure that it is valid.

When exporting to HTML, any keyword attached to the page (see "Page properties: General tab") will be inserted in the Keyword meta-tag on the HTML page. The description and keywords attached to the entire project (see "Document properties") are placed in the main index.htm file generated. The Document Properties dialog also lets you define a favorite icon for the HTML project.

Quick export

➢ Click the **Mediator Button**.
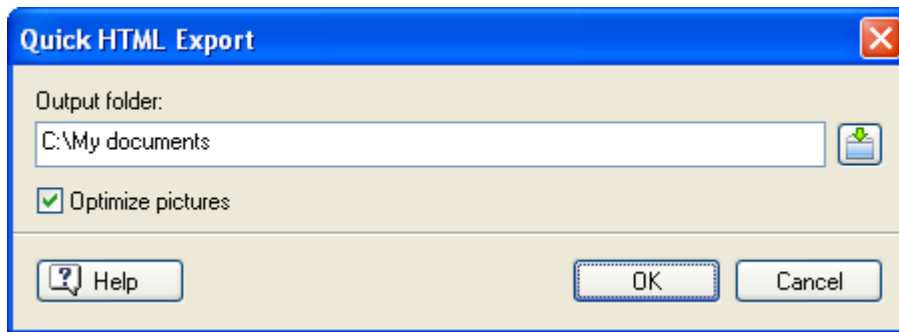
➢ Choose **Export | Quick Export**.

💡 *You can also press Ctrl + Q to access the Quick Export dialog.*

➢ Specify an output folder. By default, this is the folder containing your project.

Enter a new folder name or click the Browse button 📥 to select another folder.

➢ Check **Optimize pictures** to let Mediator optimize automatically the pictures contained in your project.

If your project contains many pictures, it is advisable to let Mediator optimize them, as pictures are often much larger than they need to be. Optimizing them reduces the download time of your online project and maximizes its performance.

➢ Click OK.

Mediator creates a sub-folder named HTML in your output folder and saves your project in this sub-folder.

Advanced export

The only difference between Quick and Advanced export is that Advanced export lets you specify additional options.
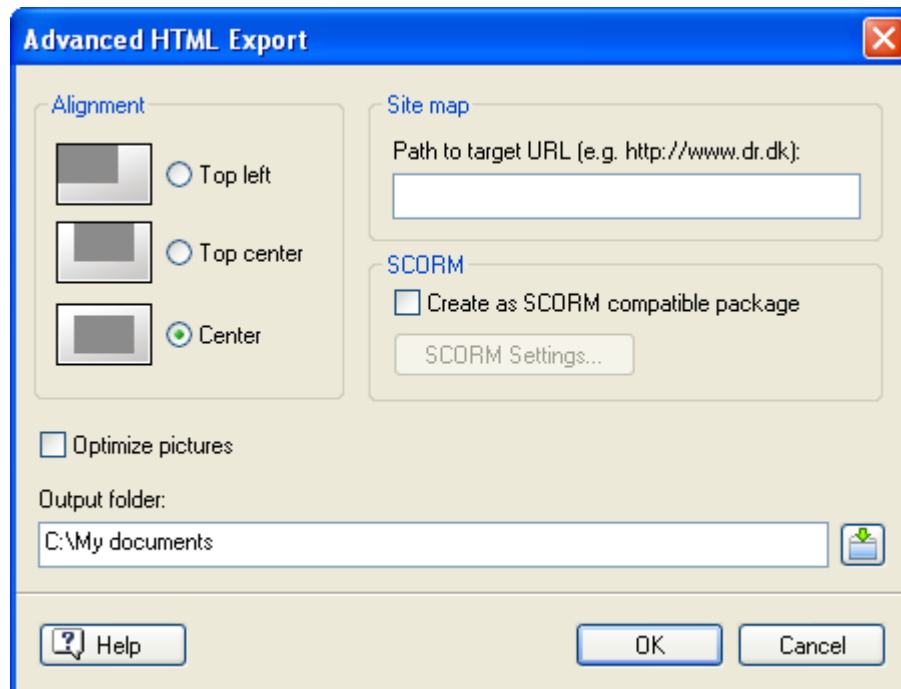
Alignment: Choose if you wish to position the project in:

• the top left corner of the browser

- the top center of the browser

- the center of the browser

The color used for the browser background is the color you defined when creating the document. You can change it via Prepare | Properties. See "Document properties" for more information.

Site map: This option allows you to get Mediator to generate an XML site map for your web site automatically. XML site maps are used to improve the visibility of your web pages by search engines. They contain information such as frequency of change, priority, date of creation and more, which search engines can look up rather than having to crawl your entire site. The site map is held in a file called sitemap.xml and stored in the root folder of the project (i.e. in the same location as your project's main page).

To generate an XML site map, you need to enter in the 'Site map' field the URL of the folder to which you intend to upload your HTML project.

If you do not yet know the URL of the folder you intend to upload to, or if you decide to upload your project to a different server after having exported it and generated the site map, you can edit the sitemap.xml file manually and replace all the occurrences of the server URL to the new URL.

SCORM: These options let you export your project as a SCORM compliant course. Please refer to "Using SCORM" for a full description of this feature.

Optimize pictures: Checking this option will start the built-in Image Optimizer just before the export to let you specify how your pictures should be optimized. See "Optimizing the pictures" for more information.

➢ Click OK.

The default export settings used in Quick export are as follows:

- **Alignment:** The project is centered if all the HTML pages have the same height. If not, it is positioned at the top center of the browser.

- **Site map:** No site map is created.

Finalizing the export

The export may take a few minutes for larger projects, but is usually done within seconds. When export is complete, the following dialog appears.
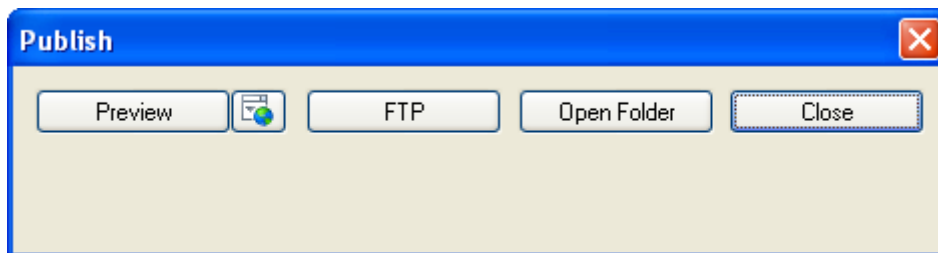
Here you can:

- Click **Preview** to open the main HTML file in your default browser for preview. If you have several browsers installed on your computer, clicking the icon to the right of the field will let you choose a different one.

- Click **FTP** to upload your project using the Mediator FTP Upload Manager program. For more information, see "Mediator FTP Upload Manager".

- Click **Open Folder** to open the folder containing your HTML files.

- Click **Close** to exit the dialog. If you choose to close this dialog without uploading your HTML files to the web, you can do so later by uploading the contents of the HTML sub-folder to the Internet using your FTP software.

Exporting to Flash

This topic describes how to export your project to Flash (.swf files).

This export format is only available for projects of document type Flash (as opposed to Standard or HTML). To find out how to change the document type of your project, refer to "Document properties".

Please refer to the topic "Mediator 9 feature list" for a complete list of all objects, events and actions available in Flash export. You will also find a detailed list of the restrictions applicable to Flash in "Flash restrictions".

Quick export

➢ Click the **Mediator Button**.
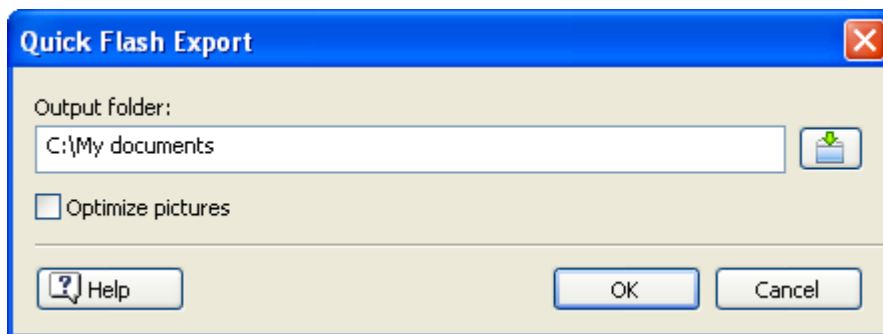
➢ Choose **Export | Quick Export**.

You can also press Ctrl + Q to access the Quick Export dialog.

➢ Specify an output folder. By default, this is the folder containing your project.

Enter a new folder name or click the Browse button to select another folder.

➢ Check **Optimize pictures** to let Mediator optimize automatically the pictures contained in your project.

If your project contains many pictures, it is advisable to let Mediator optimize them, as pictures are often much larger than they need to be. Optimizing them reduces the download time of your online project and maximizes its performance.

➢ Click OK.

Mediator will create a sub-folder named Flash in your output folder, and compresses and saves your project in it.

Advanced export

The only difference between Quick and Advanced export is that Advanced export lets you specify additional options.
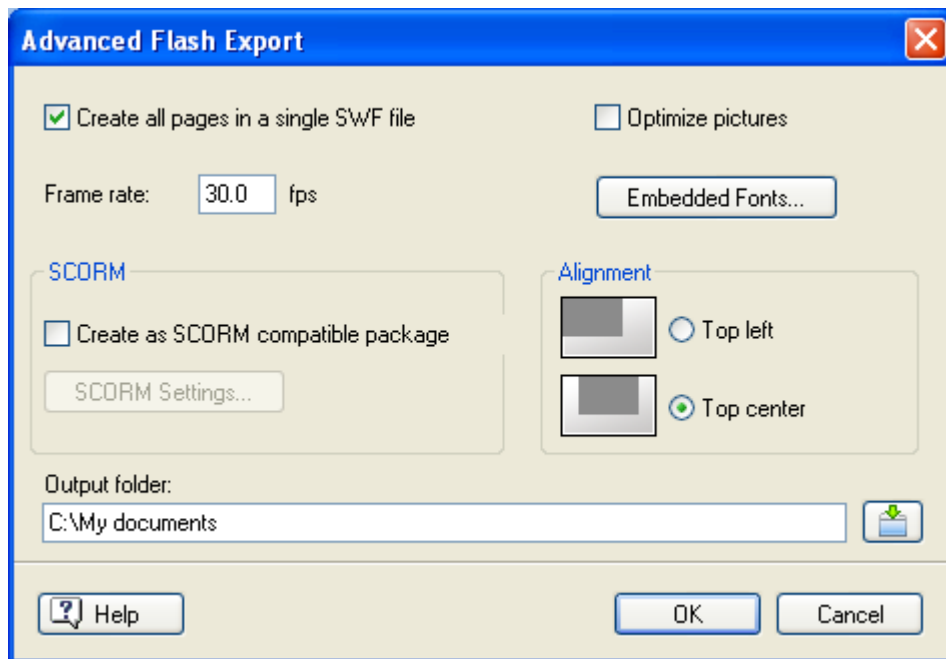
Create all pages in a single SWF file: Checking this option means that the exported Flash project will only contain one .swf file. It will however also contain HTML files and JavaScript files for loading the project and displaying it in a browser window. If you have included some .mp3 sound files using streaming, these files will also be included separately. This is also the case with video files (.flv) associated with video objects, as they cannot be embedded in a .swf file.

Using this option will result in smoother and faster page turn transitions, at the expense of having to download all pages, even if only the first one is visited.

Optimize pictures: Checking this option will start the built-in Image Optimizer just before the export to let you specify how your pictures should be optimized. See "Optimizing the pictures" for more information.

Frame rate: Use this field to define the number of frames per second your Flash file should use. The default value is set to 30.0, which ensures a smooth play back.

Embedded Fonts: Ignore this button if your project only uses western languages, as the relevant character fonts (Basic Latin and Latin-1 Supplement) are embedded by default.

If on the other hand you have included input boxes and list boxes in your project in which non western characters might be entered, this button will enable you to select only the character ranges that you need, rather than having to embed them all, thus minimizing the file size.

➢ In the **Flash Font Embedding Options** dialog, for each of the fonts displayed in the upper part of the dialog, choose the character ranges to be embedded from the list shown in the lower part. To minimize the file size, only include the ranges actually required.

SCORM: These options let you export your project as a SCORM compliant course. Please refer to "Using SCORM" for a full description of this feature.

Alignment: Choose if you wish to position the project in:

- the top left corner of the browser (adjustable frames to the right and at the bottom)

- the top center of the browser (symmetric adjustable frames on either side and at the bottom)

➢ Click OK.

The default export settings used in Quick export are as follows:

- All pages are created in a single SWF file

- Frames per second = 30

- Alignment = Top center

Finalizing the export

The export may take a few minutes for larger projects, but is usually done within seconds. When export is complete, the following dialog appears.
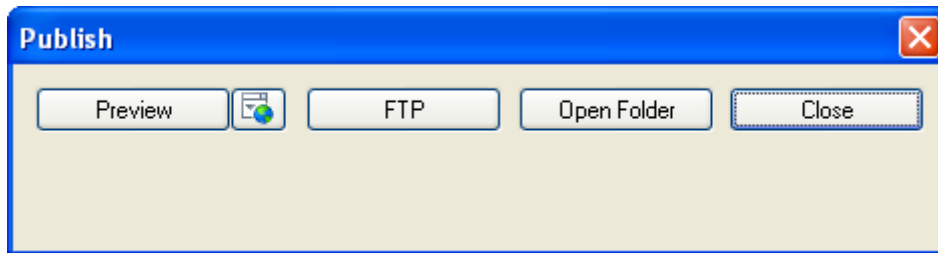
Here you can:

- Click **Preview** to open the main Flash file in your default browser for preview. If you have several browsers installed on your computer, clicking the icon to the right of the field will let you choose a different one.

- Click **FTP** to upload your Flash project using the Mediator FTP Upload Manager program. For more information, see "Mediator FTP Upload Manager".

- Click **Open Folder** to open the folder containing your Flash files.

- Click **Close** to exit the dialog. If you choose to close this dialog without uploading your Flash files to the web, you can do so later by uploading the contents of the Flash sub-folder to the Internet using your FTP software.

To launch the Flash project as a web site in a browser window, just double-click the index.htm file.

If however you want to use the Flash project as a banner within an existing html page or web site, or if you want to include it in a different Mediator project as a Flash object, you can access the main.swf file directly.

In both cases you must keep all the exported files together in the same folder.

If you open the main.swf file itself in the web browser (instead of the container file index.htm), the Flash object is scaled to fit the entire space available. It does not keep to a specific size as it does when displayed within an html page.

Advanced export settings

This topic describes the export settings available when exporting your project using the Advanced export procedure.

These settings are not relevant to the HTML, Flash or 'Copy to Folder' export methods.
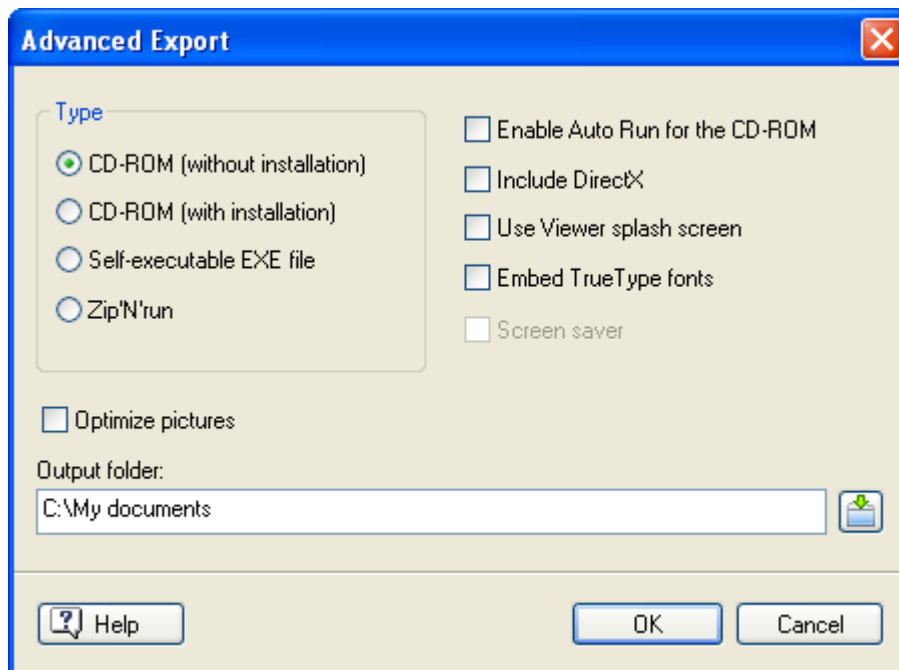
Enable Auto Run for the CD-ROM

This setting only applies to the CD-ROM (without installation) export format.

- If this option is checked, the project will start automatically as soon as the user inserts the CD-ROM in the CD-ROM drive, provided that the auto-run feature is enabled on his/her computer.

  The files Autorun.inf, Start.inf and Start.exe are also copied onto the CD-ROM.

- If you leave this option unchecked, or if the end user has disabled auto-run on his/her computer, the project will not start automatically. Instruct your end users to double-click 'Start.exe' on the CD-ROM to start it.

Auto Run is always enabled when using Quick export.

Include DirectX

Check this option to include DirectX 9 in your exported version. This ensures that 3D page and transition effects will be available to your end users even if the version of DirectX installed on their own computer is an older version.

The DirectX files are always included when using Quick export.

Use Viewer splash screen

Check this option to display the Mediator Viewer splash screen when your project starts up. This option is only relevant to the CD-ROM (without installation) export format, where viewing the splash screen can be useful to occupy the small delay while the files are read from the CD-ROM or other storage medium.

This option is disabled when using Quick export.

Embed TrueType fonts

Check this option to include the fonts used by your project in the exported version. If you do not include them, your project may appear differently on the end user's computer.

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If you check this option, Mediator will display a dialog called Font Embedding, listing all the fonts used in your project and letting you choose the ones to include.
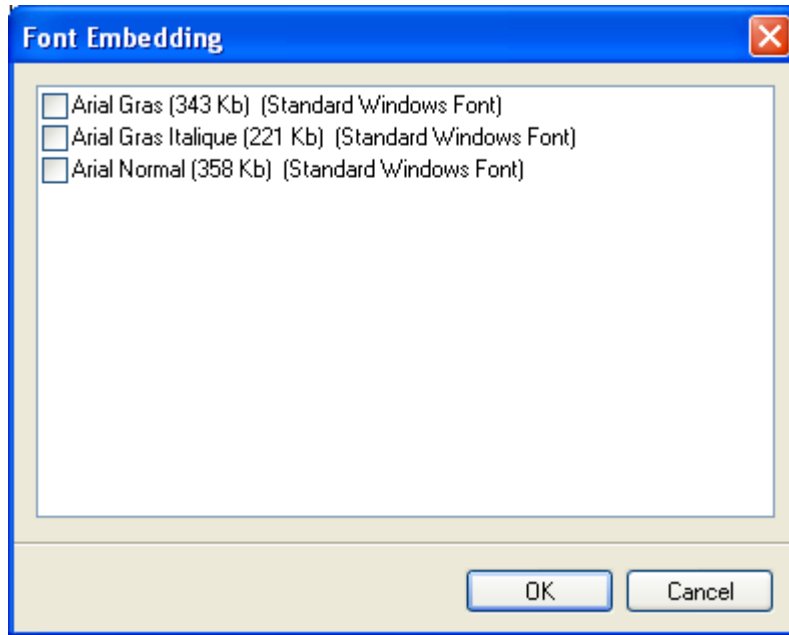
Some fonts may be protected by copyright laws. Be also aware that font files can be very big (e.g. Arial normal, bold or italic takes about 1MB).

The fonts are always all included when using Quick export.

Screen saver

This setting is only relevant to the CD-ROM (with installation) export format.

It allows your end users to install your project as a screen saver on their computer.

Optimize pictures

Checking this option will start the built-in Image Optimizer just before the export to let you optimize your pictures. If your project contains many pictures, it is advisable to let Mediator optimize them, as pictures are often much larger than they need to be. Optimizing them reduces the size of your project and maximizes its performance.

See "Optimizing the pictures" for more information.

Using Copy to Folder

This export method enables you to regroup in a single folder all the pictures, sounds, videos etc. that you have used in your project.

➢ Click the **Mediator Button**.

➢ Choose **Export | Copy to Folder**.

The following dialog appears:
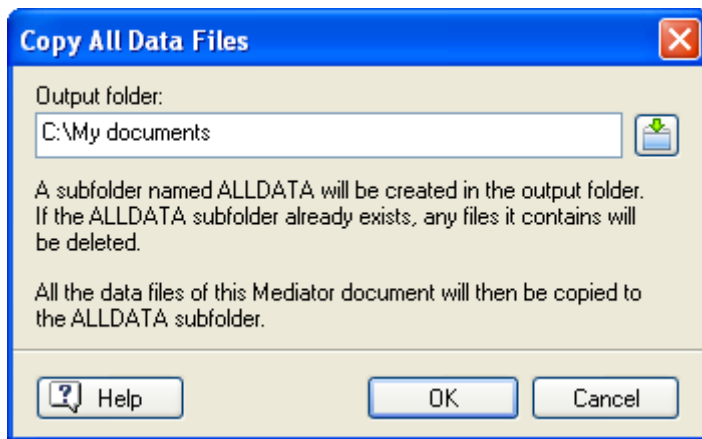
> ➤ Click OK to copy all the files.

All the files you have used in your project (including the md8 project file) are now copied and placed in a folder called ALLDATA. By default the ALLDATA folder is located in your project folder.

Using myMediator.com

Schools can upload their Mediator Flash projects to www.myMediator.com. This free service from MatchWare lets teachers and students upload their Flash web sites and share their work with other classes, schools, teachers, parents, etc.

Each Mediator Class or School license is delivered with 20 myMediator.com accounts. You are free to use one, two or all 20 without any additional charge. Single School licenses give access to 1 myMediator account.

This feature is only available in the Educational version of Mediator.

Several projects have already been uploaded to myMediator. To view any of them please visit:

> www.mymediator.com

Why myMediator.com?

One of the most frequently asked questions is: "Where and how can I upload my class projects?"

Not only does MatchWare supply the free web space, but with myMediator.com, uploading and maintaining your projects is easier than ever.

The main advantage of myMediator.com is that it requires no software other than Mediator and no technical knowledge about uploading projects. All you need to know is the login name and the password.

Only projects made with Mediator for Flash distribution can be uploaded to myMediator.com. Flash export is performed automatically when you select myMediator.com.

Administrative and User login

All myMediator.com accounts have an Administrative login/password and a User login/password:

- The Administrative login/password can be used to upload projects, delete projects and change passwords.

- The User login/password can only be used to upload projects.

Before an account can be used it must be activated. The first time you try to upload to your free account, you will be asked to activate the account. Activation requires the Administrative login/password.

Activation is instant, and uploading can be done immediately afterwards.

You can activate an account directly from Mediator or from the following web site:

> www.mymediator.com/activate

If you try to upload a project to an account that has not yet been activated you will be taken to the Activate page.
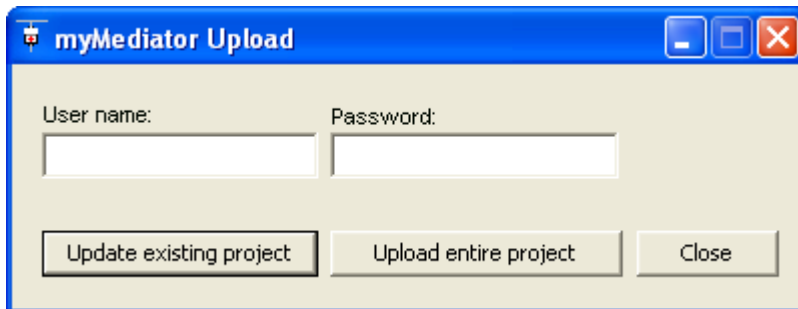
Accounts on myMediator.com are free for one full year after activation.

Uploading to myMediator.com

Once you or your students have completed the project, you can upload it as follows after saving it:
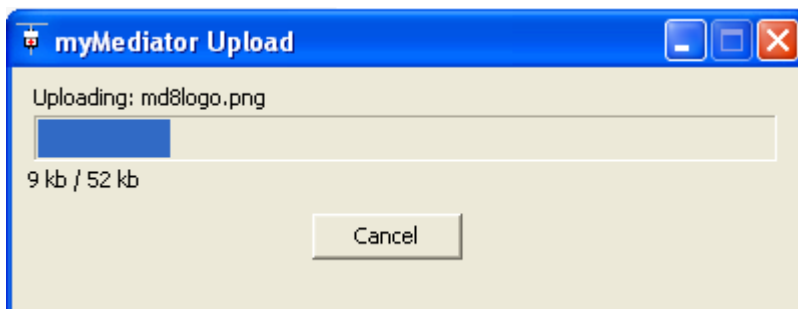
➢ Click the **Mediator Button**.

➢ Choose **Export | myMediator.com**.

The project is automatically exported to Flash and the Logon dialog appears:

➢ Enter the username and password and click **Upload entire project** to upload all the project files or **Update existing project** to only upload changes made since the original upload. The first time you upload a project, you must select 'Upload entire project'.

Your project is uploaded to the MatchWare server dedicated to school projects. When upload has been successfully completed, your browser opens and you are taken to myMediator.com:

Here you can enter information about yourself, your class, the project, etc.

➢ When you have filled in the required fields, click **Continue** to finish the upload.

Using InstallMaker

This topic describes InstallMaker, the built-in module that lets you create an Install program for your project when you choose to export it using the 'CD-ROM (with installation)' export format. For information on how to use this export format, refer to "Exporting to CD-ROM (with installation)".

Once you have chosen the required export settings in the Advanced Export dialog, Mediator starts InstallMaker, which creates the Install program that your end users will need to run to install your project on their own computer.

Default settings

Unless you modify the relevant settings, the Install program created by InstallMaker will have the following characteristics:

- It will have a standard side bar.

- It will use default messages and text strings. You can however customize these messages and strings and even create different interfaces for your Install programs. See below "Customizing the Install messages".

- A Start icon and an Uninstall icon will be created in the relevant sub-folder of the Start | Programs menu.

- Once installed, all the labels and icons used by Windows to represent the project on the end user's computer will use the parameters defined in the Document Properties dialog. See "Document properties" for more information.

Selecting the Install language

The first InstallMaker dialog allows you to choose the language in which the Install program should appear to your end users when installing your project.
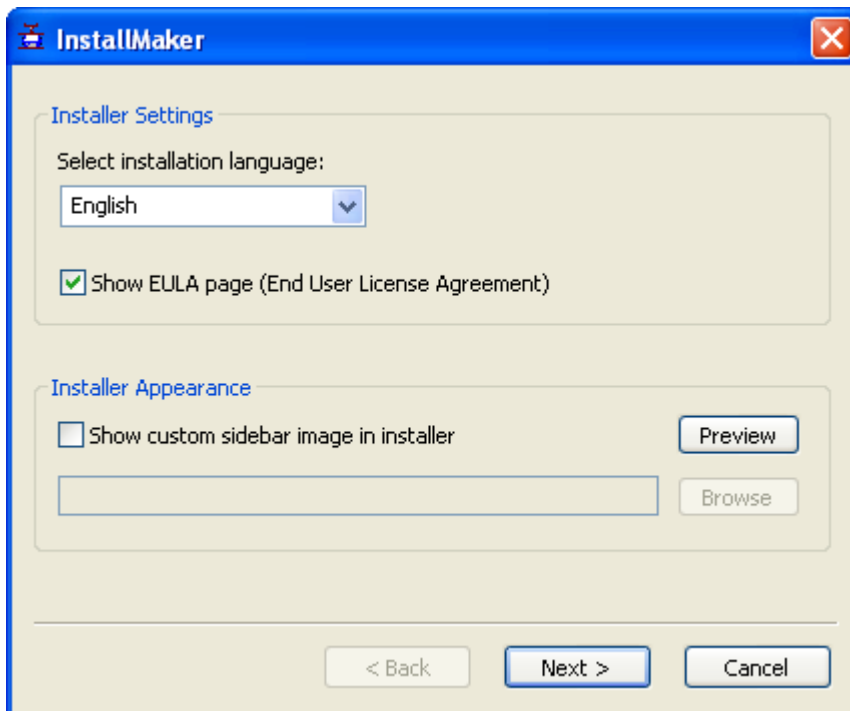
Select installation language: Select your preferred language for the Install program messages.

Show EULA page: Check this option if you want a License Agreement to be displayed at the start of the Install program.

Show custom sidebar image in Installer: Check this option to use your own side bar for the Install program, which you can enter or select using the Browse button.

➢ Click Next.

Selecting the Install folder

The next dialog to appear is the Install Folder dialog.
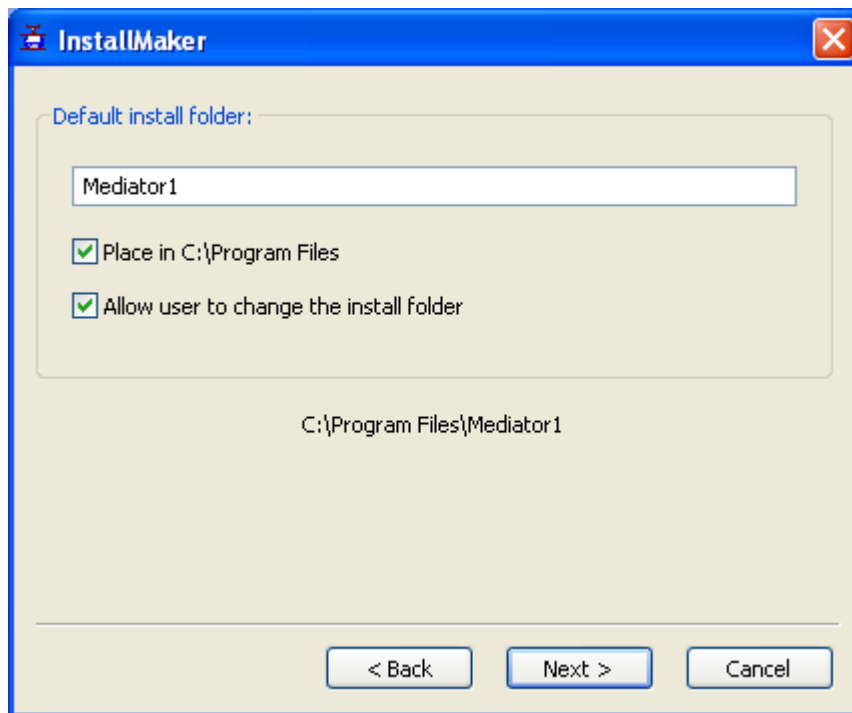
Default install folder: This field contains the name of the folder where the project will be installed on the end user's computer.

➤ (optional) Check **Place in C:\Program Files** if you want the Install folder to be created in the C:\Program Files folder of the end user's computer.

➤ (optional) Check **Allow user to change the install folder** to enable the user to specify a different Install folder during the installation.

➤ Click Next.

Selecting the Install/Uninstall shortcuts

The Shortcut dialog that appears next allows you to specify the shortcuts to create on the end user's computer.
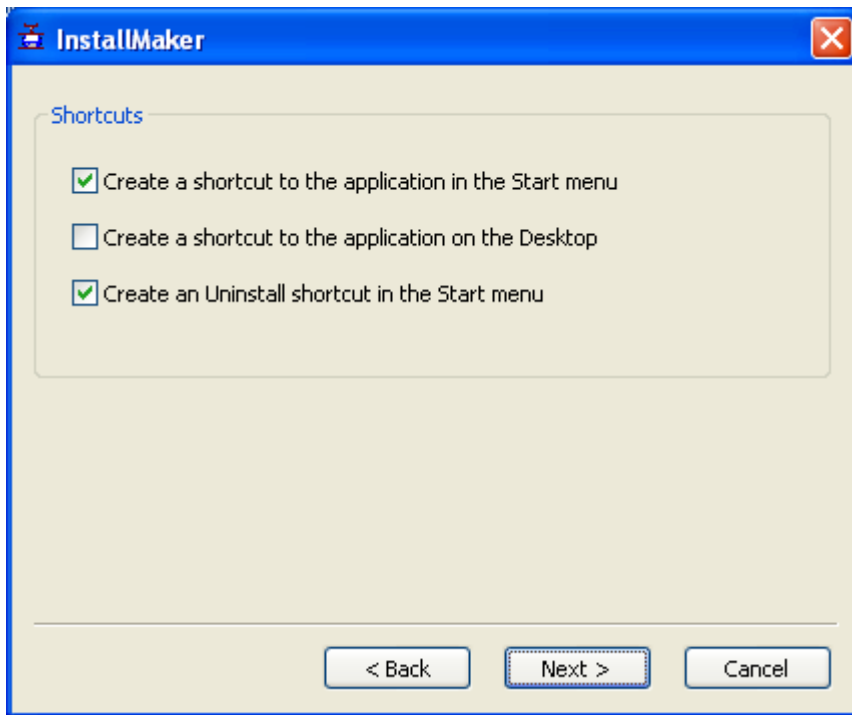
➢ Make your selections and click Next.

Creating the Install program

Once you click Create, InstallMaker displays a dialog showing the progression of the building operation.
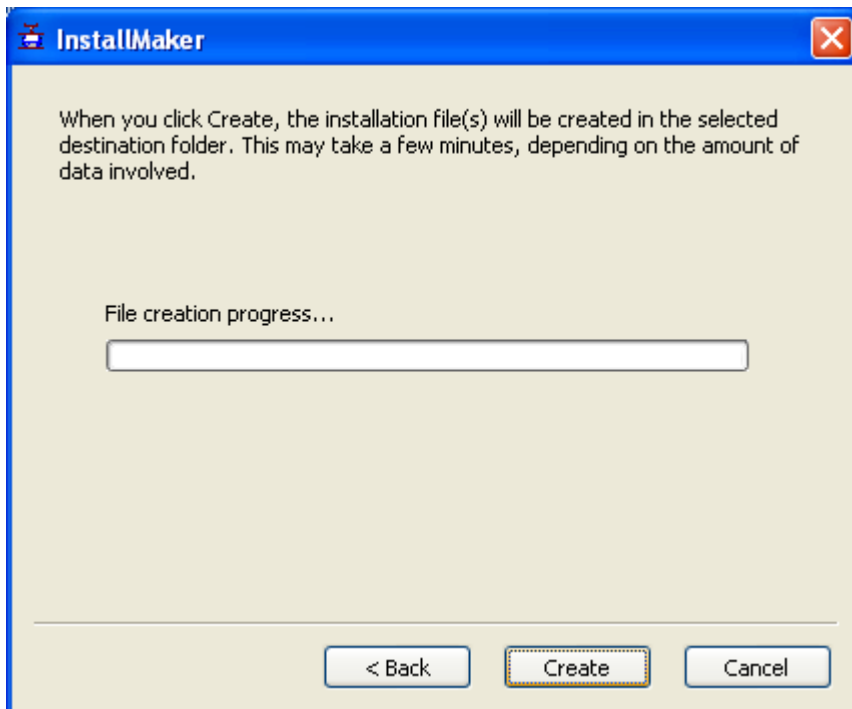
➢ Click Close once the installation files have been created.

You are now in a position to distribute your exported project.

Customizing the Install messages

You will find the various language files holding the default InstallMaker messages and strings in the Mediator InstallMaker folder (usually ..\InstallMaker in the Mediator program folder).

The file English.ini for instance contains all the English default messages used by InstallMaker.

You can either customize one of these files using Notepad, or create your own file by making a copy of one of the existing files, editing it and saving it under a different name. This file will then appear in the drop-down list of the field 'Select installation language' shown in the first InstallMaker dialog.

Using the Upload Manager

To help you get your HTML and Flash projects on the web as quickly and effortlessly as possible, Mediator comes with a built-in FTP program, the Mediator FTP Upload Manager.

Starting the FTP Upload Manager

Before you can use the FTP Upload Manager you must export your project to HTML or Flash (see "Exporting to HTML" and "Exporting to Flash" for more information). Upon completion the Publish dialog appears:
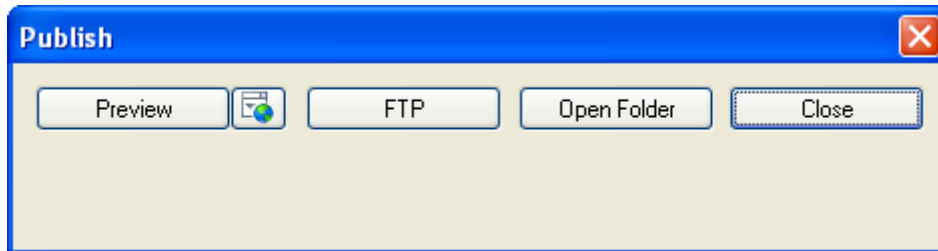
➢ To open the FTP Upload Manager click FTP.

The FTP Upload Manager dialog appears:
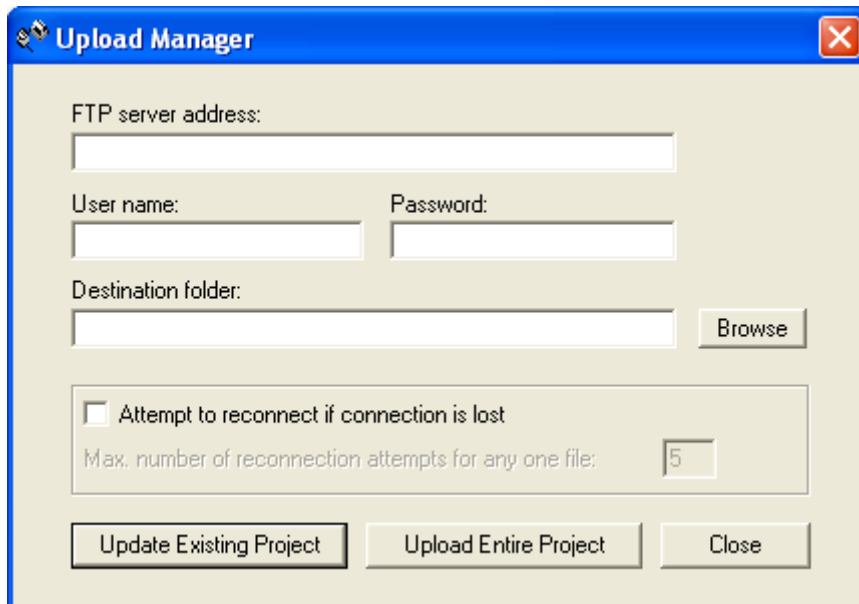
➢ In the **FTP server address** field, enter the FTP upload address that you have received from your Internet Service Provider (ISP).

➢ Enter your **User name** and **Password** in their respective fields.

If you do not have an FTP address, user name or password or have lost them, contact your ISP.

➢ Clicking the Browse button next to **Destination folder** will connect you to the Internet. Once online, search for the remote folder you wish to upload your project to.
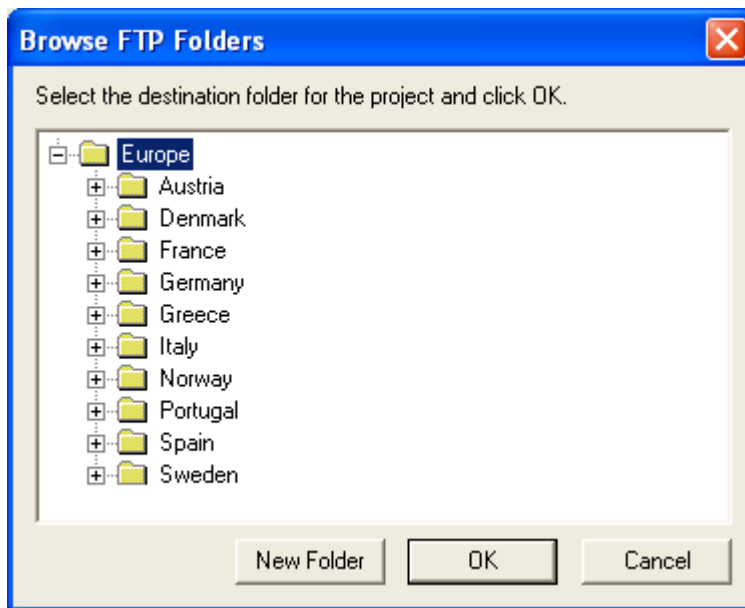
➢ Select the folder required and click OK to return to the Upload Manager dialog.

If you would like to upload the project to a new folder, click New Folder to create a new remote folder on the server. Click OK to return to the Upload Manager dialog.
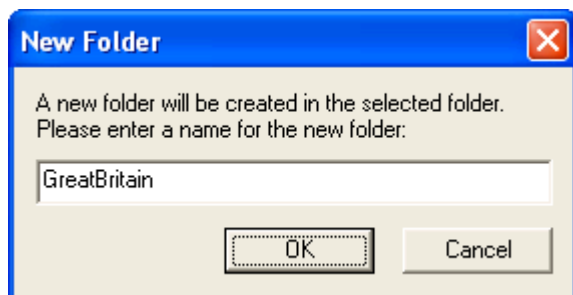
💡 *To quickly create a new remote folder enter a forward slash and the name of the new folder in the Destination folder field.*

If your Internet connection goes down often, you are advised to check the option 'Attempt to reconnect' in the Upload Manager dialog to ensure that your upload is successful.
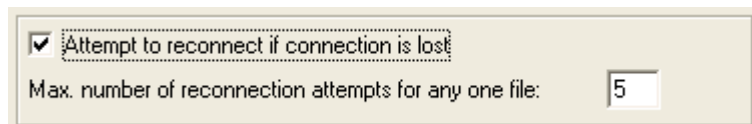
You can also set the number of reconnection attempts you want the Upload Manager to perform for a given file. If upload is still unsuccessful after this number of attempts, it is cancelled.

Uploading your project

➢ If you are uploading your project for the first time, click **Upload entire project** to connect to the FTP server and upload all the files.

You can follow the progress of the upload in the Upload dialog.
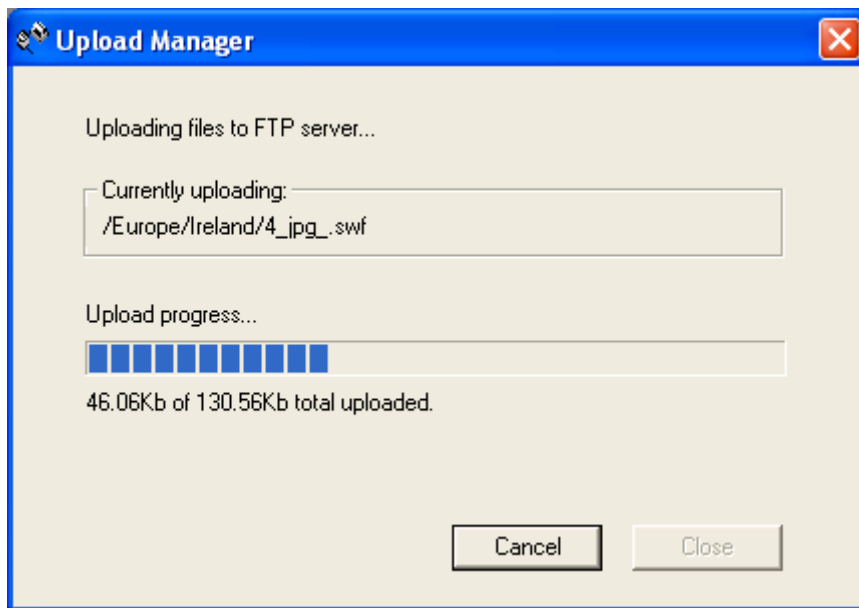
If upload is completed successfully, the following dialog appears:
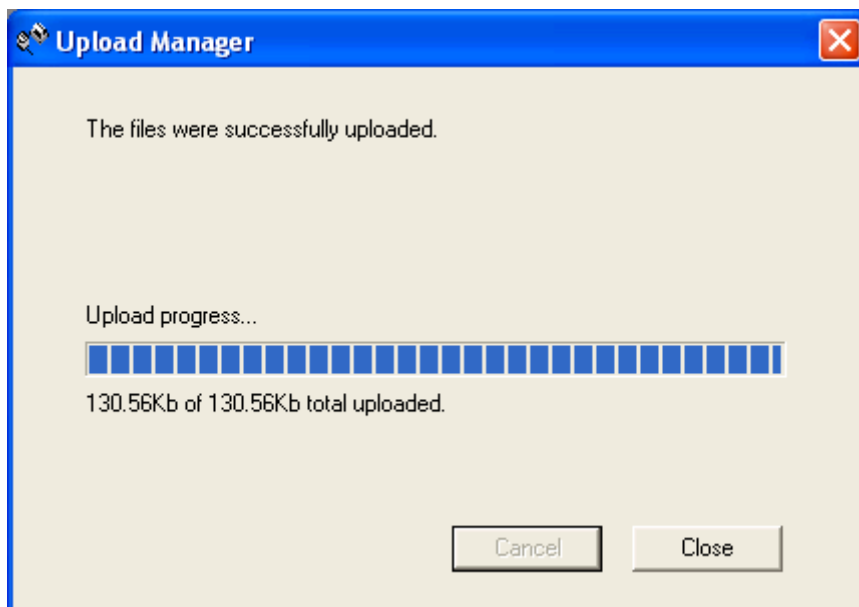
➢ Click **Close** to return to Mediator.

The FTP Upload Manager remembers your FTP address, Username, Password and Destination. If you make changes to your project and would like to upload it again, click **Update existing project** to upload only the files that have changed since your last upload.

Support

Getting help

The Mediator documentation is provided as online help in the program. It can also be found in PDF format in the Mediator installation folder.

Service Packs

If you encounter a problem that you are not able to solve by following the steps described in "Testing your project", check that you have installed the latest Mediator service pack available. MatchWare releases service packs regularly to provide enhancements and correct errors reported by its users.

You can find service packs for MatchWare products at:

http://www.matchware.com/en/support/default.htm

A looming deadline is the only reason not to install a service pack immediately. Because a service pack may introduce changes to existing functionality, you should always test your project thoroughly after its installation.

The FAQ Knowledge Base

For additional information, please refer to our FAQ Knowledge Base:

http://faq.matchware.com/en/

As well as answering the most commonly asked technical questions concerning the MatchWare products, this database allows you to post comments and send questions to MatchWare.

MatchWare web site

The MatchWare web site contains extensive information on all the products offered, as well as tutorials, templates and reviews. Updates are posted regularly. To see what is currently available, please visit:

http://www.matchware.com/en

Reporting a problem

To report a problem, bug or any other error in Mediator, please send a message to MatchWare via our FAQ Knowledge Base:

http://faq.matchware.com/en/

MatchWare is registered with the Windows® Quality Online Services. In the unfortunate event of an application failure, the Windows Error Reporting system will capture relevant product data and enable you to forward this data to MatchWare automatically.

Reference

Pages

Page properties: General tab

Properties for Page: Page1		×
Description	Page1	
Color	☐ 255,255,255	🖉
Bottom master page	...	
Top master page	...	
Keywords		
Searchable	☑ True	
Use in Contents	☑ True	
Size of pictures (KB)	125	
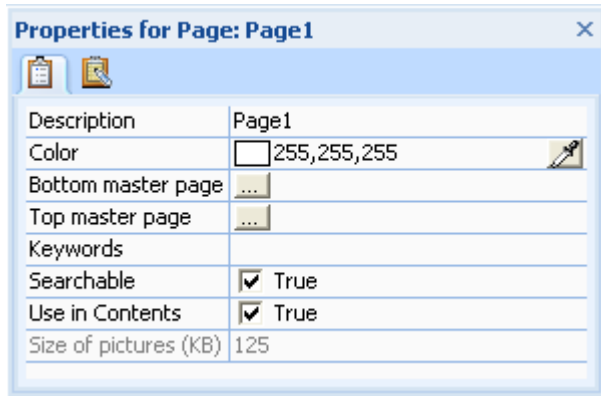
Description: The Description field allows you to enter a descriptive label for your page in addition to its name. This field accepts spaces and other characters that are not allowed in the page name.

By default, the description field is identical to the page name.

Changing the description does not change the page name.

The page Description field is also what the predefined Contents, Index, Search and History dynamic templates display in their page lists. For more information on how to use these templates, see "Using the dynamic templates".

Color: Choosing **Page | Page Setup | Color** or clicking the color box in this Properties dialog opens the Colors dialog in which you can set the background color of the page. For more information, see "Choosing a color".

Height: This field only appears if your document is of type HTML. It lets you change the height of individual pages from the overall default height chosen when creating the document. Note that you can also do this simply by dragging the bottom of the page downwards to the required size.

Bottom master page - Top master page: The master page fields show the names of the pages currently selected as top and bottom master pages. If a master page field is empty, it means that there is no master page selected. To select or change a master page click the Browse button to access the Page list. To remove a master page, delete the page reference in the Master page field. For more on this feature see "Using master pages".

Keywords: You can enter one or more words to describe the page in this field. You can display these keywords in list boxes of type 'Index' or 'Search word', or from the Index and Search dynamic templates. For more information on how to use these templates, see "Using the dynamic templates". To enter several words, simply place a semicolon (;) between each word. You can also associate keywords with objects.

When exporting your project to HTML (see "Exporting to HTML"), any keyword attached to the page is inserted in the Keyword meta-tag on the HTML page.

Searchable: When this field is checked, all the words contained on the page are added to the Text search list maintained by Mediator. You can access this list with a list box of type 'Search word' or from the Search dynamic template. Text contained in objects that do not have 'Searchable' checked is not included in the Text search list.

Use in Contents: When this field is checked, the page description is added to the Contents list maintained by Mediator. You can access this list with a list box of type 'Page list' or from the Contents dynamic template. Pages that do not have 'Use in Contents' checked are not included in the Contents list.

Size of pictures (KB): Here you can see the combined size in kilo-bytes of all the pictures and animated GIFs used on the page. This is useful when creating web projects, as it enables you to monitor the overall size of your page, and therefore the download time. The smaller the overall size is, the faster the page will load.

HTML extension: This field only appears if your document is of type HTML. The default page extension 'html' is only suitable if the page contains pure html code. If you have used the HTML object to insert server-side scripting in your project (asp or php), you should change the page extension here accordingly. See "The HTML object" for more information.

Page Properties: Notes tab

You can use the Notes tab during the design phase to enter comments about the purpose of the page or any other useful information.

Objects

Common properties

Object properties: General tab

The General tab is common to all objects in Mediator.

Note however that the properties displayed depend on the object type. Only the properties relevant to a particular object type are displayed.

Properties for Object: Rectangle	✕
Name	Rectangle
X	57
Y	145
Width	190
Height	113
Visible	☑ True
Lock	☐ False
Collision detection	☐ False
Keywords	
Mouse transparency	☐ False
Show tooltip	☐ False
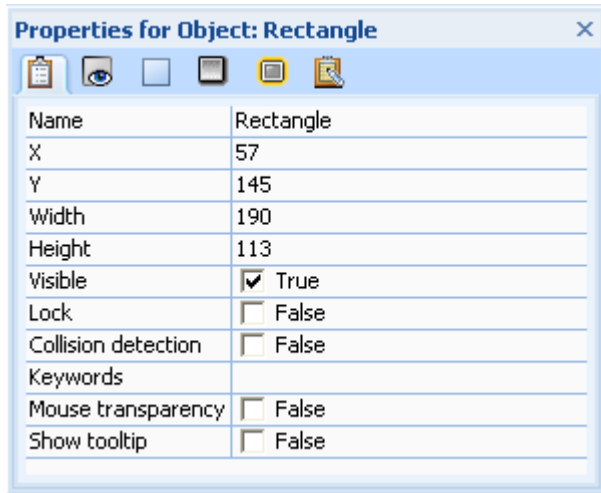
Name: This contains the object's default name. Objects that have a file attached to them have the name of the first file that was placed in that object. In large projects or pages containing many objects, it is a good idea to give the objects relevant names to make it easier to identify them in the Object list.

X, Y, Width, Height: These fields let you position and resize your objects very accurately, down to one pixel. X and Y represent the top left corner coordinates of the object. Click these fields and enter new values to reposition the object. The up and down arrows on the right let you change the coordinates one pixel at a time. The Width and Height fields are used to resize the object.

See "Moving objects" and "Resizing objects" for more information about these operations.

Visible: Use this option to select whether you want the object to be initially visible or hidden. You might want to hide the object so that you can show it later when a particular event (such as a mouse click) occurs. Objects are visible by default.

Lock: Checking this option anchors an object to its current position.

Locking an object can be useful to let you access objects placed on top of it or underneath it:

- If you have placed a picture, bump map or other object as background, and would like to select objects placed on top of it, locking the background lets you drag a rectangle to select the top objects without accidentally selecting and moving the background.

- It is not normally possible to select an object placed underneath another object by clicking it on the page. Locking the top object allows you to access the objects underneath it.

Once an object is locked you cannot select it by clicking it on the page. The only way to select a locked object is by clicking it in the Object list.

To unlock an object select it in the Object list and uncheck 'Lock'.

Locking an object does not affect its behavior at runtime. The only purpose of this property is to facilitate the design work.

Collision detection: When animating the object, this lets you detect if the animated object hits other objects. If the animated object and the object it hits both have 'Collision detection' enabled, the Collision event is triggered. You can find the Collision event in the Events list of most objects.

Keywords: You can enter one or more words to describe the object in this field. You can display these keywords in list boxes of type 'Index' or 'Search word' or from the Index and Search dynamic pages. For more information on how to use these pages, see "Using the dynamic templates". To enter several words, simply place a semicolon (;) between each word. You can also attach keywords to pages.

Searchable: This property only applies to objects containing text. When checked, the text contained in the object is added to the Text search list maintained by Mediator. You can access this list with a list box of type 'Search word' or from the Search dynamic template. Note that the 'Searchable' property of the page must also be checked for the text to be included.

Mouse transparency: This property applies to most objects. It is False by default, meaning that the object always reacts to any mouse events that have been set for it (Mouse Click, Move Into, Mouse Down etc.). If you set it to True, the object will not react to mouse events. If the object covers another object, the mouse events will therefore go "through" it as if it was not there, and reach the object underneath. Setting this property to True improves the performance of Flash projects, as the object no longer needs to be monitored for mouse events.

If you set the 'Mouse transparency' property of an object to True and then define a mouse event for that object, the property is automatically reset to False.

Show tooltip: You can use this property to display a small tooltip about the object when the user places the mouse pointer on the object. Just set this property to True and enter the tooltip in the Notes tab of the Properties dialog. See "Object properties: Notes tab". This property is only available for relevant objects. It is not available in documents of type HTML.

Tab stop: This property only applies to input objects. If you have two input objects, enabling this property allows you to use the Tab key to go from one input object to the next. If you have more than two input objects the order of the tab stops is decided by the order of the input objects in the Object list.

Object properties: Visibility tab

The Visibility tab lets you control the appearance of some of the Mediator objects. It lets you rotate objects, set their opacity level or add an alpha channel to them. The contents of the Visibility tab vary from object to object, and some objects do not have a Visibility tab.

This is the Visibility tab for a picture:
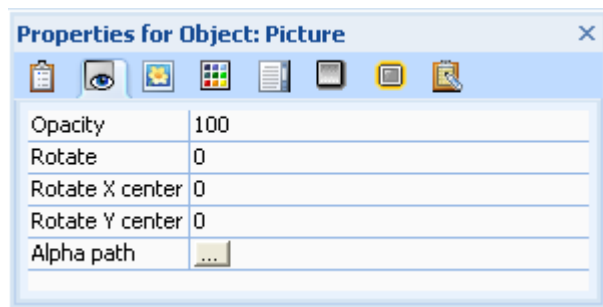
Opacity: Use this field to set the opacity of the object. An opacity value of 100 means that the object is 100% visible. A value of 0 means that the object is completely transparent.

Do not confuse transparent objects and hidden objects. They are both invisible, but transparent objects (often used as hotspots) are still able to react to events whereas hidden objects cannot.

Rotate: This field shows you how many degrees an object has been rotated by. You can change the rotation angle by entering a new value. To unrotate an object enter 0. For more on rotation see "Rotating objects".

Rotate X center and **Rotate Y center:** You do not have to rotate an object with respect to its center. Changing these values lets you move the rotation center.

Alpha path: Alpha pictures (alpha channels) are external gray-scale pictures that apply transparency shapes to the object. To select an alpha channel enter a path or click the Browse button to access the Open dialog. Note

that instead of applying a separate alpha channel to a picture or a rectangle, you can choose pictures that already contain embedded alpha channels. For more on alpha channels see "Using alpha channels and bump maps".

Object properties: Shadow tab

The Shadow tab lets you control the shadow effects applied to the object.

Properties for Object: Rectangle		×
Enable shadow	☑ True	
Shadow color	■ 0,0,0	🖋
Shadow X offset	3	
Shadow Y offset	3	
Shadow opacity	50	
Shadow width	0	
Shadow blur	3	
Shadow excl. object shape	☐ False	
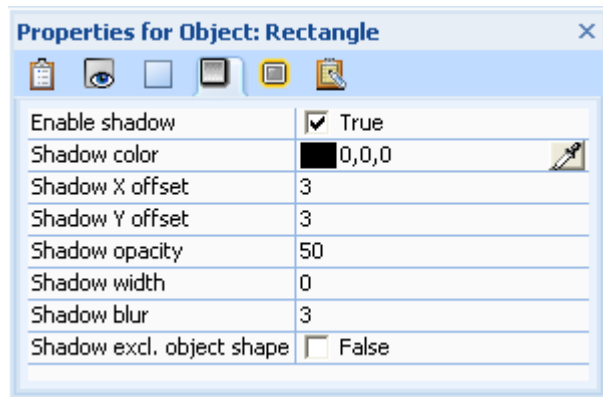
Enable shadow: Check this option to activate the effect.

Shadow color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Shadow X and Y offset: Here you set the displacement of the shadow effect. The default displacement is 3 by 3.

- Positive values displace the effect to the right and down.

- Negative values displace the effect to the left and up.

Shadow opacity: Here you set the opacity level (visibility) of the shadow. The lower the value the more transparent the shadow. The default value is 50.

Shadow width: The default value is 0 (zero), meaning that the shadow has the same size as the object.

Shadow blur: This value defines the appearance of the shadow edge. The value 0 means it is completely solid. The higher the value the more blurred the effect.

Shadow excl. object shadow: Check this option to show the shadow around the object, but not the shadow covered by the object. This is only useful when the object is not fully opaque.

Object properties: Glow tab

The Glow tab lets you control the glow effects applied to the object.

Properties for Object: Rectangle		×
Enable glow	☑ True	
Glow color	▨ 255,224,0	🖋
Glow X offset	0	
Glow Y offset	0	
Glow opacity	80	
Glow width	1	
Glow blur	5	
Glow excl. object shape	☐ False	
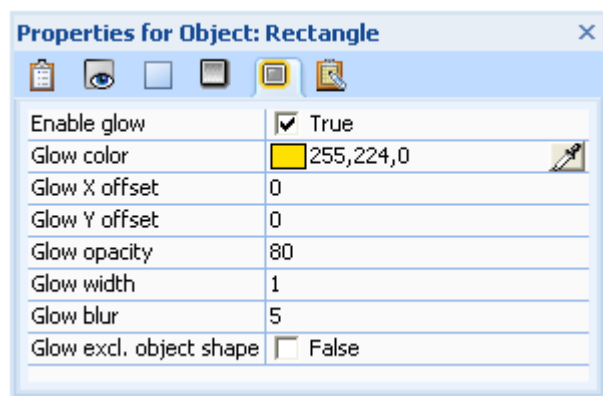
Enable glow: Check this option to activate the effect.

Glow color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Glow X and Y offset: Here you set the displacement of the glow effect.

- Positive values displace the effect to the right and down.

- Negative values displace the effect to the left and up.

Glow opacity: Here you set the opacity level (visibility) of the effect. The lower the value the more transparent the effect. The default value is 80.

Glow width: The default value is 1 (one), meaning that the glow effect is one pixel larger than the object.

Glow blur: This value defines the appearance of the glow edge. The value 0 means it is completely solid. The higher the value the more blurred the effect. The default value is 5.

Glow excl. object shape: Check this option to show the glow effect around the object, but not the glow effect covered by the object. This is only useful when the object is not fully opaque.

Object properties: Notes tab

During the design phase, you can use this tab to enter details about the purpose of the object or any other useful information for your own reference.

There is no need to delete this information when exporting your project, since it stays invisible to the user at runtime.
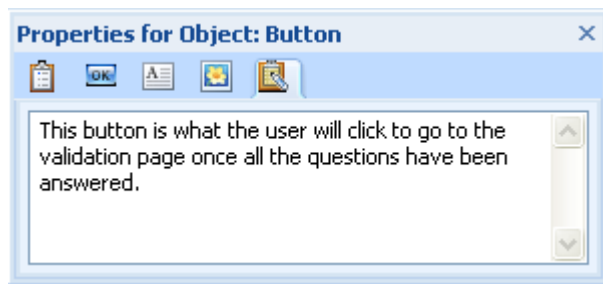
You can also use this tab to display a small tooltip about the object after a short delay when the user places the mouse pointer on the object. Just enter the tooltip here, and check the 'Show tooltip' property of the object in the General tab. See "Object properties: General tab". Note that this property is only available for relevant objects. It is not available in documents of type HTML.

Picture objects

If you export your project to HTML, any text that you enter in this tab is inserted in the Alt meta-tag for the picture in the .html file.

This text will therefore appear on the HTML page as a tooltip when the user moves the mouse pointer on the picture.

Object properties: graphic properties

All graphic objects have the following two settings in the relevant tab (e.g. Picture, Bump Map, etc.) of their Properties dialog.

Load on show

If 'Load on show' is checked, the object file is only loaded in memory when it is used. If it is not checked, the file is loaded in memory as soon as the page is displayed. Checking 'Load on show' has both advantages and disadvantages:

Advantage: If you have many large objects on a page, displaying that page can take some time since all the graphics objects (pictures and videos) must first be opened. You can speed up the page turn by checking 'Load on show' for all invisible objects.

Disadvantage: An object that has 'Load on show' checked takes a little longer to show as the file must first be opened from the disk or CD-ROM. The length of the delay depends on the speed of the computer.

Discardable

If 'Discardable' is checked, Mediator removes the file from memory as soon as it becomes invisible (e.g. via a Hide action).

Advantage: Memory is freed up.

Disadvantage: The file must be opened every time it is shown.

The Picture object

Mediator lets you insert all kinds of different pictures on your pages.

➢ To insert a picture, choose **Insert | Illustrations | Picture** and drag out a rectangular frame on your page.

Once you have created the picture frame, the Open dialog appears.

➢ Select the picture you want to place in the picture object. Checking **Preview** in the right-hand side of the dialog lets you see a preview of the selected picture file.

➢ Click **Open** to accept the selected file.

At the bottom of the Open dialog you will see a field containing the most recent paths you have used. Simply click the path to the folder you wish to select your picture file from.

Picture size

Once you have selected the picture the **Picture Adjust Size** dialog appears. This dialog lets you automatically adjust the size of the picture frame to fit the picture. You have two choices:

• Click OK to resize the picture frame.

If the picture is more than twice as high or twice as wide as the page, the Adjust Size function resizes the picture frame to a maximum size of twice the page size. To view a picture larger than this area within the picture frame, you need to use the scroll option.

• To keep the size of the frame as it is, uncheck 'Adjust the frame size' and click OK.
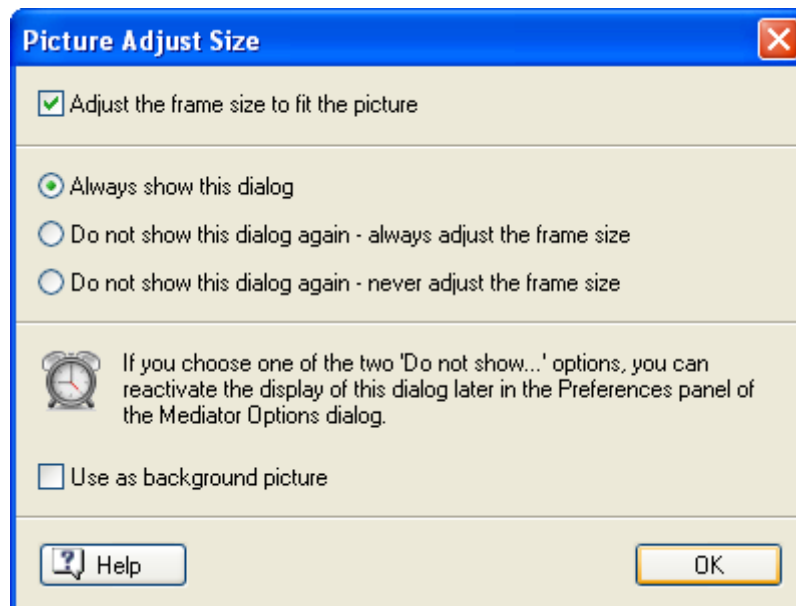
The three radio buttons let you define the default behavior for future picture imports. You can set Mediator to:

• display this dialog every time you import a picture,

• never display this dialog and always import the pictures in their original size,

• never display this dialog and always scale the pictures to fit the frames you created.

Use as background picture: Check this option to automatically adjust the picture size to the project size.

You can resize the picture manually later by pulling one of its handles. Use the corner handles to keep the aspect ratio.

Digital camera pictures and scanned pictures usually have a much higher resolution than what Mediator needs. To reduce the overall size of your Mediator project, you can use Mediator's built-in Image Optimizer to compress them, in automatic or manual mode. See "Optimizing the pictures" for more information.

If you want to scale the pictures yourself with an image processor, you should give them the same size as the picture object. A picture displayed in its original size always gives the best quality..

Picture properties

Once the picture is inserted on the page, its **Format** tab opens at the right of the ribbon.
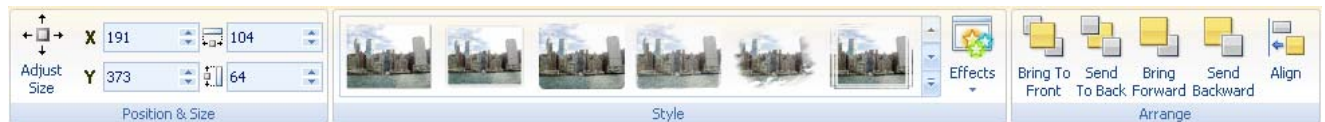
The Format tab contains the most common operations that can be performed on pictures:

- You can restore the picture to its original size by choosing **Adjust Size**.

   You can then resize it proportionally if necessary by pulling its corner handles.

- You can use the fields of the **Position & Size** group to change the position and size of the picture object. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your picture as you go. Once you have found an effect you like, just click it to apply it to the picture.

- You can use the **Effects** command to change the visual aspect of the picture. See "Applying styles" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to pictures. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Picture object, refer to the next topics.

Picture description

If you intend to export to HTML and would like a small tooltip to appear when the user moves the mouse pointer over a picture on the HTML page, you can enter this description in the Notes tab of the Properties dialog of the picture.

Mediator will then insert this text in the Alt meta-tag for the picture in the .html file during the export procedure.

Picture properties: Picture tab

A click on the Picture tab displays the following dialog.
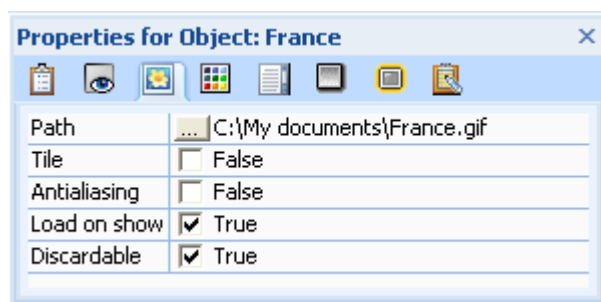
Path: This field shows the path you selected when you created the picture object. To change the path (or picture) click the Browse button ⬚ to display the Open dialog. You can also just double-click the picture frame to access the Open dialog.

Tile: If you check this option, instead of being scaled, the picture will be repeated in the picture object as many times as necessary to fill it completely. If the picture is larger than the picture object, parts of the picture will be cropped. This property lets you use a very small picture to create a background for the entire page (e.g. bricks, boards, etc.).

Antialiasing: This option only affects the scaling of pictures. Although antialiasing is turned off by default, scaled pictures often look better with antialiasing - you can test the effect by simply clicking it on and off in design mode. Antialiasing takes up more memory than traditional scaling.

Refer to the topic "Common properties" for a description of the **Load on show** and **Discardable** options.

Picture properties: Color tab

A click on the Color tab displays the following dialog.
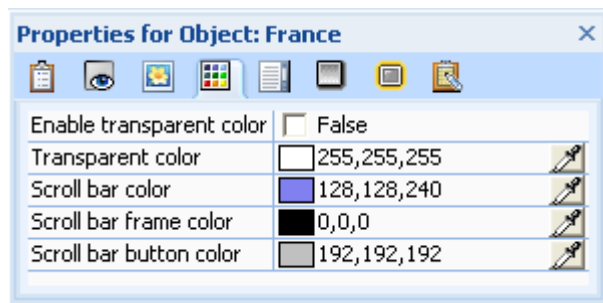
The transparent color options allow you to select a color within the picture that should become transparent.

Enable transparent color: Check this option to enable the effect.

Transparent color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Examples

- If you have a picture with a solid color around it, you can remove the solid color by selecting it as transparent color.

- When working with objects like 3D logos that have a solid background color, using a transparent color creates the illusion of a flying logo.

🔵 You can only select one color as your transparent color. When using a transparent color the picture uses twice as much memory as the same picture without a transparent color.

Scroll bar color: Only relevant if 'Enable scroll bar' is checked in the Picture Scroll tab. This sets the color of the scroll bar.

Scroll bar frame color: Use this field to choose a color for the scroll bar frame.

Scroll bar button color: Use this field to choose a color for the scroll bar elevator and arrow buttons.

Picture properties: Scroll tab

➡ **Advanced**

Mediator supports the use of scrollable pictures. This means that you can use pictures that are larger than the picture object, even larger than the page, and let the end user scroll the picture. You can use 360° panoramic pictures with the wrap-around feature to give the user the illusion of being in the middle of the picture.

A click on the Scroll tab displays the following dialog.
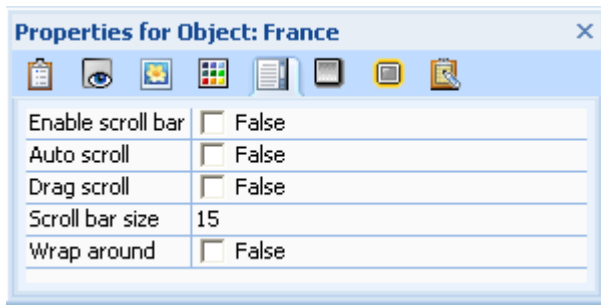
Enable scroll bar: Check this option to add scroll bars to your picture. If the picture is taller than the frame, a vertical scroll bar will be added; if it is wider than the frame, a horizontal scroll bar will be added.

This field must be checked in order to access areas of the picture that fall outside the frame.

You can set the area of the picture that you want to be visible when the picture appears. Simply use the scroll bars to define the area while in design mode. When you save the project, Mediator also saves the information about which area of any given scrollable picture you want visible. If you do not want to show the scroll bars in runtime mode simply remove the checkmark from 'Enable scroll bar' after you have set the visible area.

Auto scroll: Scrolls the picture automatically when the mouse pointer gets close to the picture frame. If the user moves the mouse pointer to the left of the picture frame the picture is scrolled from left to right, and vice-versa. The closer the mouse pointer gets to the frame the faster the picture is scrolled. This option can only be selected with 'Drag scroll' enabled (Mediator switches drag scroll on automatically), and is not compatible with scroll bars.

Drag scroll: Check this option to enable the user to drag and scroll the picture in any direction within the picture frame. This option can be selected on its own or with any other scroll option.

Scroll bar size: Use this field to set the size of the scroll bar when 'Enable scroll bar' is checked.

Wrap around: When this option is checked, picture scroll does not stop when the right or left edge of the picture is reached, but continues seamlessly all the way around. This is especially useful when working with 360° panoramic pictures, as you can achieve a true panorama effect whereby the user has the illusion of standing in the middle of a room or outdoor area and looking around. This option is not compatible with the use of scroll bars.

 You can add hotspots and hotspot objects to a scrollable picture and scroll the hotspots with the picture. You cannot, however, use transparency effects, transparent colors or alpha channels with picture scroll.

Possible uses of picture scroll

- Interactive city or country maps. You can place hidden pictures on the maps and show them using hotspots. The user has to click a certain area or building to get specific information about it.

- 360° panoramic pictures. Create games, mazes or interactive holiday slideshows, where the user must make certain decisions in order to move on.

- Interactive "tours" of houses, buildings, etc. using several 360° panoramic pictures linked with hotspots.

The Hotspot object

A hotspot is an area within a picture that can react to events. With hotspots you can create several interactive areas within the same picture. You can even use other objects (video, text, etc.) as hotspots.

When you right-click a picture, you will find two items in the picture's local menu called **Add Hotspot** and **Add Hotspot Object**.
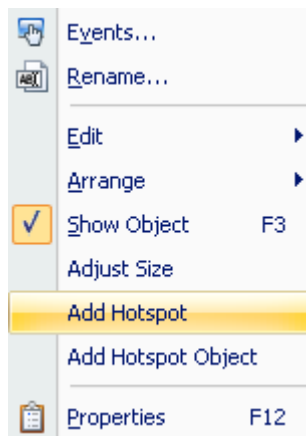
Add Hotspot

Selecting Add Hotspot creates a transparent polygon object. For more information about polygons, refer to "The Polygon object". You can move and resize the polygon as you wish and manipulate it further simply by double-clicking it. The polygon object is not hidden, but simply transparent and therefore still able to react to events. You can apply events and actions to the hotspot as for any object.

The hotspot (i.e. the polygon) is created as a secondary object of the picture.

➢ To view it in the Object list, click the + sign in front of the picture to which it belongs.

Hotspots are not supported in projects exported to HTML or Flash. You can however place a transparent rectangle over the object to obtain the same effect.

Add Hotspot Object

As mentioned above, Mediator allows you to add any object as a hotspot in a picture. To define another picture, a video, a button or a text object as a hotspot you must first create this picture, video, button or text object. You then choose Add Hotspot Object from the local menu of the picture to which you want to add the hotspot. This displays the Object list where you can select the required hotspot object.

A hotspot object is considered as a secondary object of the picture it belongs to.

➢ To view it in the Object list, click the + sign in front of the picture to which it belongs.
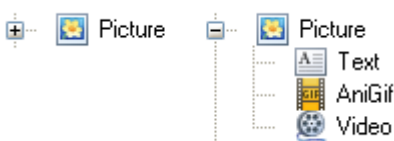
Adding an object as a hotspot, instead of merely creating transparent hotspots, gives you many new options, such as moving a picture or text along with a picture that is being scrolled.

The Rectangle object

Mediator lets you create rectangles of any size, shape and color.

➢ To insert a rectangle on your page, choose **Insert | Illustrations | Rectangle** and drag out a frame of the required size.

Rectangle properties

Once the rectangle is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on rectangles:

- You can use the fields of the **Position & Size** group to change the position and size of the rectangle. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your rectangle as you go. Once you have found an effect you like, just click it to apply it to the rectangle.

- You can use the **Fill**, **Outline** and **Effects** commands to change the visual aspect of the rectangle. See "Applying styles" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to rectangles. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Rectangle object, refer to the next topic.

Rectangle properties: Rectangle tab

A click on the Rectangle tab displays the following dialog.
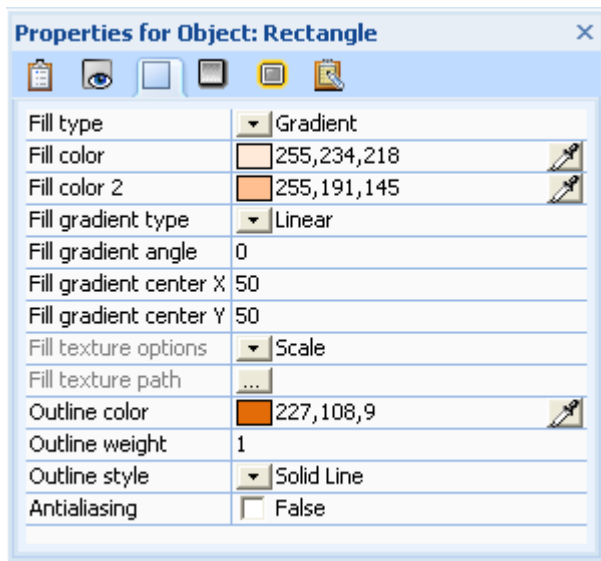
Fill type: This property allows you to change the fill (i.e. interior) of your rectangle. You can choose between:

- **No Fill:** This will make your rectangle transparent. It is only useful if you only want to create a simple outline or an invisible area.

- **Solid:** This option lets you choose a solid color for your rectangle.

- **Gradient:** This lets you create a color transition of different types.

- **Texture:** This lets you apply a texture to your rectangle.

Fill color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

The next properties only apply if you have selected a gradient fill type.

Fill color 2: Use this field to choose the second color for the color transition.

Fill gradient type: This lets you choose between different gradient types which you can experiment with.

Fill gradient angle: This only applies to linear gradients. It indicates the direction of the color transition. A value of 0 for instance means that the gradient is vertical, a value of 90 means that it is horizontal.

The next two properties define the coordinates of the gradient center. For radial and rectangular gradients, the gradient center is the point where the second color of the gradient is the strongest.

Fill gradient center X: This specifies the X coordinate of the gradient center.

Fill gradient center Y: This specifies the Y coordinate of the gradient center.

Fill texture options: The next properties only apply if you have chosen a texture fill type.

- **Scale:** This scales the texture picture to fit the object size.
- **Tile:** Here the texture picture is used in its original size. If necessary, it is tiled to match the object size.
- **Tile Flip X:** Displays every second tile mirrored in the X direction. This prevents vertical hard edges.
- **Tile Flip Y:** Displays every second tile mirrored in the Y direction. This prevents horizontal hard edges.
- **Tile Flip XY:** Displays every second tile mirrored in the X/Y direction. This prevents hard edges in both directions.

Fill texture path: This specifies the path of the picture used as texture.

The bottom of the tab contains the outline settings.

Outline color: Use this field to choose the outline color.

Outline weight: Use this field to define the width of the outline.

Outline style: Choose between the different styles available.

Antialiasing: Antialiasing smoothes the outline of your rectangle. Check this option to apply antialiasing to the rectangle. Note that the effect is only visible when the rectangle is rotated.

The Polygon object

Mediator lets you create polygons as well as curves, lines, circles, arrows and so on.

The procedure to follow to insert a polygon is not the same as for other objects:

➢ Choose **Insert | Illustrations | Polygon**.

You have two choices:

- Clicking the arrow in the lower part of the icon lets you browse and choose from a gallery of predefined polygons.
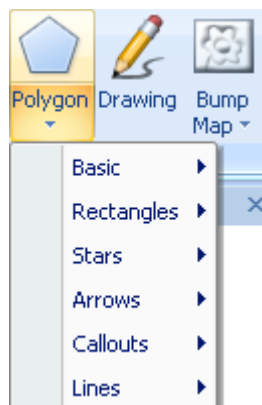
Once you have found a shape you like, click it, then drag a frame for your polygon on the page.

- Clicking the upper part of the icon lets you create your own shape.

A special **Edit** tab appears at the right of the ribbon. You are now in polygon editing mode.

The **Add Point** icon, activated by default, lets you create your polygon by placing points on the page.

➢ To place a point, simply move the mouse pointer where you would like the point and click the left mouse button.

A white point with a red rim appears.

➢ Click somewhere else on the page to place the next point.

The first point changes to gray and the new point now has the red rim to show that it is activated. A blue line connects the two points. This is all you have to do to create a straight line or an arrow.

➢ (optional) Continue to place points on the page as required.

➢ If necessary, click **Undo** in the Quick Access Toolbar to undo the last change(s) made.

➢ (optional) To connect the end points (thereby creating a polygon) click the very first point you made. Mediator asks you whether you want to connect the end points. Confirm by clicking Yes.

It is only when you place the final point that you determine whether you will obtain a line, a polygon, or a curved object. If you leave polygon editing mode without connecting the end points, you create a line.

➢ When you have finished, click **Editing | Close** or choose **Close** in the local menu to exit editing mode.

Once you are out of editing mode, clicking Undo will undo all the changes made in the polygon object since entering editing mode.

➢ To edit the polygon later double-click it to re-enter editing mode.

The tools you use for polygon editing are described below.

➢ To see what a particular icon does, place the mouse pointer over it until you see its descriptive label appear.

The icons in the **Point** group let you place the points making up your polygon.
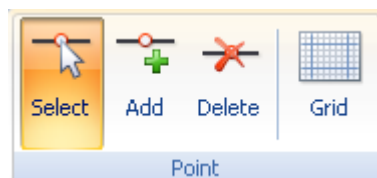
The **Select** icon lets you select an existing point (which changes from gray to white with a red rim). You can then move it by dragging it.

You can select several points in the following ways:

• Hold down the **Ctrl** key while clicking each point you want to select.

• Hold down the **Shift** key while clicking any two points. All points placed between the two points will be selected.

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- Press **Ctrl + A** to select all the points.

- Hold down the left mouse button and drag a rectangle out on the page. All points within the rectangle will be selected.

 Click **Add** to add a new point. Be aware that it will be added *after* the selected point (the white point with a red rim).

To place a point between two existing points, select both points, click Add and click where you would like to place the new point.

 To delete a point, select it and click the **Delete** icon.

 The **Grid** icon lets you activate the grid. See "Using the grid" for more information.

The next group of icons let you create curves rather than straight lines.
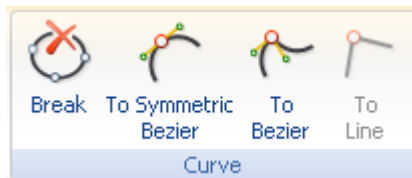
 The **Break** icon is only available if you have already closed the polygon. To open it, select a point and click this icon. Mediator opens the polygon at the selected point, thereby converting it to a line, and adds a new point. This is how you change polygons to lines or arrows.

 The **To Symmetric Bezier** icon is only enabled when at least one point is selected. It lets you convert the sharp angles between the lines to curves. If only one point is selected the effect of the command will be as follows:
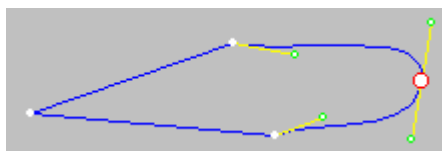
The yellow line now visible at the selected point is called a tangent. Stretch or move the green dot at either end of the tangent to change the curve. If you stretch one of the green dots, the curve flattens at the selected point and is moved further away. If you move the dot, the tangent turns and the curve becomes sharper on one side of the selected point and more rounded on the other.

In contrast to the To Bezier command described below, the To Symmetric Bezier command lets you change the curve on *both* sides of the selected point simultaneously. This gives you a complete curve without any angles. As you can see the adjacent points also receive a tangent. These, however, are only half-tangents and therefore only work in one direction.

 The **To Bezier** command is very similar to the To Symmetric Bezier command. The difference is that it lets you change *each* side of the curve independently. This gives you the opportunity to create all sorts of shapes (with curves, sharp angles, corners etc.). If only one point is selected the To Bezier command will have an effect similar to the following:

By contrast with what happened with the To Symmetric Bezier command, here the shape of the polygon remains unchanged, and the tangents are placed on top of the polygon lines, as shown above. To create curves, pull or turn the tangents as we described for the To Symmetric Bezier command. Experimenting with both commands will help you understand the difference between their mode of operation.

The **To Line** icon lets you remove the curves you create. Select a point (or more) on the curve and click this icon to return all the adjacent curves to the original straight lines.

Finally you can position a point accurately after having selected it by typing its coordinates in the **X, Y** fields.

Click **Close** to accept all changes and exit polygon editing mode.

Polygon properties

Once the polygon is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on polygons:

- You can use the fields of the **Position & Size** group to change the position and size of the polygon object. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your polygon as you go. Once you have found an effect you like, just click it to apply it to the polygon.

- You can use the **Fill**, **Outline** and **Effects** commands to change the visual aspect of the polygon. See "Applying styles" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to polygons. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Polygon object, refer to the next topic.

Polygon properties: Polygon tab

A click on the Polygon tab displays the following dialog.

Properties for Object: Polygon

Fill type	Solid
Fill color	0,153,204
Fill color 2	0,0,0
Fill gradient type	Linear
Fill gradient angle	0
Fill gradient center X	50
Fill gradient center Y	50
Fill texture options	Scale
Fill texture path	...
Outline color	0,0,0
Outline weight	1
Outline style	Solid Line
Arrow style	Line
Arrow size	10
Start arrow	False
End arrow	False
Start	0
End	100
Antialiasing	True
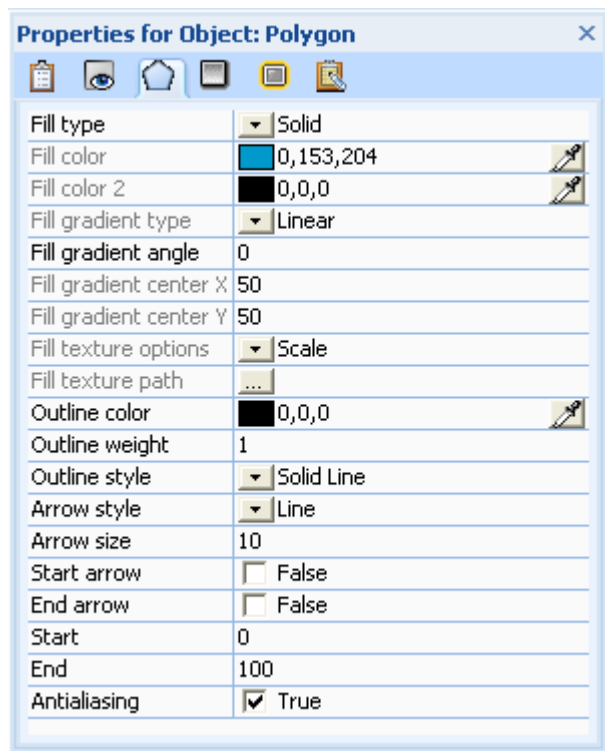
Fill type: This property allows you to change the fill (i.e. interior) of your polygon. It is only relevant when working with closed polygons, not lines or arrows. You can choose between:

- **No Fill:** This will make your polygon transparent. It is only useful if you only want to create a simple outline or an invisible area.
- **Solid:** This option lets you choose a solid color for your polygon.
- **Gradient:** This lets you create a color transition of different types.
- **Texture:** This lets you apply a texture to your polygon.

Fill color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

The next properties only apply if you have selected a gradient fill type.

Fill color 2: Use this field to choose the second color for the color transition.

Fill gradient type: This lets you choose between different gradient types which you can experiment with.

Fill gradient angle: This only applies to linear gradients. It indicates the direction of the color transition. A value of 0 for instance means that the gradient is vertical, a value of 90 means that it is horizontal.

The next two properties define the coordinates of the gradient center. For radial and rectangular gradients, the gradient center is the point where the second color of the gradient is the strongest.

Fill gradient center X: This specifies the X coordinate of the gradient center.

Fill gradient center Y: This specifies the Y coordinate of the gradient center.

Fill texture options: The next properties only apply if you have chosen a texture fill type.

- **Scale:** This scales the texture picture to fit the object size.
- **Tile:** Here the texture picture is used in its original size. If necessary, it is tiled to match the object size.
- **Tile Flip X:** Displays every second tile mirrored in the X direction. This prevents vertical hard edges.
- **Tile Flip Y:** Displays every second tile mirrored in the Y direction. This prevents horizontal hard edges.
- **Tile Flip XY:** Displays every second tile mirrored in the X/Y direction. This prevents hard edges in both directions.

Fill texture path: This specifies the path of the picture used as texture.

The bottom of the tab contains the outline settings.

Outline color: Use this field to choose the outline color.

Outline weight: Use this field to define the width of the outline.

Outline style: Choose between the different styles available. To make the polygon border invisible, choose No Outline. This can be very useful if you want to use your polygon as a hotspot (an invisible area that behaves exactly like any other object).

Arrow style: The arrow options are only enabled when working with lines (unclosed polygons). The style option lets you choose the kind of arrowhead you would like.

Arrow size: Use this field to set the arrow size.

Start arrow and **End arrow:** These fields are used to determine at which end you would like the arrowhead. You can select both ends if necessary. Simply click the check boxes to turn them on or off and the line is updated immediately.

The next two fields, **Start** and **End**, let you "grow" or "shrink" a line or a curve dynamically by showing only segments of the line or curve at any one time.

Start: This field determines the point in the polygon's outline from which this outline starts becoming visible. The value of this field is expressed as a percentage of the overall length of the outline. Its default value is 0, meaning that the outline will be visible from its real start.

End: This field determines the point in the polygon's outline at which this outline stops becoming visible. The value of this field is expressed as a percentage of the overall length of the outline. Its default value is 100, meaning that the outline will be visible from its start point to its real end. Using two Set Property actions, you can for instance increase first the End value, then the Start value of a thick curve every time the user clicks a button, thereby creating the illusion of a worm creeping along the curve.

Antialiasing: Antialiasing smoothes the lines of your polygon. Check this option to apply antialiasing to the polygon object.

The Drawing object

The Drawing tool is a very powerful built-in module which allows you to draw all kinds of different shapes, using advanced editing functions.

Although you can export your drawings from the Drawing tool in a variety of file formats, they are created as vector graphic objects. By contrast with bitmap graphics (such as JPG files), which represent images as a collection of pixels arranged in a grid, vector graphics (such as EMF or WMF files) describe images by considering the geometrical shapes, lines and curves that make them up. This technique makes it possible to scale vector images to any size without losing detail. Vector graphics are particularly interesting for Flash projects in view of their comparatively small size.

For a full description of the many features of the Drawing tool, refer to the section "Using the Drawing tool" in the chapter "Designing your project".

Drawing object properties

Once the drawing is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on drawings:

- You can use the fields of the **Position & Size** group to change the position and size of the drawing object. See "Moving objects" and "Resizing objects" for more information.

- You can use the **Effects** command to apply specific shadow and glow effects or set the opacity level of your drawing. See "Applying styles" for more information.

- You can change the placement order of the drawing object or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to drawings. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Drawing object, refer to the next topic.

Drawing properties: Drawing tab

A click on the Drawing tab displays the following dialog.
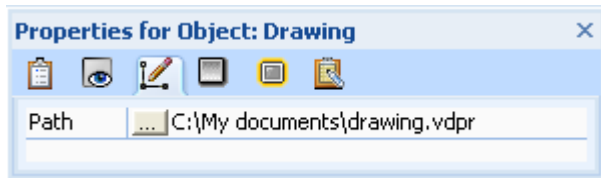
Path: This field shows you the path to the drawing you created with the Drawing tool. To change the path (or drawing) click the Browse button to display the Open dialog or enter a new path.

The Bump Map object (3D surface)

 Bump Map objects let you give a 3D look to your existing objects. Refer to the topic "Using alpha channels and bump maps" for a detailed description of the effects that can be achieved with bump maps.

➢ To insert a bump map on your page, choose **Insert | Illustrations | Bump Map**.

You have two choices:

- Clicking the upper part of the icon lets you select a bump map file from your hard disk.
- Clicking the arrow in the lower part of the icon lets you browse and choose from a gallery of predefined bump maps.
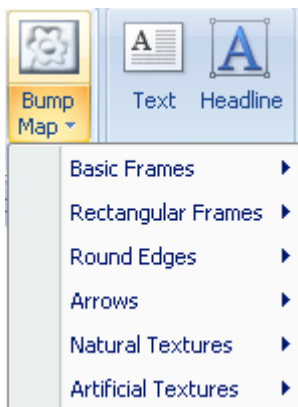
➢ Drag out a rectangular frame for the bump map, exactly as for an ordinary picture object.

 You can only use gray-scaled (8 bit) pictures as bump maps.

Bump Map properties

Once the bump map is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on bump maps:

- You can restore the bump map to its original size by choosing **Adjust Size**.

  You can then resize it proportionally if necessary by pulling its corner handles.

- You can use the fields of the **Position & Size** group to change the position and size of the bump map object. See "Moving objects" and "Resizing objects" for more information.

- You can use the **Effects** command to change the opacity level of the bump map. See "Applying styles" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to bump maps. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Bump Map object, refer to the next topic.

Bump Map properties: Bump Map tab

A click on the Bump Map tab displays the following dialog.

Path: This field shows you the path to the gray-scaled picture you selected when you created the bump map object. To change the path (or picture) click the Browse button ... to display the Open dialog.

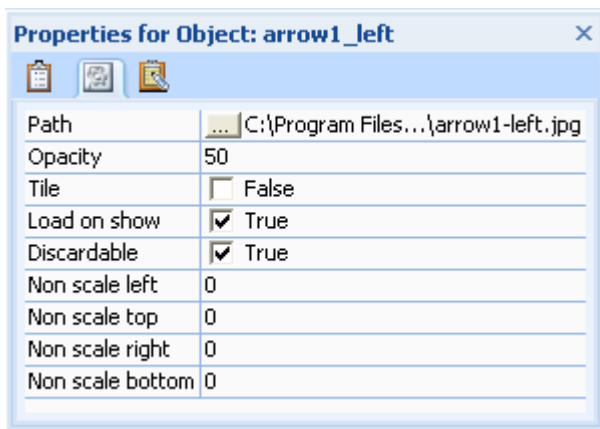**Opacity:** Use this field to set the opacity of the bump map. An opacity value of 100 means that the object is 100% visible. A value of 0 means that the object is completely transparent.

Do not confuse transparent objects and hidden objects. They are both invisible, but transparent objects (often used as hotspots) are still able to react to events whereas hidden objects cannot.

Tile: If you check this option, instead of being scaled, the bump map will be repeated in the frame as many times as necessary to fill it completely. If the bump map is larger than the frame, parts of the bump map will be cropped. This lets you use a very small bump map picture to create a 3D surface for the entire page.

Refer to the topic "Common properties" for a description of the **Load on show** and **Discardable** options.

Non scale left: Specifies the number of pixels from the left edge of the bump map that should not be scaled.

Non scale top: Specifies the number of pixels from the top edge of the bump map that should not be scaled.

Non scale right: Specifies the number of pixels from the right edge of the bump map that should not be scaled.

Non scale bottom: Specifies the number of pixels from the bottom edge of the bump map that should not be scaled.

The Text object

The Text object lets you write and format text, create bullet and numbered lists, insert tables, define hyperlinks and perform many other operations on your text.

➢ To create a text object, choose **Insert | Text | Text** and drag out a rectangular frame of the required size on your page.

As soon as you let go of the mouse button, a special **Edit** tab appears at the right of the ribbon.

➢ You can now type text, paste text from the clipboard or import text from an RTF or TXT (ASCII) file using the local menu.

➢ If necessary, click **Undo** in the Quick Access Toolbar to undo the last change(s) made.

➢ Once you have finished editing your text, click **Editing | Close**, press **Esc** or simply click outside the text field.

Once you are out of text editing mode, clicking Undo will undo all the changes made in the text object since entering text editing mode.

➢ To edit the text later double-click the text object to re-enter text editing mode.

If the text object is transparent (i.e. without a background color), the background color used during editing is the background color of the page. If the color of your text is the same as the color of the page background, this may not be convenient. You have two options to solve this:

- *Press **Shift** while double-clicking the object to edit it on a white background.*

- *Press **Ctrl** while double-clicking the object to edit it using the background color last defined for the text object.*

Text editing in Mediator works in the same way as with most word processors and you will recognize many of the commands below. Some of these commands are also included in the mini toolbar that appears when you select text with the mouse.

➢ To see what a particular icon does, place the mouse pointer over it until you see its descriptive label appear.

To select the entire contents of your text object, press Ctrl + A.
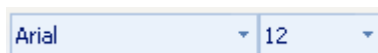
These fields let you view and change the **font** and **font size** of the currently selected text.

These icons let you increase and decrease the **font size** from their current values. If a piece of text is selected, the size of each character is increased (or decreased) individually from its current value.
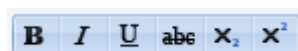
These icons help you set and remove **formatting attributes** in the usual way. You can set the selected characters as superscript or subscript by clicking the relevant icon.

The first of these icons let you change the **color** of the background of the selected text so that it looks highlighted. The second icon lets you change the color of the text itself.

Use these icons to create **bulleted lists** or **numbered lists**. Place the pointer in the relevant paragraph or at the beginning of a new line and click the appropriate icon. Clicking the arrow next to the icon lets you choose between different bullet styles and numbering formats. Clicking the icon again removes the formatting.

Use these icons to increase or decrease the **indent level** of the selected paragraph.

These icons let you **align** the current paragraph within the text object. You can align it to the left margin, center it, align it to the right margin or justify it so that it is aligned with both left and right margins.

Clicking this icon displays all the special **marks** and **symbols** within your text object, such as line feeds and spaces. Click it again to hide these symbols.
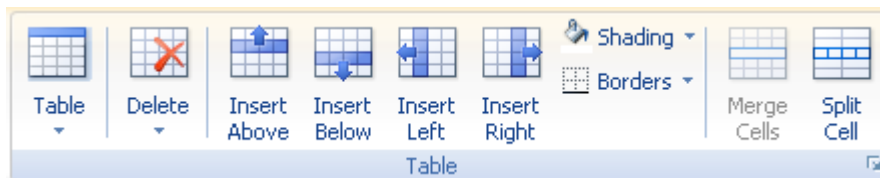
Click this icon to insert a **picture** in the text object.

Click this icon to convert the selected text to a **hypertext object**. To learn more about hypertext objects, refer to the "The Hypertext object" topic. Clicking the Hyperlink icon again will remove the hyperlink and revert the text to normal.

The next group of icons relates to tables.

- To insert a table in your text object, click the **Table** icon and choose the initial number of rows and columns required. The table is inserted at the cursor position. To change the height of table rows, or the width of table columns, drag the row or column dividers. You can add and remove rows and columns later using the Insert commands.

- To delete the entire table, click the upper part of the **Delete** icon.

- To delete the selected cell(s), row(s) or column(s), click the arrow in the lower part of the **Delete** icon and choose the relevant command.

- To insert a row or column, place the cursor at the point of insertion, and choose the relevant **Insert** command.

- To change the interior color of the selected cell(s), choose **Shading** and select your preferred color.

- To add and remove borders or change the border color, choose **Borders**.

   You can also change the interior and border colors of the cells by clicking the diagonal arrow in the bottom right of the Table group to open the **Table Borders and Shading** dialog.
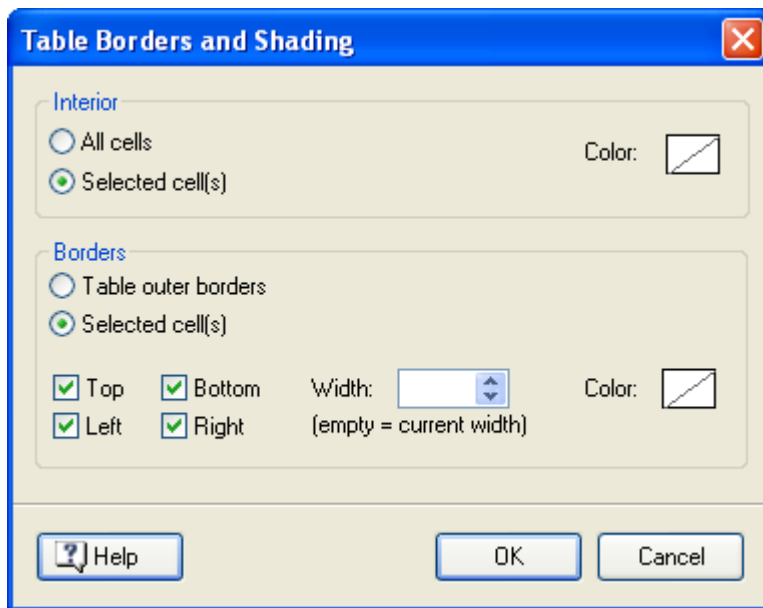
You can assign a background color to all the cells in the table or to the selected cells only. You can also assign a border width and color to the left, right, top or bottom edges of the entire table or to each of the selected cells. To keep the current border width, just leave the Width field empty. Similarly, to keep the current colors, leave the Color field(s) unchanged (diagonal line on a white background).

- To merge cells, select them and choose **Merge Cells**.

- To split a cell into two, select it and choose **Split Cell**.

 Finally to check the spelling of the text contained in your text object, choose **Spelling**. Clicking the lower part of the icon will enable you to choose a different language and set the spelling options. See "Using the spellchecker" for more information about this feature.

 Click **Close** to accept all changes and exit text editing mode.

Text properties

Once the text object is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on text objects:

- You can use the fields of the **Position & Size** group to change the position and size of the text object. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your text object as you go. Once you have found an effect you like, just click it to apply it to the text object.

- You can use the **Background**, **Frame** and **Effects** commands to change the visual aspect of the text object. See "Applying styles" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

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In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to text objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Text object, refer to the next topics.

Text properties: Text tab

A click on the Text tab displays the following dialog.
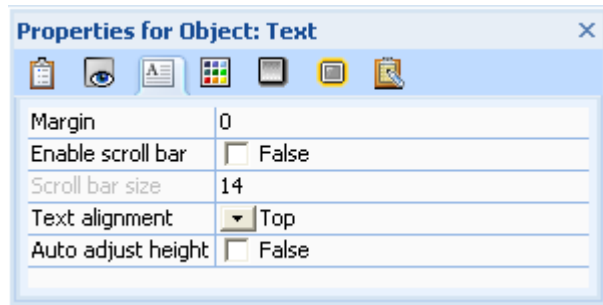
Flash device fonts: This property is only available if your document is of type Flash. See the topic "Creating a document" for more information on the different document types. When this property is set to True, only the Flash system fonts Arial, Times New Roman and Courier New will be available for the text object when exported to Flash. You should therefore replace any other font you are using with one of these fonts.

You should use device fonts:

- When using small font sizes that may look blurred (due to antialiasing)

- To reduce the size of the exported files (since there is no need to embed the fonts)

Limitations of Flash device fonts:

- They scale in increments at runtime. The effect is therefore jerky rather than smooth.

- They do not support partial opacity.

- They may not look as smooth as embedded fonts at larger font sizes.

Margin: This indicates the spacing between the frame of the text object and the text itself. The margin is set in pixels.

Enable scroll bar: Check this option to add a scroll bar on the right of your text object.

Scroll bar size: This option is only available if you have checked 'Enable scroll bar'. Use it to set the width of the scroll bar.

See "Text properties: Color tab" for a description of additional design options for your scroll bar.

Text alignment: Click this field to choose a vertical alignment option for the text within the text object.

Auto adjust height: Click this field to adjust the height of the frame to the height of the text.

Text properties: Color tab

This dialog allows you to change the color settings of the text object. Note that these properties relate to the color of the text object itself, not to the color of the text contained within the text object. You can define the color of the text when you work in text editing mode. Refer to "The Text object" for a description of the text editor.
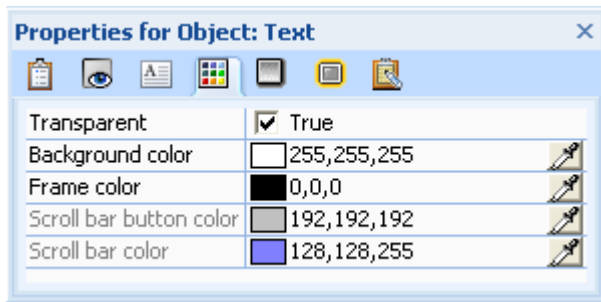
Transparent: This option is checked by default, which means that the text object does not have a background color and that you therefore only see the actual text. Remove the checkmark to see the selected background color.

Background color: Use this field to change the background color of the text object. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Frame color: Use this field to choose a color for the frame of the text object. The frame is not visible if the option 'Transparent' is checked.

The next two options relate to the text object's scroll bar. They are only available if the 'Enable scroll bar' option of the Text tab is checked.

Scroll bar button color: Use this field to choose a color for the elevator button and the two arrow buttons of the scroll bar.

Scroll bar color: Use this field to choose a color for the scroll bar itself.

The Hypertext object

A hypertext object is a word or phrase in a text object that has the same interaction capabilities as any other object.

This means that text defined as hypertext can react to events such as Mouse Click, Move Into, Right Down and so on and can therefore be used to trigger an action.

It can for instance show another descriptive label, a picture, go to a different page, start a video etc. It is possible to apply exactly the same functionality to a hypertext object as to a button.

Hypertext objects can only be created in text editing mode. When you define a hypertext object within a text object, it becomes a sub-object of the text object. In order to view a hypertext object in the Object list, you must click the + sign in front of the primary text object. See "Using the Object list" for more information on this procedure.

Creating a hypertext object

Here is the procedure to follow to define a hypertext object within a text object:

➢ Double-click the text object to enter editing mode.

You will find a full description of the text editor in "The Text object".

➢ Select the word or words that you want to define as hypertext.

You now have several choices:

- Click the **Hypertext** icon in the Paragraph group or,

- Choose **Hypertext | Activate** in the local menu, or

- Press **Ctrl + H**.

This converts the highlighted text into a hypertext object, meaning that it is now able to receive events.

➢ To define events and actions for the hypertext, choose **Hypertext | Events** in its local menu.

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You can also place the mouse pointer over the hypertext object, press Ctrl (the mouse pointer changes to a hand) and click the object to open its Events dialog.

As soon as you exit text editing, the hypertext object behaves as any other Mediator object.

The third option of the Hypertext local menu, **Default Hypertext Style**, lets you set a default format.
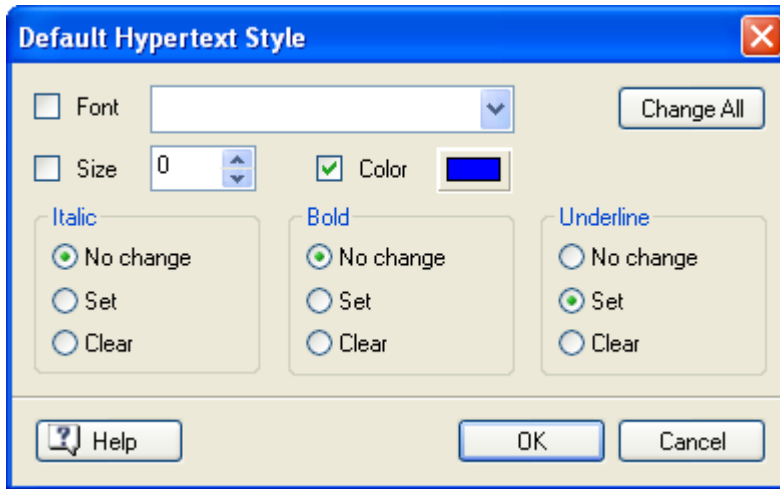
- If you select **No change**, the hypertext keeps the current italic, bold or underline attribute.

- **Set** applies the relevant formatting (e.g. italic, bold or underline) to the hypertext object.

- **Clear** removes the relevant formatting from the hypertext object.

You can also select a font, size and color for the text by choosing a value and checking the box to the left of the relevant option to apply it.

The **Change All** button allows you to apply the options selected to all the existing hypertext objects.

De-activating a hypertext object

You can convert a hypertext object back to normal text as follows:

➢ Double-click the text object to enter editing mode.

➢ Place the mouse pointer within the hypertext.

- Click the **Hypertext** icon in the Paragraph group or,

- Choose **Hypertext | De-activate** in the local menu, or

- Press **Ctrl + H**.

You can also select the hypertext object in the Object list and delete it. See "Using the Object list" for more information.

Hypertext properties

The **Properties** dialog lets you view and fine-tune all the properties applicable to hypertext objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Hypertext object, refer to the next topic.

Hypertext properties: Hypertext tab

A click on the Hypertext tab displays the following dialog.
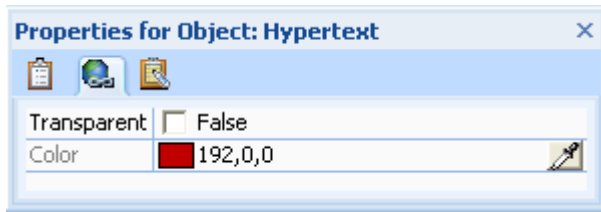
Transparent: When this is checked, the hypertext object does not have its own background color, but is shown on the same background as the rest of the text.

Color: This lets you select a color for the background of the hypertext object. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Please note that the selected background color is not visible while editing the text object.

The Headline object

Rather than using a Text object, you can use a Headline object when all you need is a single line of text on your page as a heading. Another advantage of the headline is that it can be rotated.

➢ To create a headline, choose **Insert | Text | Headline** and drag out a rectangular frame for the headline.

➢ Type your headline in the dialog that opens.
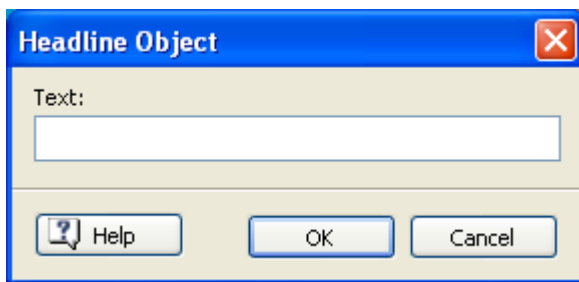
The headline text is fitted inside the rectangular frame you defined.

Headline properties

Once the headline is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on headlines:

• You can use the fields of the **Position & Size** group to change the position and size of the headline object. See "Moving objects" and "Resizing objects" for more information.

  The text is always adjusted to fit inside the object.

  To adjust the text to the closest font size right-click the headline object and choose:

  • **Adjust Height** to resize the object while maintaining its width
  • **Adjust Width** to resize the object while maintaining its height

• You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your headline as you go. Once you have found an effect you like, just click it to apply it to the headline.

• You can use the **Fill**, **Outline** and **Effects** commands to change the visual aspect of the headline. See "Applying styles" for more information.
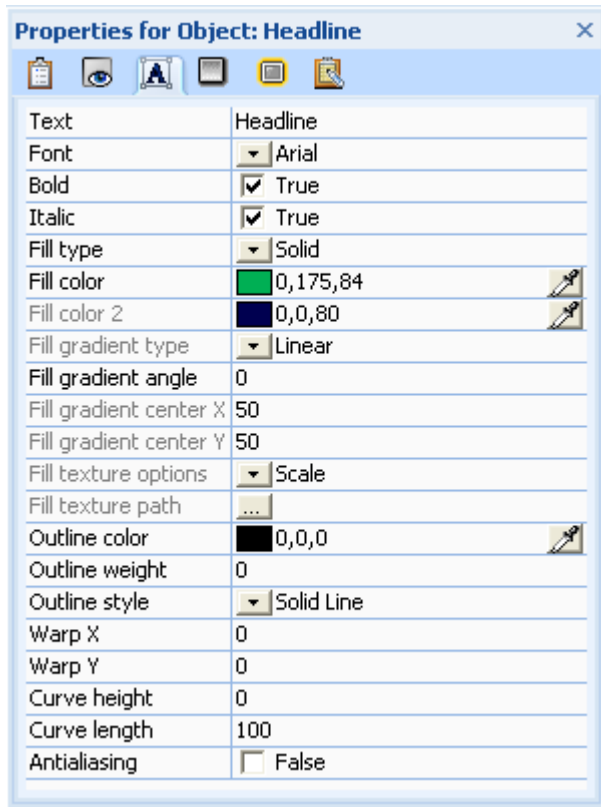
In addition to shadow and glow effects, you can also apply transform effects to the headline so that it appears warped or curved.

- You can change the font and the attributes of the headline using the commands of the **Font** group.

- You can change its placement order or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to headlines. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Headline object, refer to the next topic.

Headline properties: Headline tab

A click on the Headline tab displays the following dialog.

Properties for Object: Headline	✕
Text	Headline
Font	▾ Arial
Bold	☑ True
Italic	☑ True
Fill type	▾ Solid
Fill color	■ 0,175,84
Fill color 2	■ 0,0,80
Fill gradient type	▾ Linear
Fill gradient angle	0
Fill gradient center X	50
Fill gradient center Y	50
Fill texture options	▾ Scale
Fill texture path	...
Outline color	■ 0,0,0
Outline weight	0
Outline style	▾ Solid Line
Warp X	0
Warp Y	0
Curve height	0
Curve length	100
Antialiasing	☐ False

Text: Enter or change the headline text. You can also double-click the object itself.

Font: This field defines the headline font. Click the black arrow next to the font name to see the list of available fonts.

Bold: Check this option to make your text bold.

Italic: Check this option to make your text italic.

Fill type: This property allows you to change the fill (i.e. interior) of your headline. You can choose between:

- **No Fill:** This will make your headline transparent.
- **Solid:** This option lets you choose a solid color for your headline.
- **Gradient:** This lets you create a color transition of different types.
- **Texture:** This lets you apply a texture to your headline.

Fill color: Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

The next properties only apply if you have selected a gradient fill type.

Fill color 2: Use this field to choose the second color for the color transition.

Fill gradient type: This lets you choose between different gradient types which you can experiment with.

Fill gradient angle: This only applies to linear gradients. It indicates the direction of the color transition. A value of 0 for instance means that the gradient is vertical, a value of 90 means that it is horizontal.

The next two properties define the coordinates of the gradient center. For radial and rectangular gradients, the gradient center is the point where the second color of the gradient is the strongest.

Fill gradient center X: This specifies the X coordinate of the gradient center.

Fill gradient center Y: This specifies the Y coordinate of the gradient center.

Fill texture options: The next properties only apply if you have chosen a texture fill type.

- **Scale:** This scales the texture picture to fit the object size.
- **Tile:** Here the texture picture is used in its original size. If necessary, it is tiled to match the object size.
- **Tile Flip X:** Displays every second tile mirrored in the X direction. This prevents vertical hard edges.
- **Tile Flip Y:** Displays every second tile mirrored in the Y direction. This prevents horizontal hard edges.
- **Tile Flip XY:** Displays every second tile mirrored in the X/Y direction. This prevents hard edges in both directions.

Fill texture path: This specifies the path of the picture used as texture.

Outline color: Use this field to choose the outline color.

Outline weight: Use this field to define the width of the outline.

Outline style: Choose between the different styles available.

Warp X: Warps the headline text horizontally (values from -100 to 100). Positive values narrow the upper part, negative values the lower part.

Warp Y: Warps the headline text vertically (values from -100 to 100). Positive values narrow the left part, negative values the right part.

Curve height: Curves the headline text vertically (values from -100 to 100).

Curve length: Defines the "frequency" of the curve (values from -400 to 400). The default value of 100 shows one complete horizontal cycle.

Antialiasing: Antialiasing smoothes the text. This is checked by default.

The Media Player object

The Media Player object allows you to play video and sound in a Media Player window inserted in your page.

The Media Player object is not available in documents of type Flash. See the topic "Creating a document" for more information on the different document types. You can however use the Video object to show a video in a document of type Flash.

If you want to embed a video directly into the Mediator page, you should use the Video object. The Video object also has other advantages compared to the Media Player object. For more information, see "The Video object".

Compared to the Video object, the Media Player has the following advantages:

- It supports all the common Windows formats, including the streaming file formats ASF, WMV (video), and WMA (audio).

- It is available in documents of type HTML.

- It lets you use a slider on sound and videos, as well as built-in sound control.

- It lets you make use of markers inserted in the media files to ensure perfect timing with other interactive elements.

The Mediator Media Player object always uses the latest Windows Media Player installed on the computer. This must be version 9 or above. Although the vast majority of system configurations supported by Mediator already include Media Player, you may want to indicate to your end users that they can download it from the Microsoft Download Center if necessary.

➢ To insert a Media Player object, choose **Insert | Media Clips | Media Player** and drag out a rectangular frame on your page.

The Open dialog appears to let you select the video or sound file you wish to use.

➢ Use the preview pane on the right-hand side of the Open dialog to ensure you have selected the correct file.

When you close the Open dialog the Media Player object looks as follows.
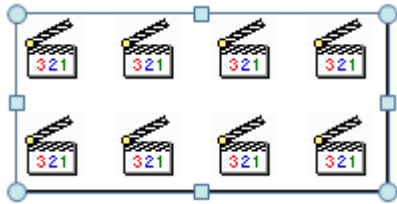
Since the Media Player object is actually just a frame for an external program (Windows® Media Player) you cannot see the file you have selected until you go into test mode. This also means that you cannot see if the size of the Media Player object you created is adequate. You must adjust the size manually later. By contrast with the Video object, you cannot auto-adjust the Media Player object.

The size of the Media Player object must be sufficient to accommodate both the contents and the navigation bar. If for instance you have a video of 320 x 240, are using Media Player 9 and have enabled the display of the navigation bar, you should define an object size of 320 x (240 + 64) to ensure that the video fits the space exactly. The aspect ratio of the video is however always maintained, even when the object size defined does match the video size exactly. In that case the "empty" space surrounding the video is filled by black stripes.

Bear in mind also that if you animate objects or use elaborate show/hide effects at the same time as playing the video, you will not get the same performance as when playing the video on its own since Mediator needs to perform all these actions in parallel.

Media Player object properties

Once the Media Player object is inserted on the page, its **Format** tab opens at the right of the ribbon.
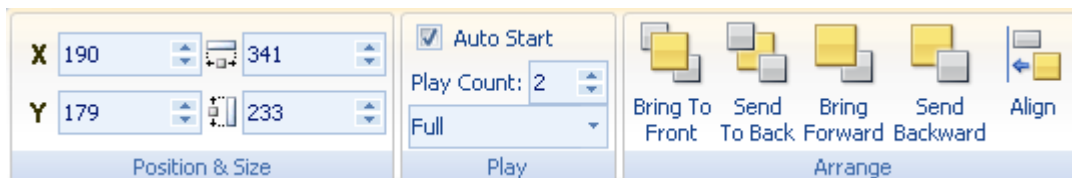
The Format tab contains the most common operations that can be performed on Media Player objects:

- You can use the fields of the **Position & Size** group to change the position and size of the Media Player object. See "Moving objects" and "Resizing objects" for more information.

- You can modify the **Auto Start**, **Play Count** and **UI Mode** properties of the object. For a description of these properties, see the next topic.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to Media Player objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Media Player object, refer to the next topic.

Using streaming video and audio

The Media Player object enables you to use streaming media in your offline and online projects.

The advantage of streaming media is that the audio or video can start playing as soon as an initial amount of data is loaded. The rest is downloaded while playing.

If you are using the Media Player object for an online project, you are advised to use one of these formats. You can convert your existing video files to ASF or WMV with the Windows Media© Encoder, which can be downloaded freely from the Microsoft Download Center.

💡 *To include a WMA sound in your project without actually showing the Media Player object which contains it, just move the object in the non-visible part of the workspace. You will still be able to play and control the sound as expected.*

Using markers (cue points) in media files

→ Advanced ASF and WMV files can sometimes contain markers (also called cue points), which Mediator can detect and react to.

Markers identify precise positions within the file.

The **Marker Hit** event, specific to the Media Player object, is triggered every time such a marker is hit.

Using this event gives you the possibility of timing your project perfectly. You can ensure that a picture is shown exactly at the right moment, make an animation start on a high note, or display an explanation at the right time.

To insert markers in an ASF file you can use the Media File Editor contained in the Windows Media Encoder.

The name of the most recently encountered marker is stored in the Media Player object property **CurrentMarkerName**. CurrentMarkerName is a read-only property and is therefore not accessible in the Properties dialog. However, you can access it from the Set Property action as any other property by entering the name of the object followed by the name of the property, e.g. MPlayer.CurrentMarkerName, as shown below.
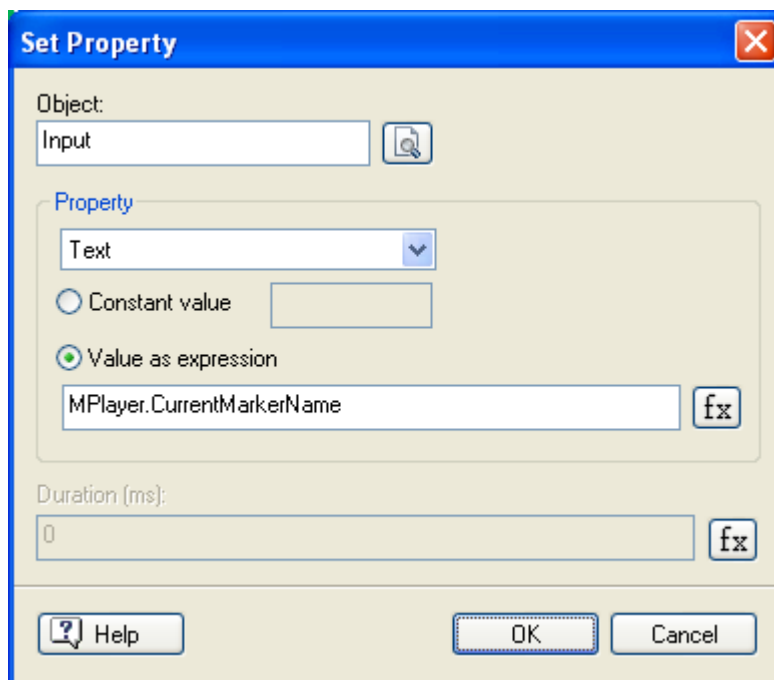
Media Player object properties: Media Player tab

The Media Player tab lets you adjust the playback settings and the contents of the Player window.
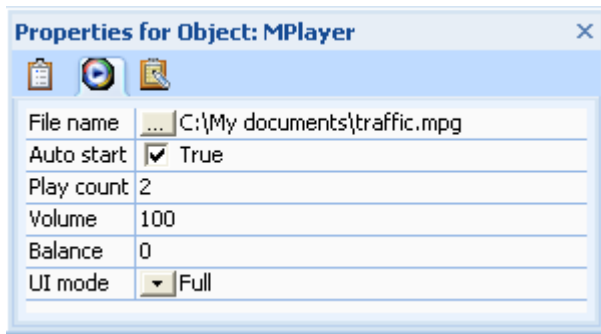
File name: Shows the selected file. Click the Browse button [...] to select another file.

The Media Player object can be used with HTML export to play back streaming video and audio. It works without modification in Microsoft Explorer and Mozilla Firefox.

Auto start: Starts the selected file automatically. This is checked by default.

Play count: Indicates how many times to play the selected file. If the value is set to 0 (zero), the file plays repeatedly, restarting as soon as it reaches the end.

Volume: Used to set the volume output level. Possible values range from 100 to 0 (%), where 100 specifies full volume and 0 specifies no volume.

Balance: Used to set the balance. The default value of 0 (zero) indicates that the sound is balanced equally between the left and right speakers. A value of -100 indicates that all sound is going to the left speaker. A value of 100 indicates that all sound is going to the right speaker.

UI mode: This property can be used to determine the appearance of the Media Player window. It can take one of the following values:

- **None:** The Player is shown without any controls. The only visible element is the video window itself.

- **Mini:** In addition to the video window, the Player is shown with a status window, as well as Play/Pause, Stop, Mute and Volume controls.

- **Full:** This is the default setting. In addition to the video window, the Player is shown with a status window, a seek bar, and Play/Pause, Stop, Previous, Next, Mute, Fast Forward, Fast Reverse and Volume controls.

The Video object

Mediator lets you embed video objects on your page to show different types of videos.

The Video object is not available in documents of type HTML. See the topic "Creating a document" for more information on the different document types. You can however use the Media Player object to show a video in a document of type HTML.

The formats supported by the Video object for documents of type Standard are AVI and MPG. Other formats, such as WMV, might work in test mode, but are not supported in runtime mode. To include a WMV video in a document of type Standard, use the Media Player object instead.

For documents of type Flash, the only format supported is FLV. If necessary, you can convert AVI and MPG videos to FLV by using one of the freeware tools available on the Internet.

Compared to the Media Player object, the Video object has the following advantages:

- It is available in documents of type Flash, with some restrictions. Please see "Flash restrictions" for more information.

- It is possible to auto-adjust the size of the video frame so that it fits the video perfectly.

- It can be played with other objects shown on top of it.

- As it is embedded on the page, it can have transition effects and special effects such as rotation applied to it.

➢ To insert a video, choose **Insert | Media Clips | Video** and drag out a rectangular frame on your page.

Once you have created the video frame, the Open dialog appears.

➢ Select the video you want to place in the video object, choosing from the video formats supported by the file type "Video files". Checking **Preview** in the right-hand side of the dialog lets you see a preview of the selected video file. Use the buttons on top to Play ▶, Pause ‖ or Stop ■ your video.

➢ Click **Open** to accept the selected file.

At the bottom of the Open dialog you will see a field containing the most recent paths you have used.. Simply click the path to the folder you wish to select your video file from.

Video size

Once you have selected the video the **Video Adjust Size** dialog appears. This dialog lets you automatically adjust the size of the video frame to fit the video. You have two choices:

• Click OK to resize the video frame.

• To keep the size of the frame as it is, uncheck 'Adjust the frame size' and click OK.
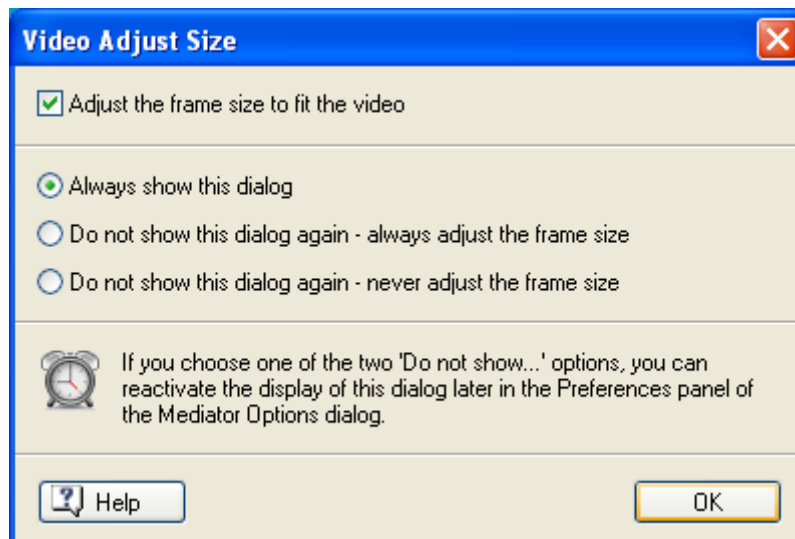

It is recommended to always play videos in their original size.

The three radio buttons let you define the default behavior for future video imports. You can set Mediator to:

• display this dialog every time you import a video,

• never display this dialog and always import the videos in their original size,

• never display this dialog and always scale the videos to fit the frames you created.

Video properties

Once the video is inserted on the page, its **Format** tab opens at the right of the ribbon.
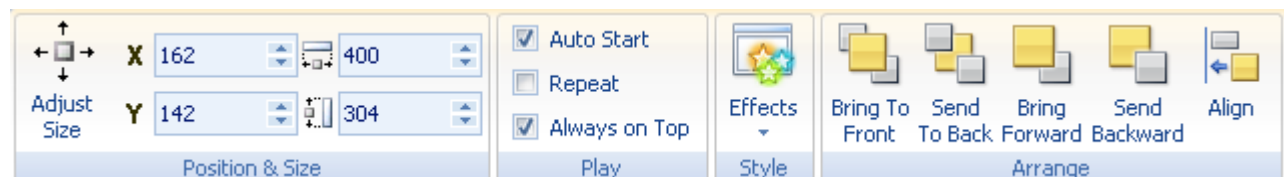
The Format tab contains the most common operations that can be performed on videos:

• You can restore the video to its original size by choosing **Adjust Size**.

You can then resize it proportionally if necessary by pulling its corner handles.

- You can use the fields of the **Position & Size** group to change the position and size of the video object. See "Moving objects" and "Resizing objects" for more information.

- You can modify the **Auto Start**, **Repeat** and **Always On Top** properties of the video. For a description of these properties, see the next topic.

- You can use the **Effects** command to rotate the video object. For more information, see "Rotating objects". Note that rotating a video object automatically disables its 'Always on Top' property.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to videos. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Video object, refer to the next topic.

Video properties: Video tab

A click on the Video tab displays the following dialog.
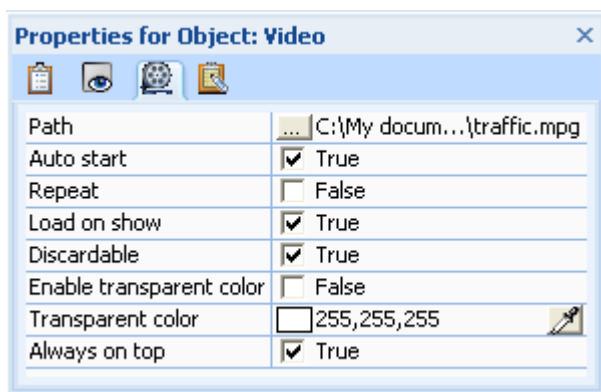
Path: This field shows the path to the video you selected in the Open dialog. Click the Browse button [...] to select a different video.

Auto start: When this is checked, the video starts playing as soon as the page is displayed. Otherwise, the video does not play until a Start action activates it. Until then, the first frame appears in the video object.

Repeat: When this is checked, the video plays over and over until a Stop action terminates it or the page is left. If the box is not checked the video stops after the first play-back. It then shows the last frame of the video.

Refer to the topic "Common properties" for a description of the **Load on show** and **Discardable** options.

Enable transparent color: Check this option to enable the effect.

Transparent color: Click the color box or use the Pipette to select the color you would like to make transparent. See "Choosing a color" for more information. This visual effect is not as good on ordinary videos as on pictures, unless you want the video to have "holes" here end there while it is playing! Even though many videos appear to have a solid background color, they are often made of several almost identical colors.

You can select one color, and one color only, as your transparent color. When using a transparent color the video uses twice as much memory as the same video without a transparent color.

Always on top: When this is checked, the video always stays in front of other objects. As it requires a lot less computer power to play the video when this option is enabled, you should only disable it if you really need to place other objects on top of the video.

Special effects placed on the video object will only work when 'Always on top' is disabled. If the computer is not able to play the video with 'Always on top' disabled, Mediator re-enables it automatically before playing the video (which means that the special effects will not show).

Bear in mind also that if you animate objects or use elaborate show/hide effects at the same time as playing the video, you will not get the same performance as when playing the video on its own since Mediator needs to perform all these actions in parallel.

The Animated GIF object

The Animated GIF object lets you show animated GIF files.

➢ To insert an animated GIF object on your page, choose **Insert | Media Clips | Animated GIF** and click the position on the page where you want to insert it.

You do not need to drag out a rectangular frame when working with animated GIF objects, since animated GIFs always keep their original size. Unlike pictures and videos, animated GIFs cannot be resized.

The Open dialog appears.

➢ Select the animated GIF you would like to use. Checking **Preview** in the right-hand side of the dialog lets you see a preview of the animation. Use the buttons on top to Play ▶, Pause ▮▮ or Stop ▪ your animated GIF.

Animated GIF properties

Once the animated GIF object is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on animated GIF objects:

• You can use the fields of the **Position** group to change the position of the animated GIF object. See "Moving objects" for more information.

• You can modify its **Auto Start** and **Repeat** properties. For a description of these properties, see the next topic.

• You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to animated GIF objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Animated GIF object, refer to the next topic.

Animated GIF properties: Animated GIF tab

A click on the Animated GIF tab displays the following dialog.
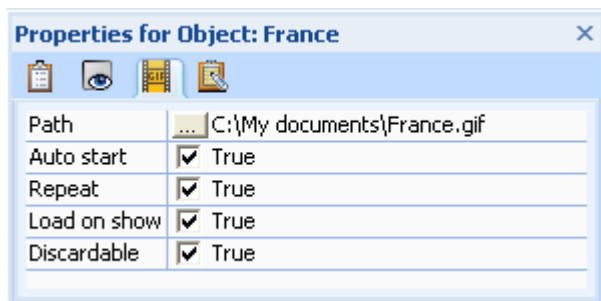
Path: Specifies the path of the selected animated GIF file. You can enter the path manually or select a file by clicking the Browse button ....

Auto start: When this is checked, the animation starts playing as soon as the page is loaded in memory. Otherwise it waits for a Start action before playing. Until then the first frame appears in the animated GIF object.

Repeat: When this is checked, the animated GIF plays over and over until a Stop action terminates it, or the page is left. If the box is not checked, the animated GIF stops after the first play-back. It then shows the last frame of the animated GIF.

Refer to the topic "Common properties" for a description of the **Load on show** and **Discardable** options.

The Flash object

The Flash object lets you display Flash files (*.swf files) on your page.

➢ To insert a Flash object, choose **Insert | Media Clips | Flash** and drag out a rectangular frame on your page.

The Open dialog appears to let you select the Flash file you would like to use. You can select a Flash file from your hard drive or a remote URL.

The Flash object has certain limitations when exporting to Flash. Please see "Flash restrictions" for more information.

Flash object properties

Once the Flash object is inserted on the page, its **Format** tab opens at the right of the ribbon.
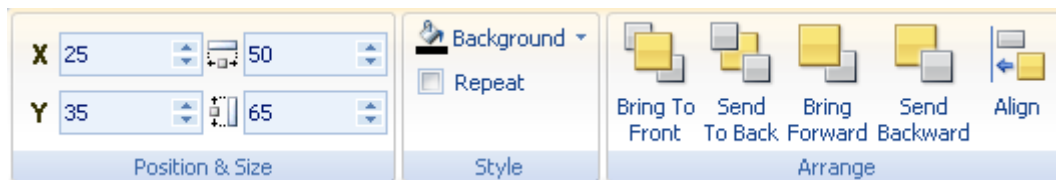
The Format tab contains the most common operations that can be performed on Flash objects:

- You can use the fields of the **Position & Size** group to change the position and size of the Flash object. See "Moving objects" and "Resizing objects" for more information.

- You can modify the **Repeat** property and use the **Background** command to set a color for the background of the Flash object. See the next topic for a description of both of these properties.

- You can change the placement of the Flash object or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to Flash objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Flash object, refer to the next topic.

Flash object events

The Flash object has only three events: **On Show**, **On Hide** and the special Flash event **On Ready State**.

This event is triggered every time a change occurs in the state of the selected Flash file. During loading and play back of a Flash file the state can take five different values:

0=Loading

1=Uninitialized

2=Loaded

3=Interactive

4=Complete

You can check for each of these values and trigger any given action as a result.

Flash object properties: Flash tab

A click on the Flash tab displays the following dialog.
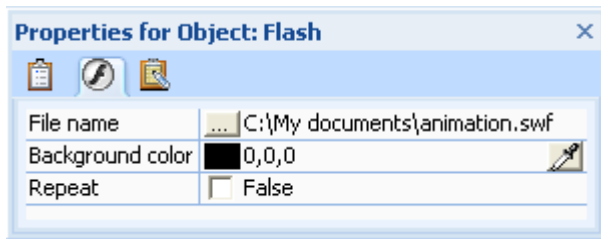
File name: Specifies the path of the selected Flash file. You can enter the path manually or select a Flash file by clicking the Browse button [...].

Background color: If the frame of the Flash object is larger than the selected Flash file, the Flash file is scaled proportionally to fit the frame, meaning that the width and height of the Flash file always keep the same aspect ratio. The areas of the Flash object left empty will be shown in the selected background color. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Repeat: Some Flash files, primarily older files, start over when they reach the end. When this option is unchecked, the Flash file stops on the last frame after one play back.

The Button object

 Creating buttons with Mediator is quick and easy.

➢ To insert a button on your page, choose **Insert | Controls | Button**.

You have two choices:

- Clicking the upper part of the icon lets you create a default button.

- Clicking the arrow in the lower part of the icon lets you browse and choose from galleries of predefined buttons.
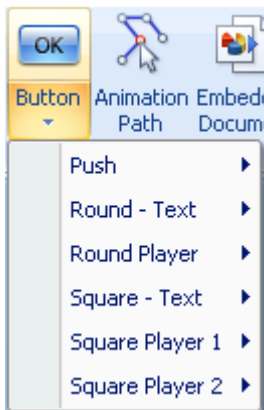
➢ Drag out a rectangular frame for the button.

If you are creating a default button, Mediator immediately enters editing mode to let you change the default label. Otherwise, all you have to do to enter editing mode is to double-click the button.

➢ Type the button label. If you need more than one line, press **Ctrl + Enter** at the end of the first line.

➢ When you have finished, press either **Enter** or **Esc**, or click anywhere outside the button to leave editing mode.

Button properties

Once the button is inserted and selected on the page, its **Format** tab opens at the right of the ribbon.
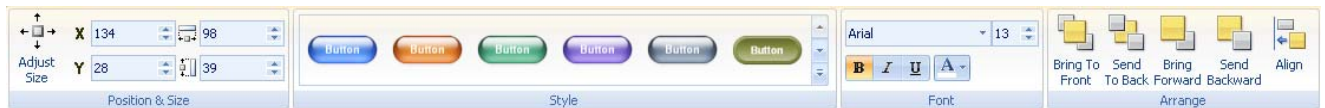
The Format tab contains the most common operations that can be performed on buttons:

- You can reset the button object to the size of the button picture by choosing **Adjust Size**.

- You can use the fields of the **Position & Size** group to change the position and size of the button. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your button as you go. Once you have found an effect you like, just click it to apply it to the button.

- You can use the font and attribute icons of the **Font** group to format the button label.

- You can change the placement of the button or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to buttons. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Button object, refer to the next topics.

*If you have created a button that you would like to re-use (including its events and actions), drag it **from the Object list** to the desired User Area category of the Multimedia Catalog. You can then drag it straight back from the Multimedia Catalog on any other page of your project.*

*You could also make it your default button type by choosing **Edit | Define as Default Object** in its local menu. This means that any button you create from now on will automatically inherit the properties of your default button, as well as all its events and actions.*

Button properties: Button tab

A click on the Button tab displays the following dialog.
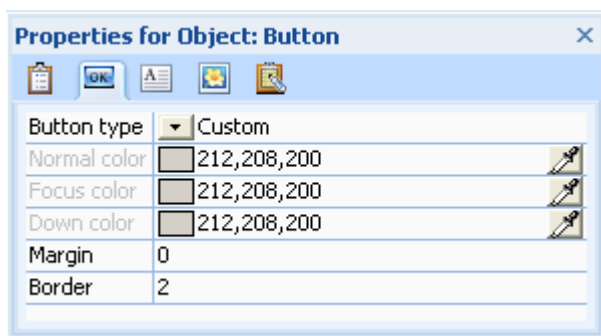
Button type: This property determines the type of the button, which can be **Normal** or **Custom**. By default the button type is set to Normal.

The differences between the two button types are as follows:

- **Normal:** With this button type, you can use the three color fields underneath the 'Button type' option to choose different colors depending on the state of the button.

  The three possible states are: "Normal" (when the mouse pointer is not on the button), "Focus" (when the mouse pointer is on the button) and "Down" (when the button is clicked or activated).

  Using the Picture tab, you can also place a picture on the button. This picture will be displayed in the center of the button, in each of its three states. Refer to "Button properties: Picture tab" for more information.

- **Custom:** If you select Custom the button's color and frame disappear and only the text remains. You must now click the Picture tab and choose pictures for each of the three states of the button (Normal, Focus, Down).

The middle section contains the three color fields relating to the Normal button type described above.

Normal color: The standard color of the button before it is clicked. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Focus color: This is the color the button changes to when the mouse pointer is placed on the button.

Down color: This is the color the button changes to when it is clicked.

The bottom half of the dialog contains two additional design options related to buttons of Normal type.

Margin: If you have placed a picture on the button, you can specify here the number of pixels representing the spacing between the edges of the button and the picture.

Border: This field relates to the button's 3D effect. Mediator achieves this three-dimensional effect by showing the top and left sides of the button in a lighter shade than the button surface, and the other two sides in a darker shade. You can increase or decrease this 3D effect by increasing or decreasing the value of the Border field.

Button properties: Text tab

The Text tab contains the format settings related to the button label.
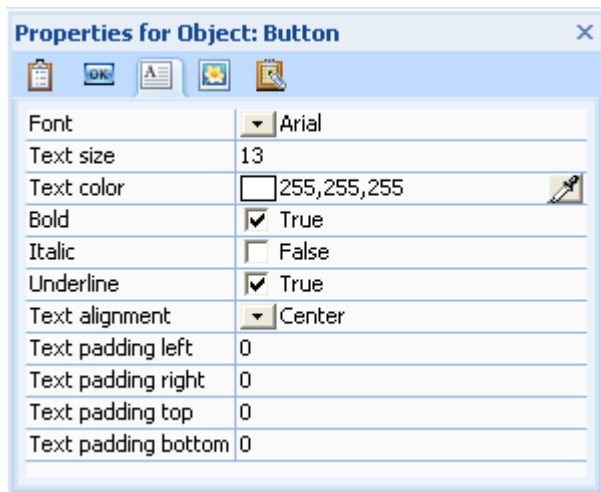
Font: This field defines the font of the button label. Click the black arrow next to the font name to see the list of available fonts.

Text size: This determines the font size for the button label. Click the field and enter a value, or use the arrow buttons to increase or decrease the value displayed.

Text color: Click the color box on the left of the field or use the Pipette to choose the text color. See "Choosing a color" for more information.

Bold-Italic-Underline: Check the box next to one of these options to apply the corresponding attribute to the button label.

Text alignment: Click this field to choose one of the alignment options available for the button label.

The next four settings specify the number of pixels between the edges of the button and the button label. Use these settings to ensure that the label does not overlap with any graphics elements placed on the edges of the button.

Text padding left: Number of pixels between the left edge of the button and the label. You can also use this property to prevent the label from being so close to the edge of the button that it is hard to read.

In the example below, the property 'Text padding left' has been set to 30 to leave some space on the left of the button for the graphic element placed before the label.
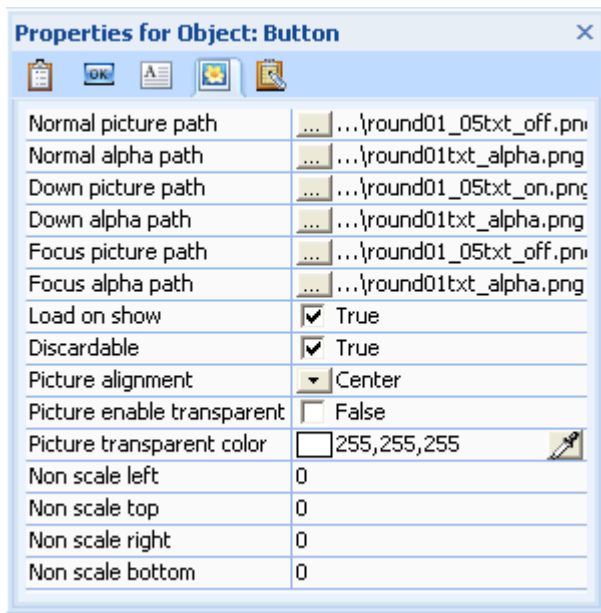
Text padding right: Number of pixels between the right edge of the button and the label.

Text padding top: Number of pixels between the top edge of the button and the label.

Text padding bottom: Number of pixels between the bottom edge of the button and the label.

Button properties: Picture tab

A click on the Picture tab displays the following dialog.

The first two properties, **Normal picture path** and **Normal alpha path** let you choose pictures to display on your button. As you can see there are two different path fields, one for the picture and one for an external alpha channel. These properties have a slightly different meaning depending on whether the button type is Normal or Custom. Refer to "Button properties: Button tab" for more information about button types.

- If the button type is Normal, the pictures you select here will always be shown on the button, regardless of its state. The picture maintains its X/Y aspect ratio (i.e. it is not stretched to fill the entire button).

- If the button type is Custom, the pictures you select here will be shown when the button is in its "normal" state (i.e. when the mouse pointer is not on the button). The X/Y aspect ratio is not maintained, which means that Mediator scales the picture to fill the entire button frame. If you wish to keep the picture at its original size, right-click the button and choose **Adjust Size** from the local menu.

➢ Click the Browse button ⋯ to display the Open dialog and select the picture you wish to use.

The purpose of an alpha channel is described in "Using alpha channels and bump maps". In brief, it is used to add a transparent effect to the picture on the button. You do not have to use an alpha channel, so if you do not want a transparent effect, leave this field empty.

The following four options are only available if you have chosen the button type Custom in the Button tab.

- The **Down picture path** and **Down alpha path** let you select the picture and alpha channel you wish to use when the button is clicked.

- The **Focus picture path** and **Focus alpha path** let you select the picture and alpha channel you wish to use when the button has the focus (i.e. when you move the mouse pointer on the button without clicking it).

Note that instead of applying a separate alpha channel to the Normal picture, Down picture and Focus picture, you can choose pictures that already contain embedded alpha channels. You can also combine such a picture with an additional alpha channel.

Refer to the topic "Common properties" for a description of the **Load on show** and **Discardable** options.

Picture alignment: Use this field to determine the position of the picture on the button. Picture alignment is only relevant when working with Normal buttons. The pictures shown on Custom buttons are scaled to fill the entire button frame, making the Alignment option redundant.

Picture enable transparent: Check this option to enable the effect.

Picture transparent color: Click the color box or use the Pipette to select the color you would like to make transparent. See "Choosing a color" for more information. With Normal buttons (with a picture), you can use this function to create transparent areas. With Custom buttons, you can use it to create non-rectangular buttons (round, triangular, star-shaped etc.).

On Custom buttons, you can only select one color contained on all the pictures selected.

The following four options are only available for Custom buttons. They allow you to specify the number of pixels from each edge that should not be scaled when you resize the button. This avoids the distortion of any graphical elements shown on the edges of the button that would otherwise occur when you resize the button, for instance to accommodate a longer label.

Non scale left: Specifies the number of pixels from the left edge of the button that should not be scaled.

Non scale top: Specifies the number of pixels from the top edge of the button that should not be scaled.

Non scale right: Specifies the number of pixels from the right edge of the button that should not be scaled.

Non scale bottom: Specifies the number of pixels from the bottom edge of the button that should not be scaled.

Consider for instance the button below:

Stretching it without setting any of its 'Non scale' properties gives the result below. The graphical element on the left is badly distorted, the button label partially overlaps the graphical element and the rounded ends of the button have become rough and grainy.

Stretching it after setting its 'Non scale left' and 'Non scale right' properties to 25 and its 'Non scale top' and 'Non scale bottom' properties to 12 give the much more satisfactory result below.

Of course, this technique only works well if there is a central area in the button that can be stretched without any visible negative effect.

If the picture displayed on your button has been scaled to fill the entire button and is therefore not shown at its original size, you can use the properties above to undo this scaling on the left, top, right or bottom. If for instance the picture's original size is much smaller than the button size, setting 'Non scale left' and 'Non scale top' to the original width and height of the picture will give you a large button, mostly invisible, except for the picture displayed in its top left corner.

The Animation Path object

The Animation Path tool lets you create a path along which you can animate one or more objects using the Animate action.

Creating an animation path is done in exactly the same way as creating a polygon, as both tools connect points with straight lines or curves. You will find a complete description of the creation process in "The Polygon object".

To create a loop, connect the end points of the animation path to close it.

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The **Edit** tab of the Animation Path is almost identical to that of the Polygon. The only difference is the **Browse Object** field, which lets you see how the object you intend to animate will look at each point of the animation path.

Each point of the animation path represents the center of the animated object.

➢   Click the **Browse for Object** button and select the required object from the Object list.

➢   Click the **Select** icon, then click each point of the animation path in turn.
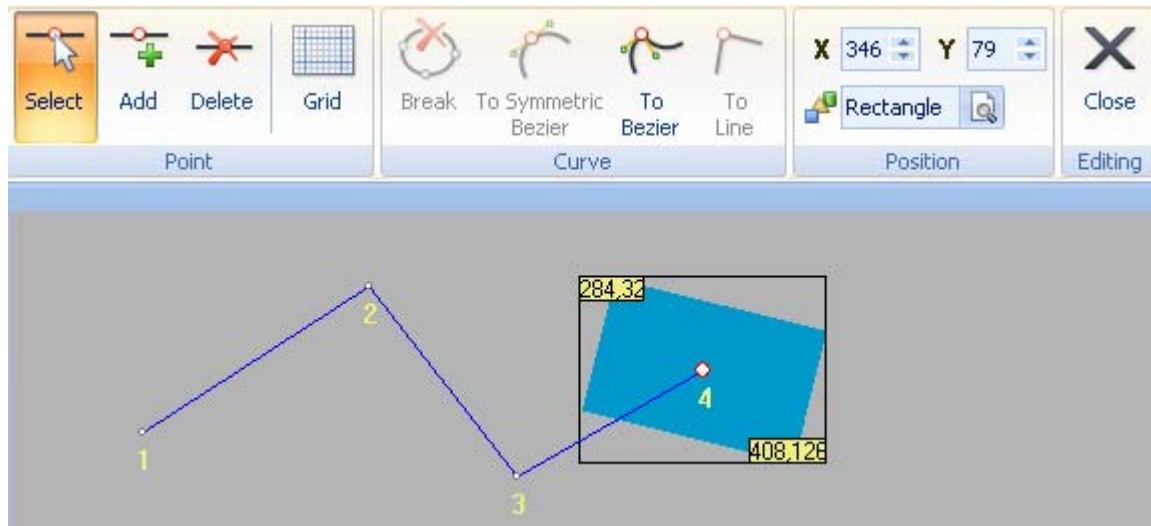
If you intend to use the animation path for more than one object, simply select each of the other objects in the Browse field once you have previewed the animation of the first object.

When you define an Animate action for an object, you can decide whether the animation path should be **fixed** or **relative** to the object:

•   In the first case, the object will move to the start of the animation path before following it.

•   In the second case, you can choose whether the animation path should *start from* the object's current position or *end at* the object's current position. The entire path is then displaced so its start - or end - point coincides with the object's position.

Please refer to "Animate" for a complete description of these settings.

Animation path properties

Once the animation path is inserted and selected on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on animation paths:

•   You can use the fields of the **Position & Size** group to change the position and size of the animation path object. See "Moving objects" and "Resizing objects" for more information.

•   You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to animation paths. Refer to the topic "Common properties" for a description of the properties that are common to all objects.

The Embedded Document object

The Embedded Document object lets you place a browser window within your project to display an external file. The file therefore appears as if it was embedded in your Mediator page.

The Embedded Document object is not available in documents of type HTML or Flash. See the topic "Creating a document" for more information on the different document types.

To display a URL or a file in a separate browser window, do not use the Embedded Document object. Use the Web Link action instead.

➢ Choose **Insert | Controls | Embedded Document** and drag out a frame for the Embedded Document browser on your page.

The Embedded Document dialog appears.
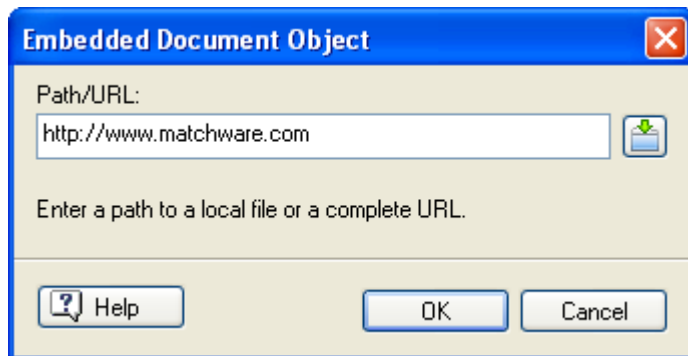
The Embedded Document object can open web sites, web-based documents and files that support the Active Document standard. Applications that support this standard include Adobe Acrobat®, Microsoft® Word, Microsoft® Excel, Microsoft® PowerPoint etc. You can also use this object to show pictures (online or offline), download items, etc.

Path/URL: Enter the address of a web site or a web document, or even a path to a file on your hard drive. You can also click the Browse button to select a file.

If you intend to export your project for distribution to other users, you should only enter the file name and extension, without its path. Then choose **Prepare | Additional Data Files** to add the file (and any other required file) to the project so that Mediator can include it when exporting your project. See "Adding data and program files" for more information.

Notes:

- Embedded Document objects are displayed in an Internet Explorer browser window. As Internet Explorer is part of Windows, the browser window will open on all systems, regardless of whether Internet Explorer is the default browser on those systems or not. If you are using the Embedded Document object to display commonly used files (e.g. Flash files, PDF files etc.), you can assume that the end user will have the plug-in required (e.g. Flash Player, Adobe Acrobat Reader etc.) installed in their browser. If you are using more unusual file types, it is advisable to supply a link from which the user could download the relevant plug-in.

- When the Embedded Document object is used to display a web site or web document, Mediator automatically connects to Internet using the end user's default connection settings, even if the Embedded Document object is hidden.

Embedded Document object properties

Once the Embedded Document object is inserted on the page, its **Format** tab opens at the right of the ribbon.
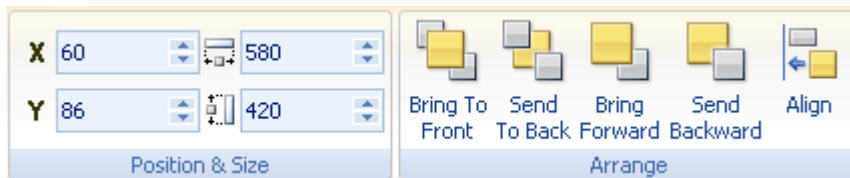
- You can use the fields of the **Position & Size** group to change the position and size of the Embedded Document object. See "Moving objects" and "Resizing objects" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to Embedded Document objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Embedded Document object, refer to the next topic.

Embedded Document event

 The **Document Complete** event, specific to the Embedded Document, is triggered as soon as the download of a web site or a web document is complete, or when the picture or document displayed in the object is fully loaded.

Embedded Document properties: Embedded Document tab

A click on the Embedded Document tab displays the following dialog.
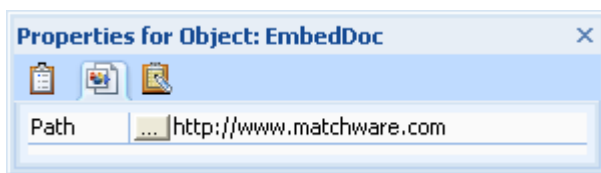
This tab only holds one field, the path of the site or document to display.

You may enter the address of a web site or a web document, or even a path to a file on your hard drive. You can also click the Browse button [...] to select a file.

If you intend to export your project for distribution to other users, only enter the name and extension of the file, without its path. Then choose **Prepare | Additional Data Files** to add the file (and any other required file) to the project so that Mediator can include it when exporting your project. See "Adding data and program files" for more information.

The HTML object

 The HTML object is used to embed HTML code seamlessly into your Mediator page.

It is only available in documents of type Standard or HTML. See the topic "Creating a document" for more information on the different document types.

For documents of type Standard, the HTML object has the same limitations as when you run an HTML page locally on your computer. You cannot for instance use any server-side scripting such as ASP and PHP in an HTML object in a document of type Standard.

The real strength of this object is in HTML mode, as it lets you inject any HTML code into your Mediator HTML project. This could be JavaScript, PHP or ASP code.

In order to use server-side scripting such as PHP and ASP, you will need to upload your exported project to a web server that supports server-side scripting.
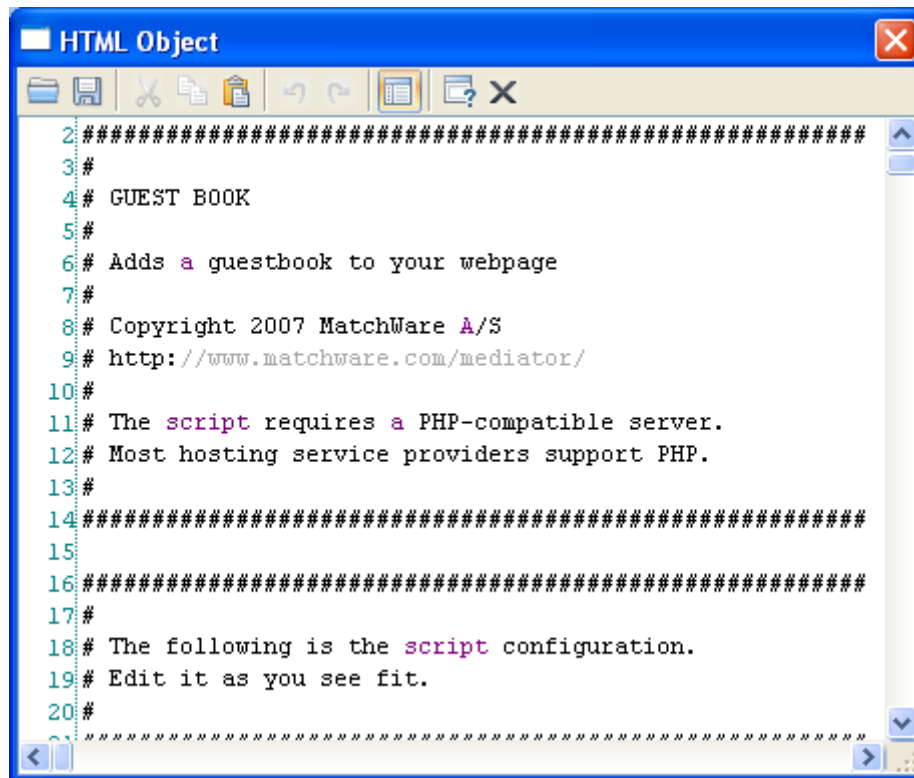
➢ To insert an HTML object on your page, choose **Insert | Controls | HTML Object**.

You have two choices:

- Clicking the upper part of the icon lets you create your own HTML object.

- Clicking the arrow in the lower part of the icon lets you browse and choose from a gallery of predefined HTML objects.

➢ Drag out a rectangular frame for the HTML object.

The HTML Object dialog appears.

You can resize this dialog if necessary by dragging one of its edges with the mouse.

You now have several options:

- You can open an existing HTML object, either predefined or custom, by clicking the **Open HTML Object** icon 📂 on the left. When you have found the object you want, click **Open** or double-click the object name to open it in the HTML Object dialog.

- You can paste code into the dialog.

- You can save any changes made, either to a predefined object or to a custom object, by clicking the **Save HTML Object** icon 💾. This lets you overwrite an existing custom object, or create a new one.

- You can also delete an existing custom object by right-clicking it in the Open HTML Object dialog or Save HTML Object dialog and choosing **Delete**.

Notes:

- The HTML object should only contain the contents of the <body> tag. Therefore, make sure you do not include anything outside the <body> tag when entering or pasting code.

- If you include PHP or ASP code in the HTML object, most web servers require that the web page is renamed with the correct extension (.php or .asp). You can do this by modifying the 'HTML extension' property of the page in its Properties dialog. See "Page properties: General tab" for more information.

HTML object properties

Once the HTML object is inserted on the page, its **Format** tab opens at the right of the ribbon.

- You can use the fields of the **Position & Size** group to change the position and size of the HTML object. See "Moving objects" and "Resizing objects" for more information.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to HTML objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects.

The Input object

Input objects can be used in many different ways, but they basically serve two purposes:

- Showing information to the user

- Getting information from the user

➢ Choose **Insert | Controls | Input Object** and drag out a rectangular frame for the input object on the page.

➢ (optional) Enter text to be displayed initially in the input object. If you need more than one line, press **Ctrl + Enter** at the end of the first line. When you have finished, press either **Enter** or **Esc**, or click anywhere outside the input object to leave editing mode.

The Input object has certain limitations when exporting to HTML or Flash. Please see "HTML restrictions" and "Flash restrictions" for more information.

Here are two typical examples of use of the Input object:

Showing information to the user: To show the current date, create an input object (for instance with the name Input01). Attach a Set Property action to the page event On Start. Select the object Input01 in the Object field of the Set Property action and the property Text in the Property field. Check the option 'Value as expression', and enter the expression @Date in the field.

You can also use Set Property to assign to the input object an integer or floating point value stored in a variable. Select the input object in the Object field and the property Value in the Property field. Check the option 'Value as expression', and enter the variable name in the field.

Getting information from the user: You might wish to obtain the user's name to use it elsewhere in your project. Prompt them to enter their name in an input object (for instance Input02). You can now access the user name entered in the input object by referring to its Text property. In this case it would be Input02.Text. You can assign this value to a variable or use it directly in any expression.

If you want to read a number from an input object, you can refer to its Value property (e.g. Input02.Value in our example).

You can also display the contents of an array in an input object, or assign the value of the input object to an array.

For more on variables, arrays and expressions, see "Using project variables" and Using expressions".

Input object properties

Once the input object is inserted on the page, its **Format** tab opens at the right of the ribbon.
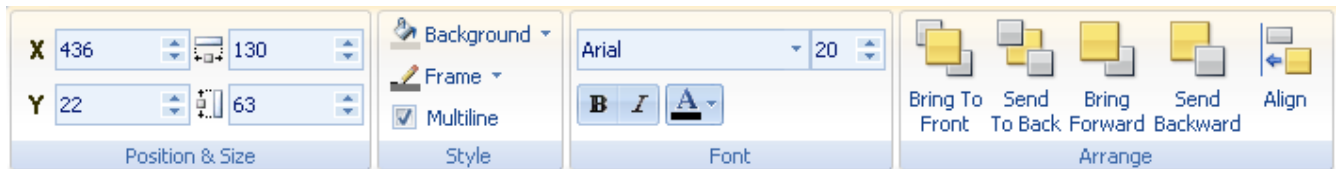
The Format tab contains the most common operations that can be performed on input objects:

- You can use the fields of the **Position & Size** group to change the position and size of the input object. See "Moving objects" and "Resizing objects" for more information.

- You can use the **Background** and **Frame** commands to change the visual aspect of the input object.

- The **Multiline** box specifies whether the input object is allowed to contain more than one line of text or not. Check it to let the user enter more than one line of text or to import an external text file into the input object.

- You can change the font and the attributes of the input object with the commands of the **Font** group.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and edit all the properties applicable to input objects. Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the Input object, refer to the next topics.

Input object events

Two events can be used to control what is entered in the input object.

- The **On Stop** event is triggered when the user presses the Enter key or clicks a different object. This allows you to perform an action based on the entire contents of the input object.

- By contrast, the **On Change** event is triggered every time the contents of the input object changes. This gives you total control on user input. You can for instance display an error message if an incorrect character is entered, restrict the number of characters allowed in the input object, etc.

Input object properties: Input tab

A click on the Input tab displays the following dialog.
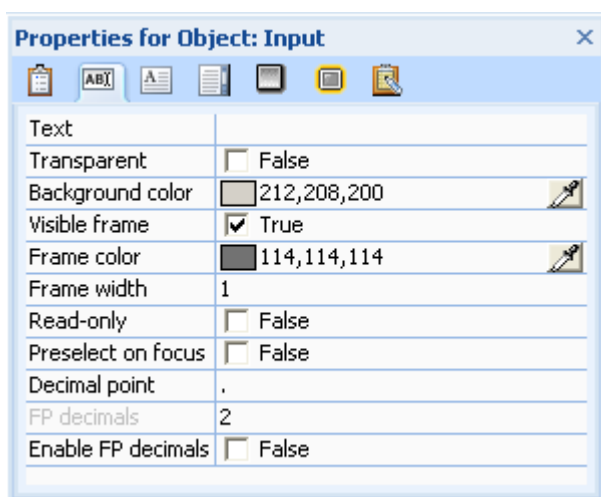
Text: This is a text property that holds the default contents of the input object.

Transparent: Check this option to make the background transparent. Unless the input object is "read-only" (see below), the background will become visible as soon as the input object is selected.

Background color: Use this field to choose a color for the background. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Visible frame: If you uncheck the box the input object will not have a frame.

Frame color: Use this field to choose a color for the frame.

Frame width: Use this field to set the width of the frame (if it is visible).

💡 *If you choose the same color for the background and for the frame, you can use the frame width to set a "margin" for the contents of the input object.*

Read-only: When this is checked, the end user can only read from the input object, not enter new values.

Preselect on focus: Check this option if you want the entire contents of the input object to be selected as soon as it receives the focus.

Decimal point: Use this field to change the character representing the decimal point in input objects used to display floating point values.

Enable FP decimals: Check this option to allow decimals after the decimal point.

FP decimals: Use this field to set the number of decimals after the decimal point.

Input object properties: Text tab

A click on the Text tab displays the following dialog.
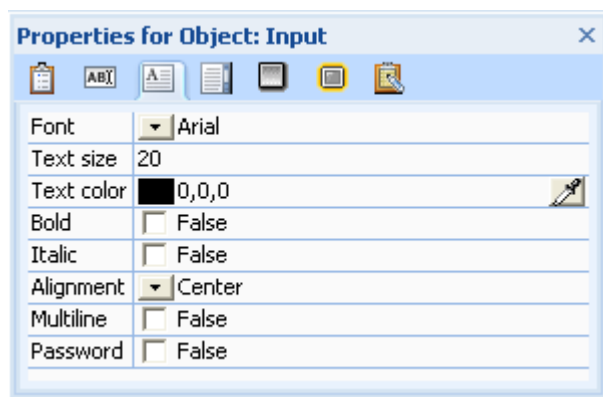
This dialog lets you set the appearance of the text in the input object.

Font: Here you set the font that will be used in the input object. Unlike the Text object, the Input object always uses the same font and formatting.

Text size: Use this field to set the font size.

Text color: Use this field to choose the font color. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Bold/Italic: Formats the input object text in bold or italic.

Alignment: Use this field to set the horizontal text alignment.

Multiline: Using this option, you can let the user enter more than one line of text or you can import an external text file into the input object.

Password: Allows you to hide the contents of the input object by replacing it with stars. You can only use this option when 'Multiline' is disabled.

Flash device fonts: This property is only available for documents of type Flash. Setting it to True lets you choose from the three built-in Flash fonts (Arial, Times New Roman, and Courier New). These fonts do not need to be embedded, which reduces the size of the exported file. It is advisable to always use device fonts when exporting to Flash.

Input object properties: Scroll tab

A click on the Scroll tab displays the following dialog.
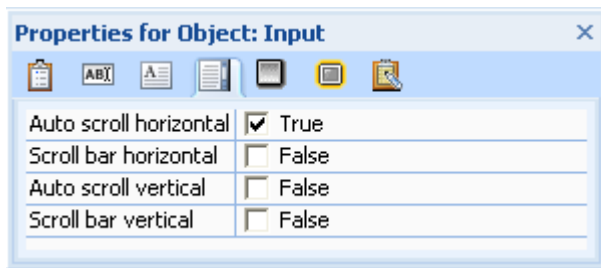
Auto scroll horizontal: If you use an input object to get input from the user but do not know how many characters to expect, you can select this option to enable user input to exceed the length of the input object, for instance if the user enters a path for a picture or text file.

If you are reading a multiline text (with the option 'Multiline' enabled in the Text tab), make sure this option is disabled. Otherwise the text will appear as one continuous line without any line breaks.

Auto scroll vertical: This is useful when you are using the input object to load an external text file. In this case the input object makes the necessary word-wrap adjustment in order to fit the text to the input object as well as possible.

Scroll bar horizontal - Scroll bar vertical: You may decide to force scroll bars vertically and horizontally. If you check one of these options, the scroll bars are added to your input object even when they are not needed.

You cannot change the size or color of the scroll bars as you can in a text object.

Important: Checking 'Scroll bar' and 'Auto scroll' not only means that scrolling is enabled, but also that you can load text files that are larger than the input object.

If you do not check 'Auto scroll', the input object will simply stop reading the text file once the input object is full and the rest of the text file will not be loaded.

The List Box object

The List Box object lets you create a list (for instance a list of cars, products, countries, etc.) from which the end user can select a particular option. Depending on the user choice, you can perform different actions, for instance display another page or open a web page.

The List Box object has certain limitations when exporting to Flash. Please see "Flash restrictions" for more information. It is not available in documents of type HTML. See the topic "Creating a document" for more information on the different document types.

➢ Choose **Insert | Controls | List Box** and drag out a frame for the list box on the page.

If you want to include a Contents page, an Index page or a History page in your project, or set up a text search covering the entire document, you can use one of the ready-made dynamic templates Contents, Index, History or Search. Just choose the relevant template when creating the page. For more information on these templates, see "Using the dynamic templates".

List Box properties

Once the list box is inserted on the page, its **Format** tab opens at the right of the ribbon.

The Format tab contains the most common operations that can be performed on list boxes:

- You can use the fields of the **Position & Size** group to change the position and size of the list box. See "Moving objects" and "Resizing objects" for more information.

- You can apply different predefined effects by browsing through the style gallery (click the **More** button at the bottom right of the gallery to see the full range of choices), checking their effect on your list box as you go. Once you have found an effect you like, just click it to apply it to the list box.

- You can use the **Background**, **Frame** and **Effects** commands to change the visual aspect of the list box.

- You can change the font and the attributes of the list box with the commands of the **Font** group.

- You can change its placement or align it differently using the commands of the **Arrange** group. See "Arranging objects" and "Aligning objects" for more information.

In addition to the Format tab, the **Properties** dialog lets you view and fine-tune all the properties applicable to list boxes. This is where you choose the type of list you want to create and also where you can enter your list data.

Refer to the topic "Common properties" for a description of the properties that are common to all objects. To learn more about the particular properties of the List Box object, refer to the next topics.

List Box event

The **On Select** event is specific to list boxes. It is triggered every time the user selects an item in the list box, enabling you to check what has been selected and to execute the appropriate action(s).

The List Box object also has two "invisible" properties: **SelectedIndex** and **SelectedString**.

They are used to read or set what is selected in the list box:

- **SelectedIndex** holds the entry number of the selection starting with 0 for the first, 1 for the next and so on.

- **SelectedString** holds the actual contents of the selection.

Example: If you have created a list of car brands in Listbox01 and the third in the list is Aston Martin, Listbox01.SelectedIndex will have the value 2 (since the list starts with 0, 1, 2) and Listbox01.SelectedString will have the value "Aston Martin".

You could for instance assign the entry number to a variable named 'Brand' by using an Assign action as follows:
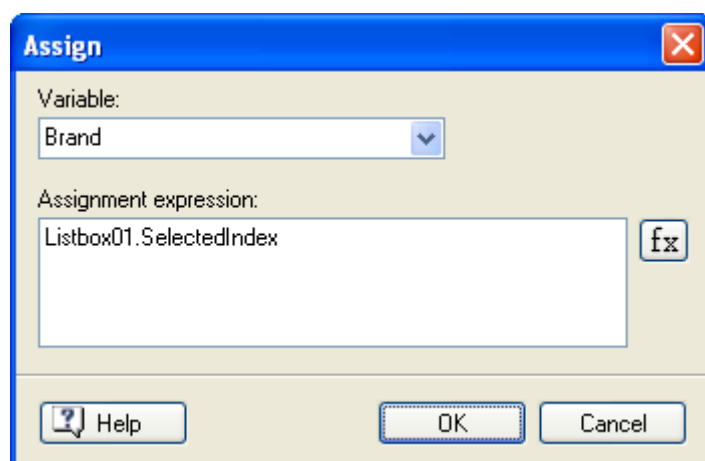
You can also use the Set Property action to set a selection. If for example you want to force the selection of the item Green in Listbox01 you would fill in the Set Property dialog as follows:
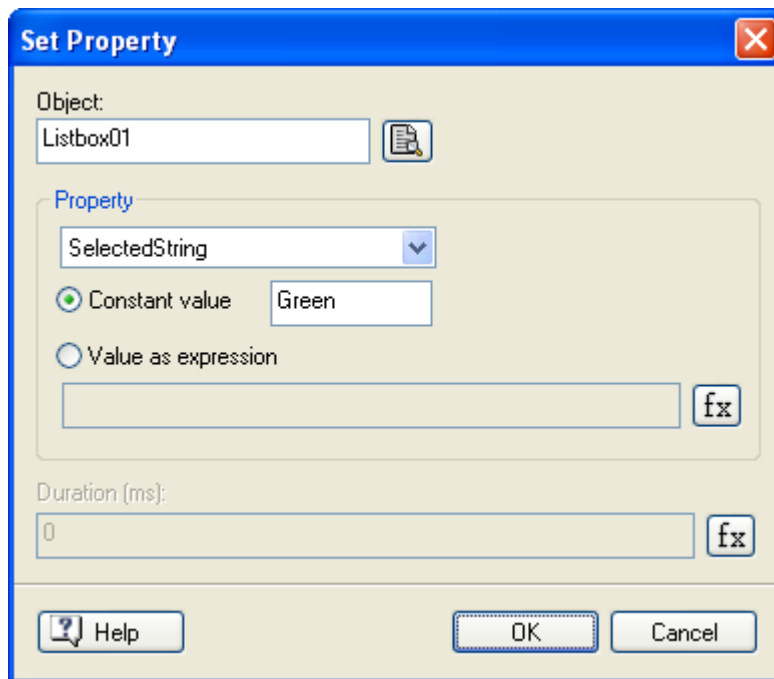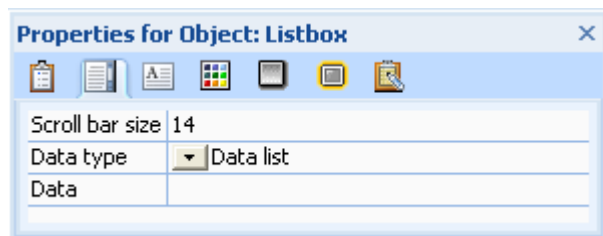
You can also display the contents of an array in a list box, or assign the value of the list box to an array.

For more on variables, arrays and expressions, see "Using project variables" and Using expressions".

List Box properties: List box tab

A click on the List Box tab displays the following dialog.

Scroll bar size: Here you set the width of the list box scroll bar, in pixels. A scroll bar is applied automatically to the list box if necessary.

Data type: This lets you choose the type of list box you require. There are five different types of list boxes:

- **Data list:** A list containing data that you enter manually in the list box, in the Data field. See the description of the Data field further down.

- **Page list:** A list of all the pages contained in the project (except the pages you excluded by disabling 'Use in Contents' in their Properties dialog). The names displayed in the list box are not the page names, but the descriptions entered in the Description field of their Properties dialog. See "Page properties: General tab" for more information.

- **Index list:** A list containing all the keywords you have added to the project. You can attach keywords to pages and objects. Refer to "Page properties: General tab" and "Object properties: General tab" for more information on how to enter keywords.

- **Search word list:** A list containing all the keywords you have added to the project, as well as all the text appearing in the project's page descriptions, text objects, headline objects and buttons. The text is only included if both the object and the page it belongs to have their 'Searchable' property set to True. You can use the Search Manager (**Review | Search | Search Manager**) to exclude "noise" words (the, and, it, etc.) from the search. Refer to "Using the Search Manager" for more information.

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- **History list:** A list containing all the pages that have been visited. This can be used to allow users to return to a page visited previously or to retrace their steps in large projects.

Mediator includes ready-made dynamic templates using the last four list box types, respectively called Contents, Index, Search and History, which you can select when creating a new page. For more information on how to use these templates, see "Using the dynamic templates".

Data: Use this field to create your own list. You must choose the data type 'Data list' in order to access this field. Separate each entry in the data list with a semicolon and no space, e.g. Alice;Bill;Lawrence;Dan
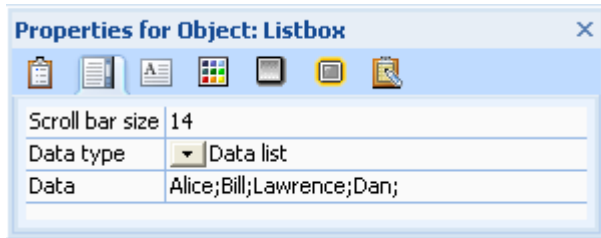
If you have a lot of data to enter, it may be more convenient to create your list in a text editor such as WordPad rather than typing it directly into this field. Type all your entries in a single line, separating them with semi-colons, then copy the line and paste it into the Data field. If you need to edit it at a later stage, just copy again the entire contents of the Data field into WordPad, edit it as required and paste it back into the field.

Possible uses

You can use your own data list to define page names (the real page names, not the descriptions) and go to the selected page - or define files (e.g. picture files) and assign these to particular objects.

You can also use list boxes to give the user any number of options on how to navigate in the project. This kind of list box is not as easy to set up as the predefined pages, but it gives you a lot of flexibility.

Every time you wish to present the user with a number of possible choices, a list box is the right solution.

List Box properties: Text tab

A click on the Text tab displays the following dialog.
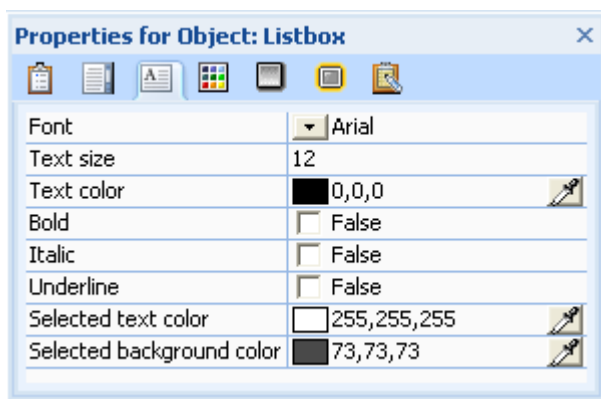
Font: Select the font you wish to use in the list box.

Text size: Use this field to set the font size.

Text color: Use this field to choose a font color. Click the color box on the left of the field or use the Pipette. See "Choosing a color" for more information.

Bold - Italic - Underline: Select to format the text as needed.

Selected text color: Use this field to choose the font color of the entry selected by the user in the list box.

Selected background color: Use this field to choose the background color of the entry selected by the user in the list box.

Flash device fonts: This property is only available for documents of type Flash. Setting it to True lets you choose from the three built-in Flash fonts (Arial, Times New Roman, and Courier New). These fonts do not need to be embedded, which reduces the size of the exported file. It is advisable to always use device fonts when exporting to Flash.

List Box properties: Color tab

A click on the Color tab displays the following dialog.
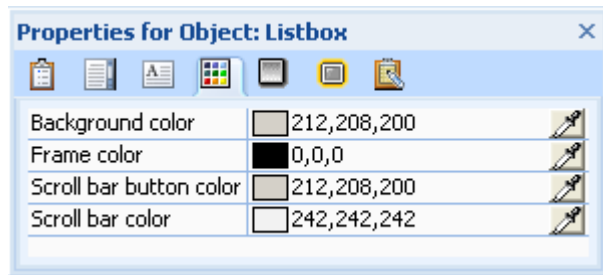
Background color: Use this field to choose a background color for the list box. Make sure that this color is in sharp contrast to that of the text (see List Box properties: Text tab).

Frame color: Use this field to choose a color for the list box frame. If you want an invisible frame select the same color as the list box background color.

Scroll bar button color - Scroll bar color: Use this field to choose colors for the scroll bar and its buttons. Remember that a scroll bar is added automatically if needed. The colors should therefore be colors that go well with the background color.

The ActiveX object

The ActiveX object is used to insert ActiveX controls in your project.

An ActiveX object is a program module that can perform a specific task like playing a video, displaying text, displaying pictures etc. As all Mediator objects, ActiveX objects have properties that can be manipulated. You can use some of the thousands of ready-made ActiveX objects available. You can also create your own. ActiveX objects can be made with different programming tools like Visual Basic and C++.

➢ To insert an ActiveX control in your project, choose **Insert | Controls | ActiveX**.

The Select ActiveX Control dialog appears.
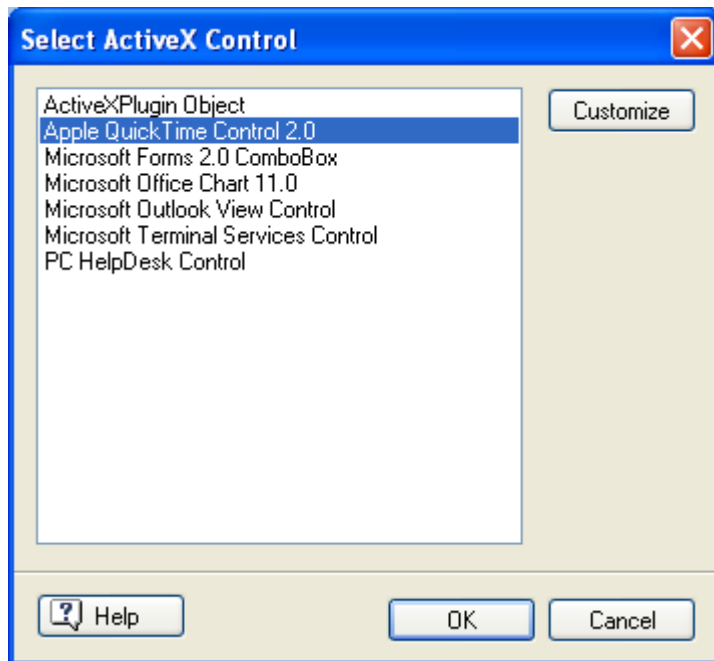
➢ (optional) Click **Customize** to access ActiveX controls that are not listed in the Select ActiveX Control dialog.

The Available Active Controls dialog appears.
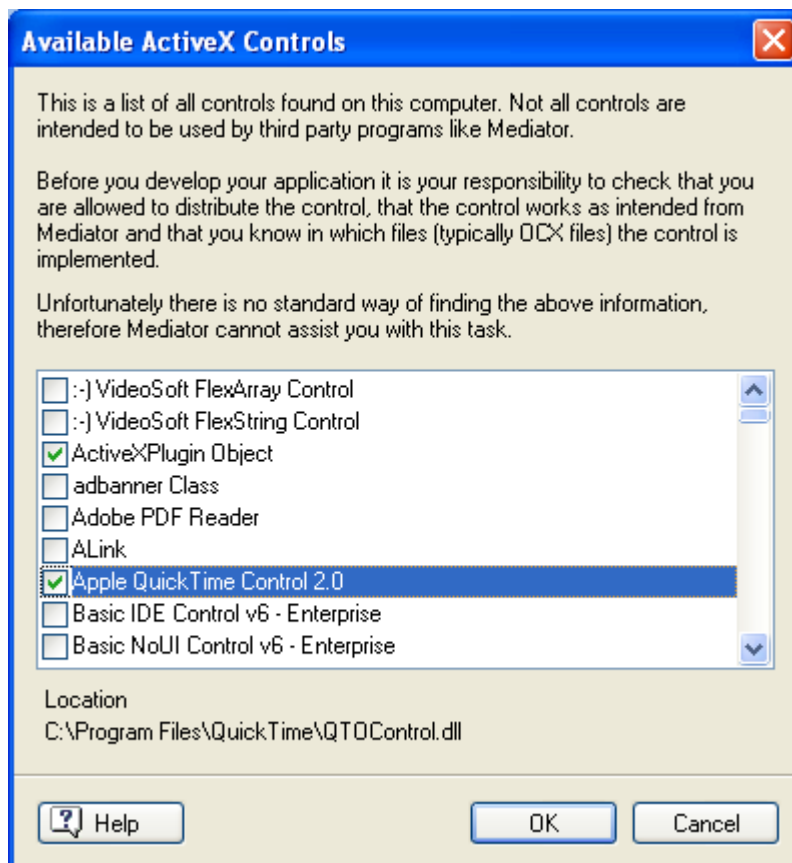
➢ Choose a control by clicking its checkbox and click OK.

The control is added to the Select ActiveX Control dialog.

➢ Click OK to validate and drag out a rectangular frame for the ActiveX object.

The Available ActiveX Controls dialog lists all the controls found on your computer. The fact that a control is listed does not mean that it is intended to work with Mediator or that you are allowed to distribute it. You are therefore advised to select only ActiveX controls that you are familiar with and are allowed to distribute. It is your responsibility to make sure that you do not infringe any copyright protecting ActiveX controls.

When you use script and ActiveX controls you also need to make sure that all the necessary files are included in the exported version of your project.

ActiveX object properties

As all Mediator objects, ActiveX objects have properties that can be manipulated from the standard Mediator Properties dialog.

Refer to the topic "Common properties" for a description of the properties that are common to all Mediator objects.

As ActiveX objects are different from each other, their specific properties are also different.
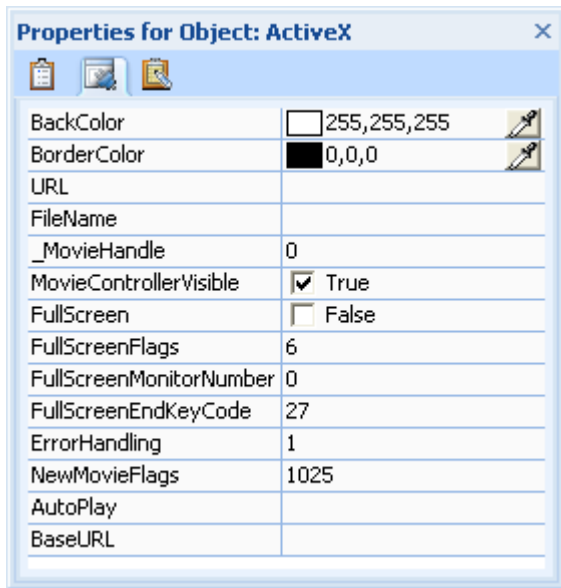
Many ActiveX controls also have their own ActiveX Properties dialog.

➢ To open an ActiveX Properties dialog right-click the object and choose **ActiveX Properties**.

ActiveX object event

The **ActiveX** event is unique to ActiveX objects.

It is a standard interface that returns a string value from the ActiveX control whenever it registers an event. Different ActiveX controls give different responses.

The return value from the ActiveX event is accessed through the control using the dot notation (e.g. ActiveX.Event).

In most cases, an If-Then-Else action is used to determine the type of the event.

Events

Events and actions are responsible for all the activity in a Mediator project.

An event is something that can happen to an object or a page. For instance an object may be clicked, the mouse pointer may be moved inside the object, the object may receive a right click and so on. An action is something that is triggered by an event. For instance, you may want to display another page or play a sound when a particular event is triggered.

All the events available for the page or object selected at any given point are listed on the left-hand side of the Events dialog. Events do nothing on their own, but must be combined with actions in the Events dialog.

For information about how to combine events with actions, see "Using events and actions".

The events available depend on the type of the document. Documents of type HTML or Flash do not have as many events as documents of type Standard. See the topic "Creating a document" for more information on document types. Please also refer to the "Mediator 9 feature list" for a complete list of all the events available for each type of document.

Most of the Mediator objects have the same events available to them, although some objects have specific events that are unique to them.

On the other hand, some events, such as On Page Ready, are only available for pages.

This topic list all the events available, dividing them in four categories:

- Events available on pages and objects

- Events only available on pages

- Events only available on objects

- Events only available on specific objects

Events available on pages and objects

Mouse Click

This event occurs when the left mouse button is clicked.

Mouse Click is the most frequently used event. It lets you detect a click on a button, a hypertext object and so on, and react to it.

Mouse Down

This event occurs when the left mouse button is held down on the object.

You can use the Mouse Down event to execute actions that should only be activated as long as the button is clicked, e.g. playing a sound, showing a picture, etc.

Mouse Up

This event occurs when the left mouse button is released after a Mouse Down event on an object.

It is mostly used to terminate an action started with Mouse Down.

Right Click

This event occurs when the right mouse button is clicked.

This is often combined with the Show action to open a menu, or other items that you would like to display.

Right Down

This event occurs when the right mouse button is held down on an object.

You can use the Right Down event to execute actions that should only be activated as long as the right button is clicked, e.g. play a sound, show a picture, etc.

Right Up

This event occurs when the right mouse button is released after a Right Down event on an object.

It is mostly used to terminate an action started with Right Down.

Mouse Double Click

This event occurs when the left mouse button receives a double click.

You can use it instead of a single click wherever a double click is commonly used to perform a particular action, for instance to show a picture in higher resolution, start counting or execute a 3rd party program from within Mediator.

Right Double Click

This event occurs when the right mouse button receives a double click.

Its use is similar to the Mouse Double Click.

On Start

This event occurs when an object such as a video or a resource starts or an input object is activated. It also occurs as soon as Mediator turns to a page. By contrast, the On Page Ready event is triggered later, once all the objects are fully displayed.

In general, you should use On Page Ready, but On Start can be used when you want to start music or sound while the page is being built.

On Stop

This event occurs when an object such as a video or resource stops or an input object is left. The Stop event also occurs when a page is stopped, i.e. when you leave the page.

On Stop is often used to show text when a video stops or play a tune when another tune or video stops.

Events only available on pages

On Page Ready

This event occurs after a Go to Page action as soon as all visible objects on the new page are displayed.

On Page Ready is often used to start a timeline, activate an input object or play music.

On Mouse Move

This event occurs whenever the mouse is moved.

Example: Your tradeshow presentation plays music to attract customers. When a customer moves the mouse, your presentation jumps to the introduction page.

On Key Down

This event occurs the instant a key on the keyboard is pressed.

For more information about how to handle keyboard events, see "Using keyboard events".

On Key Up

This event occurs when a key just pressed is released.

Events only available on objects

Move Into

This event occurs when the mouse is moved into a visible object.

Move Into is often used with the action Set Cursor in order to change the mouse pointer from an arrow to a hand. It can also be used with the Show action, for instance to show a descriptive label when the mouse is moved into a picture.

Move Out

This event occurs when the mouse is moved out of a visible object.

Move Out is often used to revert changes made with Move Into. It can for instance be used to change the mouse pointer back from a hand to an arrow, or to remove a descriptive label using the Hide action.

On Show

This event occurs when a hidden object is shown via the Show action.

Use On Show on an object which is being shown often and perhaps starts a timeline when it is shown.

Let us suppose that several different user actions can show an object, and you would like to play a sound every time it is shown: using On Show, you only need to place the Sound action on the object being shown instead of on all the objects that can trigger the showing.

 Do not confuse the On Show event with the Show action. You cannot place On Show after another event.

On Hide

This event occurs when a visible object is hidden via the Hide action.

On Hide has similar uses to On Show. If an object can be hidden by several different user actions, it is often convenient to set the required action directly on the object using On Hide instead of on all the objects that can trigger the hiding.

 Do not confuse the On Hide event with the Hide action. You cannot place On Hide after another event.

Drop On

This event occurs when another object is dropped on the object. Drop On is often followed by an If action that checks which object was dropped.

Drop On is great for interactive games and CBT material. Create online puzzles. Drop a flag on the corresponding country. Drop an accounting term in the correct balance sheet item. Build a house with different building blocks. And so on.

Collision

This event occurs when two objects hit each other during an animation. Both objects must have the property 'Collision detection' checked.

Use this event to play a sound when two objects collide, start another animation, explode the objects, etc.

Events only available on specific objects

Marker Hit

This event is unique to the Media Player object. It is triggered when a marker point (in the video or sound played in the Media Player) is encountered. To insert markers in a file you must use a special program such as the Media File Editor contained in the Windows Media Encoder. See "The Media Player object" for more information.

Use this event to show pictures or text at any given point during a piece of music or video. You can also start an animation, or any other action.

Document Complete

This event is unique to the Embedded Document object. It is triggered as soon as the web site, picture, or web-based document download is complete. See "The Embedded Document object" for more information.

Use this event to play a sound to inform the user of the completion of the download, start an animation as soon as download is complete, get perfect control of online timelines, etc.

On Select

This event is unique to the List box object. It is triggered every time the user selects an item in the list box so that you can check it and execute the appropriate action(s). See "The List Box object" for more information.

On Change

This event is unique to the Input object. It is triggered every time a character is entered or deleted on the input object. It gives you complete control of the contents of the input object as you can validate the contents every time a change happens. See "The Input object" for more information.

On Ready State

This event is unique to the Flash object. It is triggered every time a change occurs in the state of the Flash file. See "The Flash object" for a list of the possible states.

ActiveX

The ActiveX event is unique to the ActiveX object. See "The ActiveX object" for more information.

Actions

Standard

Go to Page (Standard tab)

The Go to Page dialog lets you go to another page in your project.

As soon as you drop the Go to Page action into the active field, the Go to Page dialog appears.
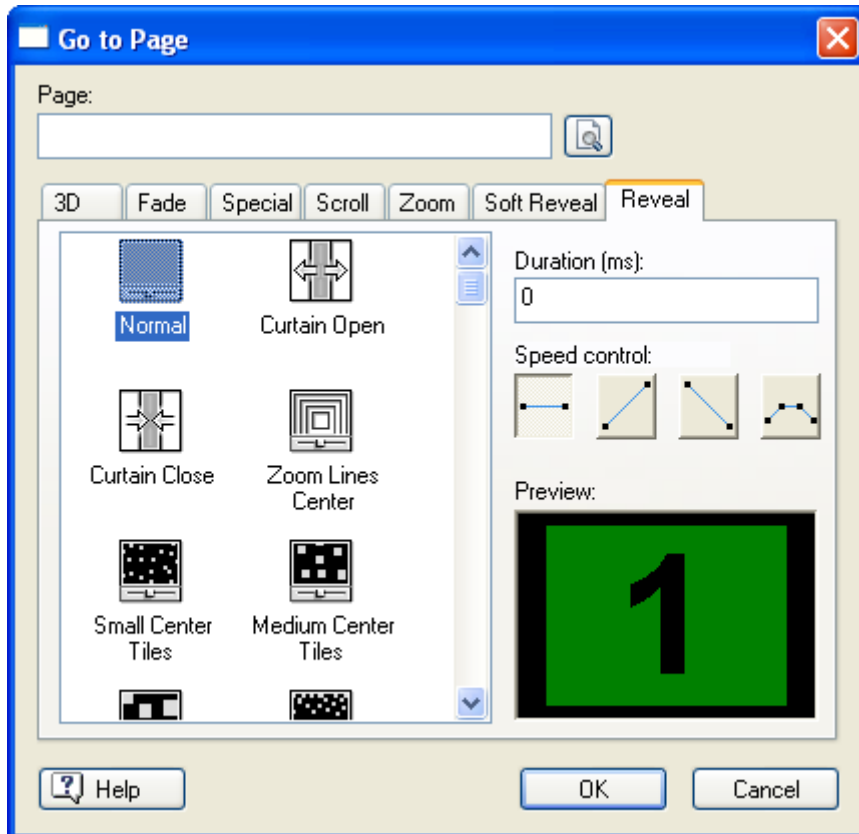
Every time you drag a Go to Page action into the active field, a page list opens. This page list contains all the available pages as well as some special pages described below. In this picture, we only have one normal page (Page1).

➢ Choose the page you require and close the dialog by clicking OK.

Double-clicking the page closes the Page list automatically.

➢ To select a different page in an existing Go to Page action double-click the action in the active field. The dialog opens and you can click the Browse button ▣ next to the 'Page' field to open the page list.

You can also drop the Go to Page action in the active field before you have actually created the page you wish to go to:

➢ To create a new page simply click New in the Go to Page page list.

New...	OK	Cancel
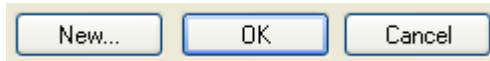
The new page is inserted in the Page list and selected as the page you wish to go to.

→ Advanced The 'Page' field also accepts variables. This allows you for instance to go to a page previously selected by the user from a menu of pages and stored in a variable. For more information on variables and expressions, see "Using expressions".

Using the special @pages

All the pages whose name start with '@' in the Go to Page page list have a special function.

See "Using the Page list" for more information about pages and sub-pages.

@Next: Goes to the next page at the same level in the Page list. If for instance @Next is attached to a head page, Mediator will turn to the next page placed at the same level as the head page, ignoring any sub-pages. If @Next is attached to a sub-page, Mediator will go to the next sub-page at the same level in the list, provided both sub-pages belong to the same parent page.

@Previous: Goes back to the page immediately preceding the current page in the Page list, at the same level (head page to head page, sub-page to sub-page, etc.). If for instance @Previous is attached to a head page, Mediator will turn to the previous head page, ignoring all sub-pages. If @Previous is attached to a sub-page, Mediator will go to the previous sub-page at the same level in the list, provided both sub-pages belong to the same parent page.

@PrePage: Goes back to the page visited last. Since this function can be used on different pages (head pages, sub-pages, sub-sub-pages etc.), you can skip through several levels of pages. When called several times, this function behaves as a history list, allowing you to return to the last pages visited in reverse order. The maximum number of past pages which can be revisited is 19.

@FirstChild: Goes to the first sub-page of the particular page, i.e. the first of the pages inserted as sub-pages of the page you are currently on.

@Parent: Goes from any sub-page to its parent page (where parent page means a page at the level immediately above, e.g. sub-page to head page, sub-sub-page to sub-page, etc.).

@PreviousParent: Goes from any sub-page to its previous parent page in the Page list.

@NextParent: Goes from any sub-page to its next parent page in the Page list.

Selecting a page turn effect

Once you have selected a page you return to the Go to Page dialog. The name of the page now appears in the 'Page' field. The rest of the fields are used to determine how you want the page turn to look, by selecting an effect and its settings.
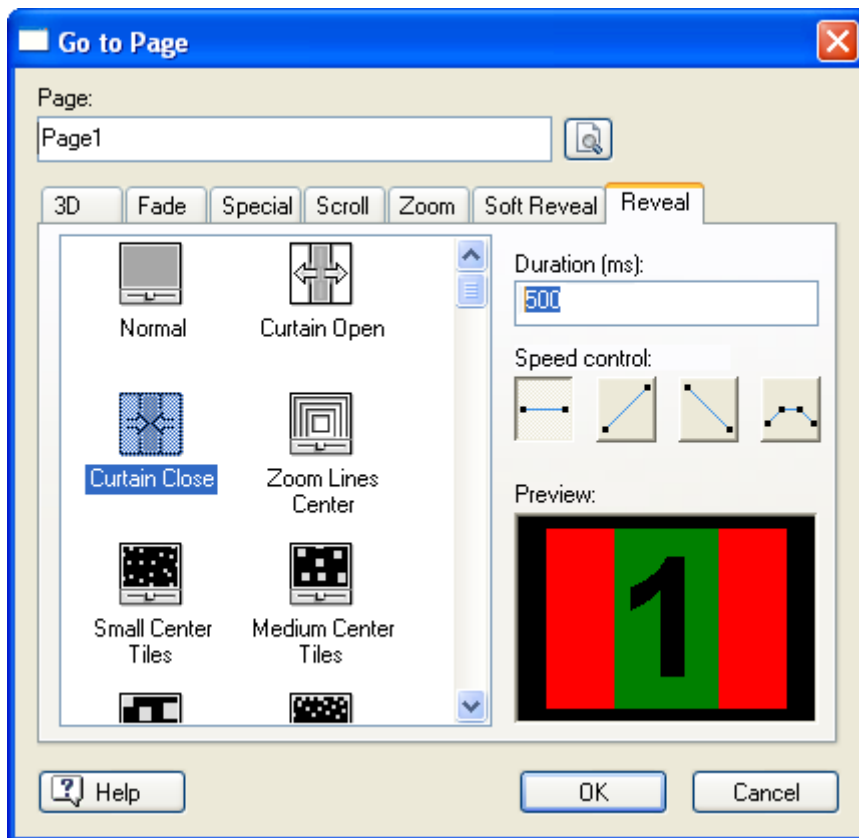
Effects are split into several different categories.

➢ Click one of the tabs to see all the different effects available in that specific category.

➢ Click an effect to see a preview of the page turn in the Preview window in the bottom right corner. To display the page without any effect, select Normal in the Reveal tab.

Notes:

- Mediator includes some real 3D effects for use in page transitions. These Direct 3D page transitions work on any computer with a graphic card that supports Direct 3D 9.0 (standard for most of today's PC's). If a Mediator project is shown on a computer without Direct 3D 9.0, a normal transition is used.

- HTML and Flash documents do not have as many page transitions available as documents of type Standard.

If your project frequently turns to the same page, it is a good idea to use the Random effect. The Random effect uses effects from all the categories except Reveal. It is located in the Special tab.

Duration: Here you set the exact length of time you wish the effect to last. The time is set in milliseconds to give you extreme precision (1000 milliseconds = 1 second). Each effect has its own default duration (varying between 200 and 2000 milliseconds), but you are free to specify the amount of time you wish to allocate for the effect.

Advanced The Duration field accepts variables and expressions. You can for example specify a variable instead of a fixed value so that when the page turn starts, the current value of the variable is read and used as its duration. You can change the variable during a page turn. This has no impact on the current page turn, but will apply to any subsequent page turn using that variable. For more information on variables and expressions, see "Using expressions".

Speed control: The four icons under 'Speed control' symbolize the acceleration of the effect.

You have four acceleration effects to choose from: None, Accelerate, Decelerate, Combination. Some effects may look better with one type of acceleration than another. Experiment to find out what kind of acceleration you prefer for different effects.

= No acceleration

 = Acceleration

 = Deceleration

 = Acceleration then deceleration

Creating your own effects

 This section is primarily aimed at advanced users. However, the principle of creating your own effects is very simple.

Imagine a gray-scale picture used to determine how the new page will be revealed: the pixels of the new page corresponding to black areas of the gray-scale picture will be revealed first, whereas those corresponding to white areas of the gray-scale picture will be revealed last. The pixels of the new page corresponding to gray colors in the gray-scale picture will be revealed according to the degree of darkness of these gray colors (i.e. pixels corresponding to darker areas being revealed before those corresponding to lighter ones). You set the time duration for the whole effect in the Go to Page dialog.

If for instance you create a gray-scale effect picture containing only black and white areas, the areas of the new page corresponding to the black areas of the gray-scale picture will be revealed immediately. Once the time you set in the Duration field (let's say 2000 milliseconds) has elapsed, the areas of the new page corresponding to the white parts of the gray-scale picture will be revealed.

If your effect picture is graded from black to white (black at the top, white at the bottom) the page turn will start at the top and progress downwards revealing more and more of the new page.

➢ To see some demonstration effects made with gray-scaled pictures, click the Reveal tab in the Go to Page dialog.

The gray-scaled pictures used for the effects can be found in a folder named Picture Effects in the Mediator installation folder. If you would like to create your own effects, take a look at some of the gray-scaled pictures in this folder and check the effects in Mediator (a picture has the same name in the folder as the effect it generates).

This way you will get a good idea of how a gray-scaled picture can look so that you can generate the exact effect you would like to create.

To make your own effect picture to use as a page turn effect in Mediator, follow these next steps:

➢ Create a new picture in your picture editing program as gray-scale, 8-bit (256 gray colors) or open an existing 8-bit, gray-scaled picture.

The size and the format are not relevant, as Mediator automatically converts the picture to the appropriate document size. The recommended format is the standard 4x3 format (320 x 240 or 640 x 480 pixels).

➢ Save the picture as JPG (e.g. myeffect.jpg) in the Picture Effects folder of the Mediator installation folder. You should compress the picture so that it is as small as possible. The quality of an effect picture is not what determines the quality of the effect.

Next time you start Mediator you will find your effect in the Reveal effect tab with a custom icon above it. Your effect will have the same name as your picture file.

 You can use alpha channels as effect pictures.

Show/Hide (Standard tab)

Show

 You use the Show action to make objects that are hidden become visible. This action is only relevant to hidden (invisible) objects.

When you drop the Show action in the active field the Show dialog appears.

This dialog is almost identical to the Go to Page dialog, which is described in detail in the topic on the "Go to Page" action.
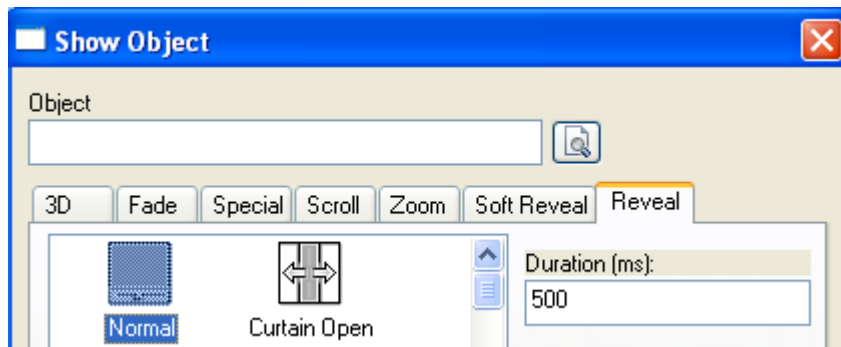
The main difference between the Show dialog and the Go to Page dialog is that instead of selecting a new page, here you select the object you wish to show.

➢ Click the Browse button ![icon] next to the 'Object' field to display the object list.

➢ Select the object you wish to show.
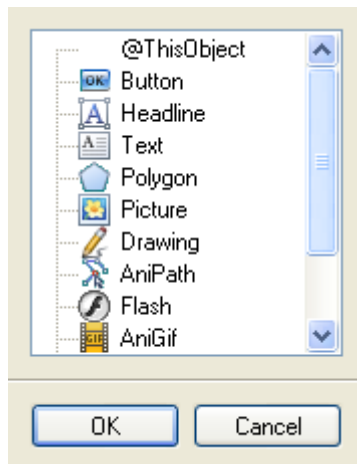
Most of the effects are the same as in the Go to Page dialog.

➢ Click an effect to see a preview in the Preview window.

➢ When you have decided on the effect and possibly modified speed and duration settings, click OK.

Hide

![icon] The Hide action does the opposite of the Show action: it hides currently visible objects. The Hide action is only relevant to objects that are visible at the start of your project or become visible during it.

When you drop the Hide action in the active field the Hide dialog appears. This dialog is identical to the Show dialog.

➢ Click the Browse button ![icon] next to the 'Object' field to display the object list.

➢ Select the object you wish to hide.

You have all the same effects available as in the Show dialog.

➢ Click an effect to see a preview in the Preview window.

➢ When you have decided on the effect, click OK.

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Do not confuse transparent objects and hidden objects. They are both invisible, but transparent objects (often used as hotspots) are still able to react to events whereas hidden objects cannot.

Timeline (Standard tab)

The timeline is ideal for executing actions in a specific sequence or after a given period of time.

As all other actions, the timeline is started by an event such as a mouse click. You can use the timeline to go to another page after a few seconds (very useful for automatic slideshows), or for more complex tasks such as showing and hiding objects while playing some music.

When you drop the Timeline action in the active field, the following dialog appears. It is very similar to the Events dialog.
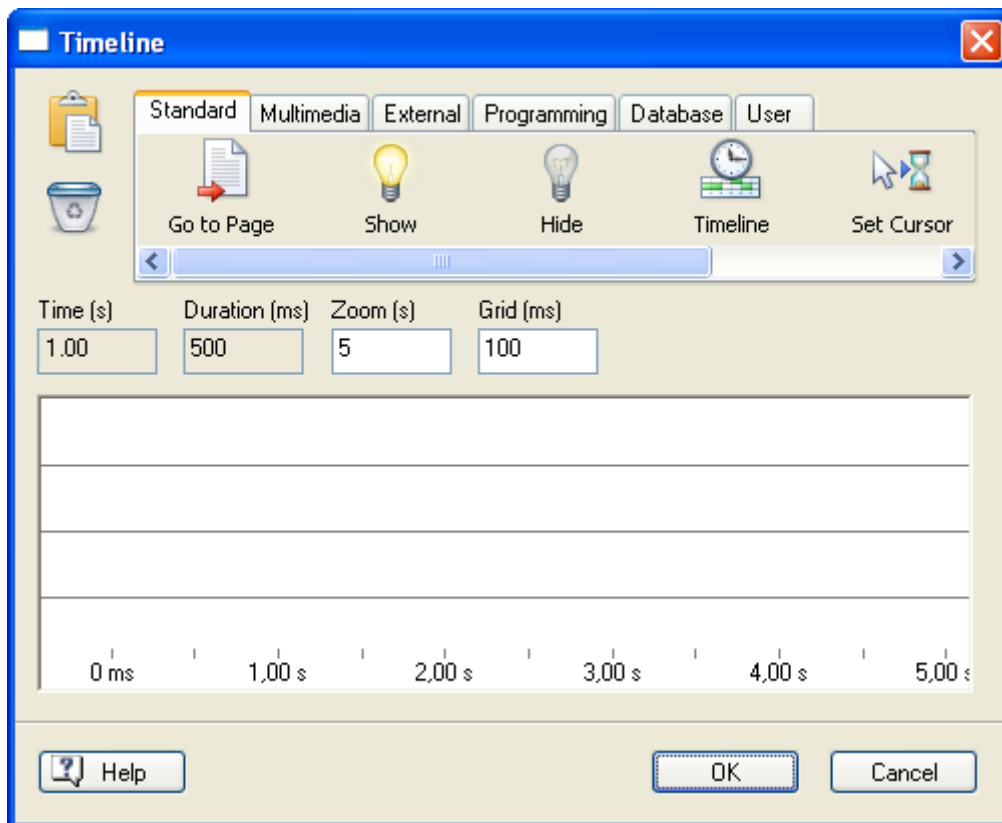
The horizontal bar at the top contains all the same actions as the Events dialog.

The same clipboard icon [icon] and wastebasket icon [icon] are shown on the left of the actions bar. Under the actions bar, there are four new time fields which we will describe shortly.

The large white field in the middle is the timeline. It contains several "tracks" to give you a better overview of the different actions that are placed on it. To see more tracks or expand the timeline, simply pull the edges and corners of the entire Timeline dialog (or use the scroll bars).

➢ To place an action on the timeline, drag it from the action field.

Just as in the Events dialog most of the actions open their own dialog.

➢ Fill in the dialog and click OK to return to the timeline.

Where applicable (Go to Page, Show/Hide etc.), the timeline track is shaded to represent the time you have allocated for the action. Some actions do not have a duration.
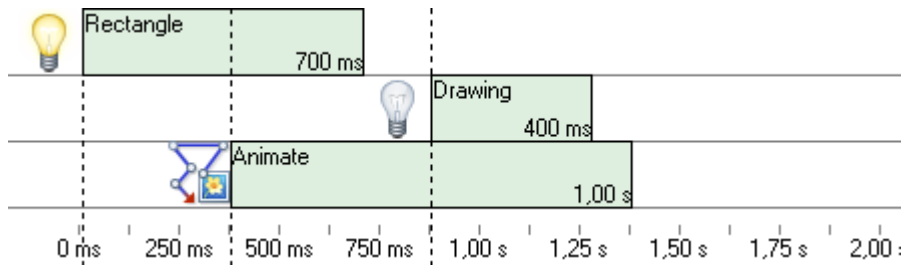
When you drag a Sound action on the timeline, a wave form appears to represent the sound. This makes it very easy to synchronize other actions with the sound. You can for instance record a speech and add visual effects later, using the wave form as a guide of where to place the actions for perfect synchronization. This technique works best for sounds that are reasonably short, with easily identifiable gaps and beats.
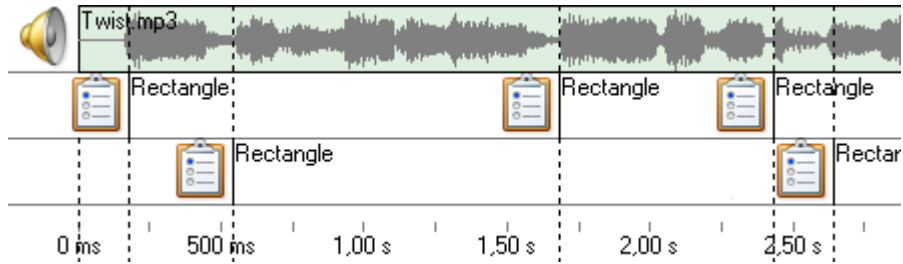
➢ To change any of the settings of the action later, simply double-click its icon to open the action dialog.

The four time fields above the timeline help you place your actions very precisely.

Time (s): This field indicates the delay after which the selected action is executed.

Duration: This field shows the time the selected action should take.

→ Advanced The Duration field accepts variables and expressions. You can for example specify a variable instead of a fixed value so that when the action starts, the current value of the variable is read and used as its duration. You can change the variable during the execution of an action. This has no impact on the action currently running, but will apply to any subsequent action using that variable. For more information on variables and expressions, see "Using expressions".

Zoom: In this field, you decide how much (or little) you want to see of the timeline (in milliseconds, 1000 ms = 1 second). Increasing the Zoom factor will give you a better overview of the timeline when it contains many actions. When trying to synchronize actions with a sound on the other hand, lowering the Zoom factor will allow you to see the wave form in more detail.

Grid: This sets the accuracy of the timeline (in milliseconds).

- Example 1: If Grid is set to 100 (milliseconds) you can place actions on the timeline at intervals of 0.1 second (100 milliseconds = 0.1 second). This means that you can place an action at 1.20 seconds or 1.10 seconds, but not at 1.15 seconds.

- Example 2: If Grid is set to 10 (milliseconds) you can place actions on the timeline at intervals of 0.01 second (10 milliseconds = 0.01 second).

The grid is very useful when you want to start several actions at exactly the same time or place actions one after the other with exactly the same time interval between them.

When synchronizing actions with a sound, a low grid value will help you position the actions more precisely.

When actions are placed at the same time mark, they are executed in random order. Leave a small gap between the actions if the order of execution is important.

Selecting actions

- To select an action on the timeline, click it once.

- To select several actions, press and hold down the Ctrl key while you click each action.

Moving actions

➢ To move one or more actions on the timeline, click them to select them, then drag them to the desired point on the timeline (let go of the Ctrl key but hold down the left mouse button while moving the actions).

Changing the duration of an action

➢ Select the action on the timeline, then place the mouse pointer over the end of the action's shaded track until it changes to an arrow.
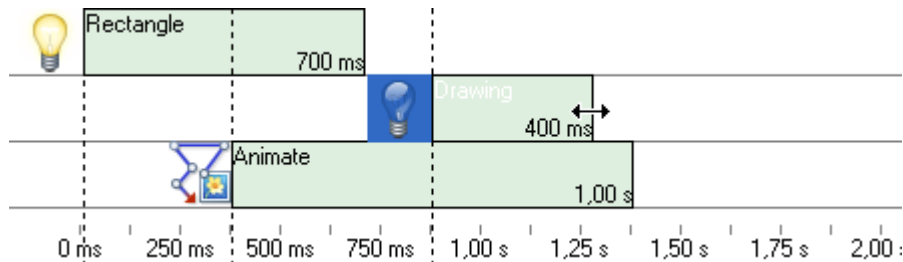
➢ Drag the track edge in the required direction.

To change the duration of several actions in one go, select them and drag the edge of one of them.

You can also of course double-click the action and change its duration from within its dialog (e.g. Go to Page, Show/Hide etc.).

If you have used a variable instead of a fixed value in the Duration field of the action, you can also change its duration by changing the value of that variable.

Cutting, copying or deleting actions

- To **cut** actions from the timeline and place them on the clipboard, first select the actions you wish to cut as described above and drag them to the Clipboard icon in the top left corner of the timeline while holding the Shift key down. Let go when the pointer is on top of the Clipboard icon.

  You can also right-click the selected actions and choose **Cut** in the local menu.

- To **copy** actions, just drag them to the Clipboard icon (the shape of the mouse pointer changes to a + sign). The actions remain on the timeline, but are also placed on the clipboard where they will stay until you replace them with other actions.

  You can also right-click and choose **Copy** in the local menu.

- To **delete** selected actions, press the Delete key or drag them to the wastebasket .

  You can also right-click and choose **Delete** in the local menu.

  When you delete actions, they are removed from the timeline and not placed on the clipboard. You can restore deleted actions by choosing **Undo** in the Quick Access Toolbar.

Pasting actions

➢ Move the mouse pointer to the Clipboard icon , click and drag the actions back onto the timeline (the shape of the mouse pointer changes to a + sign).

  You can also right-click the timeline and choose **Paste**.

Saving actions in the User tab

As the Windows clipboard, the Timeline dialog clipboard is only useful as temporary storage. Anything stored on the clipboard is lost when something else is placed on it or when the computer is shut down.

You can however save actions permanently in the User tab of the Timeline dialog. To do this:

➢ Open the User tab at the far right of the Timeline dialog.

➢ Drag the selected actions to the User tab.

To re-use these saved actions:

➢ Open the Events or Timeline dialog of the page or object you are programming.

➢ Drag the actions from the User tab into the active field.

Set Cursor (Standard Tab)

This action lets you change the shape of the mouse pointer.

When you drop the action in the active field the Set Cursor dialog appears.
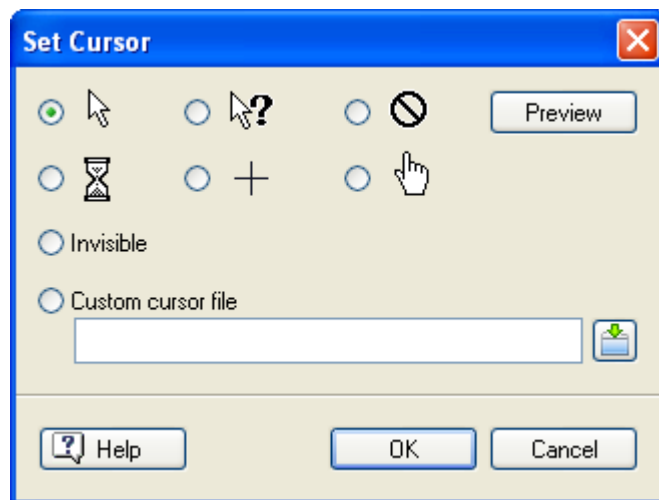
Invisible: The pointer disappears.

Normal: The normal pointer. Use this to restore the original appearance of the pointer.

Help: Turns the pointer into a question mark pointer.

Stop: Turns the pointer into the stop pointer (for instance to highlight areas that do not react to mouse clicks).

Wait: Turns the pointer into the hourglass pointer.

Cross: Turns the pointer into a cross pointer.

Hand: Turns the pointer into the pointing hand pointer.

You can also choose a **Custom** cursor file (*.cur or *.ani):

➢ Click the Browse button to access the Open dialog and select your pointer.

Only the Normal and Hand pointers are available when working with HTML or Flash projects. In these exports, the pointer returns to its standard shape after each page turn.

Move Cursor (Standard tab)

This action lets you move the mouse pointer to any point on the screen.

When you drop the action in the active field the Move Cursor dialog appears.
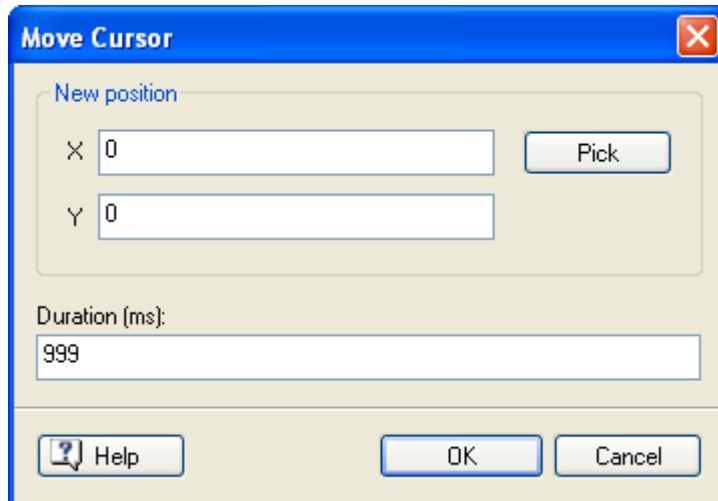
In the **X** and **Y** fields you set the coordinates of the position you wish to move the pointer to. It is however often easier to use the Pick tool (see below).

Duration: Here you set how long (in milliseconds) you would like the pointer move to last. The speed of the pointer move depends on how far the pointer has to travel when the action is started.

→ Advanced The Duration field accepts variables and expressions. You can for example specify a variable instead of a fixed value so that when the action starts, the current value of the variable is read and used as its duration. For more information on variables and expressions, see "Using expressions".

When you click the **Pick** button the pointer changes to a cross. Click the position on the screen where you would like to move the pointer. The X and Y values will be set automatically to that position.

Mediator ignores all other events and actions while the pointer is being moved.

Exit (Standard tab)

In the exported version of your project, Exit closes (ends) it.

In test mode, you are returned to design mode.

Multimedia

Set Property (Multimedia tab)

→ Advanced

The Set Property action lets you change one of the properties of any given object at runtime.

When you drop the Set Property action in the Events dialog active field, the following dialog appears:
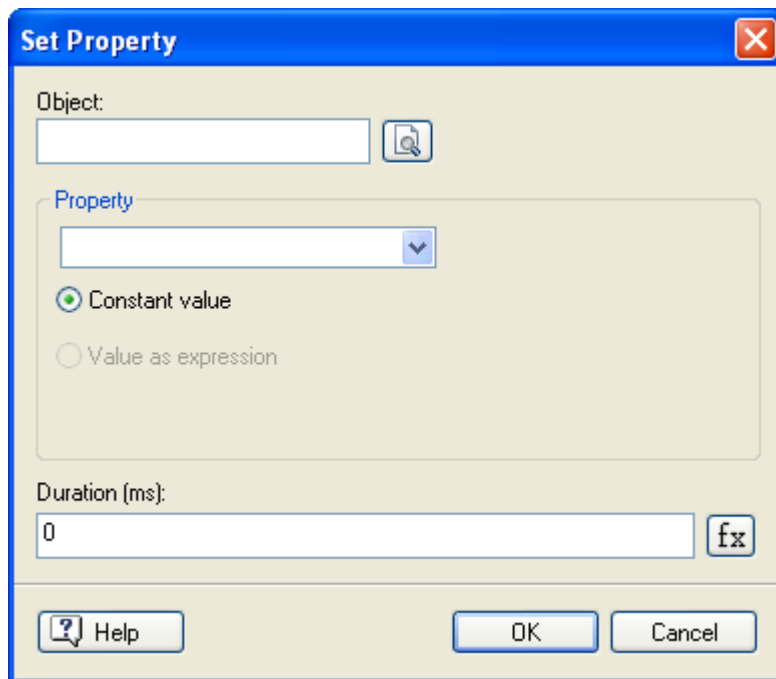
Object: Select the object whose property you would like to change.

Property: Select the property required (click the arrow to choose from a list of all the properties applicable to the object).

Constant value: Most properties are set using numbers, e.g. Width and Height, and you may enter the new value in this field. If you have selected a color property (color, glow, shadow) a color button appears:
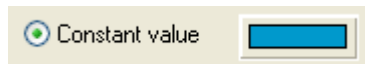
➢ Double-click the button to open the standard Color dialog and select the preferred color.

Value as expression: You can use this field to enter the new value of the property as a variable or expression. You can refer to one of the selected object's own properties or to another object's property using the *Object.Property* notation, where *Object* is the name of the object and *Property* the name of the property.

The **Expression** button fx helps you create expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

Example 1: To make the width of one object (Picture) the same as that of another object (Rectangle) fill in the Set Property dialog as follows:
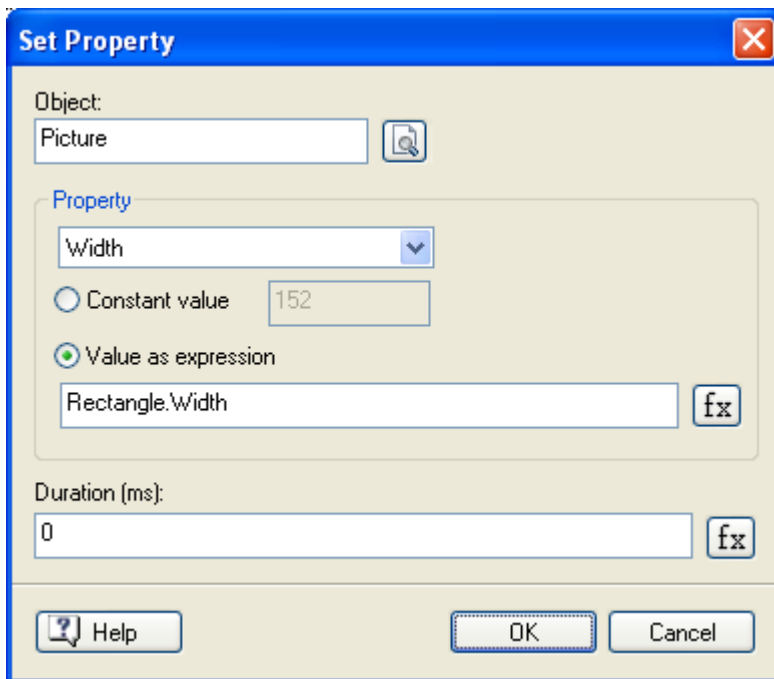
Example 2: To make the height of one object (Rectangle) the same as the width of another object (Picture) fill in the Set Property dialog as follows:
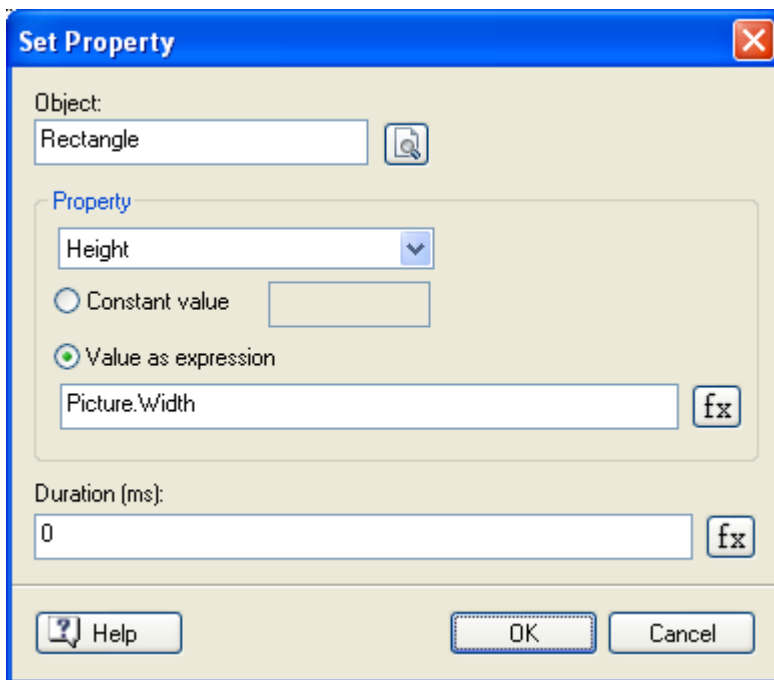
Example 3: To change the value of a property repeatedly every time the user clicks a button, enter: *Object.Property* + *value* in the 'Value as expression' field (where *value* can be a fixed value, a variable, or the content of an input object).
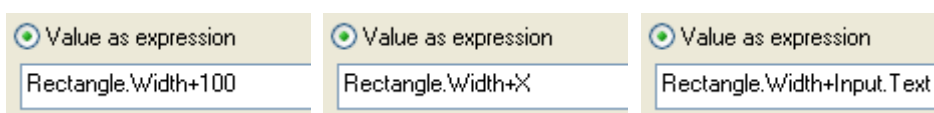
Duration (ms): Here you set the exact length of time you wish the property change to last. The duration is specified in milliseconds (1000 milliseconds = 1 second).

The Duration field also accepts variables and expressions. You can for example specify a variable or the content of an input object instead of a fixed value.

Duration (ms):	Duration (ms):	Duration (ms):
2000	Time	Input.Text
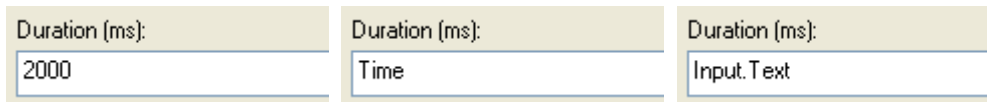
When the action starts the current value of the variable or expression is evaluated and used as its duration. You can change the variable or expression during the execution of the action. This has no impact on the action currently running, but will apply to any subsequent action using that variable.

Example: If you want to move an object to a different X position (stored in a variable) and want to make sure that the speed is always the same, regardless of how far the new X position is from the current position, you could use the difference of the two X values as duration (multiplying it or dividing it by an adequate factor if necessary).

Changing several properties

Each Set Property action lets you change one property of any object on your page.

If you wish to change more than one property on an object, simply drag in more Set Property actions, and select the same object, but different properties.

You may also consider using the Animation Track action. This lets you select all the properties you need in one action.

If you execute several Set Property actions with a set duration on an object, and then execute a Set Property with a zero duration on that same object the Set Property actions in progress are ended. To avoid stopping the existing actions, set the Duration to 1 millisecond.

Animate (Multimedia tab)

The Animate action lets you move objects across the screen.

Before the animation can happen, you need to define the animation path that the object must follow. See "The Animation Path object" for more information.

As soon as you drop the action in the active field the following dialog appears:

Object to animate: Here you select the object you wish to animate. Click the Browse button and select the object from the Object list.

Animation path: Here you select the animation path the object should follow. Click the Browse button and select the animation path from the Object list. This assumes that you have already created an animation path for the object to follow. If you have only created one animation path it will automatically appear in this field.

Duration: Here you set the duration of the entire animation, in milliseconds (1000 milliseconds = 1 second). The time is independent of the 'Speed control' described below.

→ Advanced The Duration field accepts variables and expressions. This means that you can specify a variable instead of a fixed value in this field so that then the animation starts, the value of the variable will be read and used as its duration. Changing the value of the variable during an animation only affects subsequent animations that use the variable. For more information on variables and expressions, see "Using expressions".

Under the Duration field, you have four radio buttons. Each one selects a different type of animation. The type you choose determines the starting point for the animation:

- **Normal:** The path followed by the object is entirely determined by the animation path. When the animation starts, the object "jumps" from its current position to the first point of the animation path. It then follows the animation path until it reaches its last point. Since the jump often looks unnatural, this option is normally used only when the object is initially hidden. You can check 'Auto show object' to automatically show a hidden object when the animation begins.

- **Use object as first animation point:** Rather than starting at the first point of the animation path, the animation starts at the current position of the object. In effect, the first point of the animation path becomes the second point of the animation. The object starts by going from its current position to the first point of the animation, then continues along the path. The time set in the Duration field covers the moment when the object starts moving to the moment when it reaches the final point in the animation path.

- **Fly to object position:** Here the position of the animation path is determined by the initial position of the object. The entire animation path is displaced, so that its end point coincides with the initial position of the object. You can use this option to make an object "fly" into the screen by following the animation path until it reaches its initial position. This option is normally used when the object is initially hidden.

- **Fly from object position:** Here again the animation path is relative to the object's initial position. The entire animation path is displaced so that its start point coincides with the initial position of the object. This option is useful to make objects "fly" off the screen. It is most commonly used when the object is visible before the animation starts.

Reverse: Check this option to make the object follow the animation path from its last point to its first point. This is convenient if you want to animate an object back and forth along a complex line or curve, or to animate several objects from both sides of the screen along the same type of path.

Repeat: This option lets you restart the animation as soon as the object reaches the end of the animation path.

Auto show object: If this box is checked, hidden objects are automatically shown when the animation starts. This is useful when you have several hidden objects that you want to animate one by one, or to animate an object along an animation path that starts outside the screen.

Follow animation path angle: Check this option to make the animated object rotate automatically in the same direction (angle) than that of the animation path at any point. The object will therefore orientate itself in the direction of the animation path as it follows it. In most cases, this makes the animation look more natural.

Speed control: This group of controls let you set the acceleration of the animation. By default, the animation speed is constant.
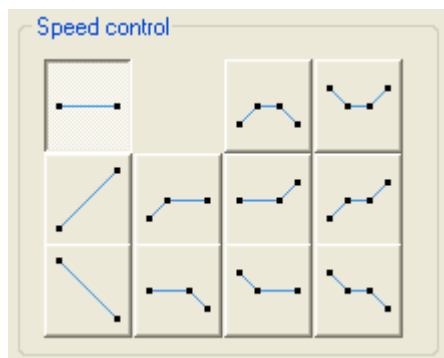
The speed buttons represent the object's acceleration and deceleration during the animation.

- A horizontal line means that the speed does not change.

- An upward pointing line means that the object accelerates.

- A downward pointing line means that the object decelerates.

➢ Click the speed button that gives you the best appearance for your animation.

Animation Effect (Multimedia tab)

 The Animation Effect action lets you animate an object across the screen while splitting it up in small pieces, referred to below as "bricks".

As soon as you drop the Animation Effect action in the active field the Animation Effect dialog appears. Its top half is shown here:
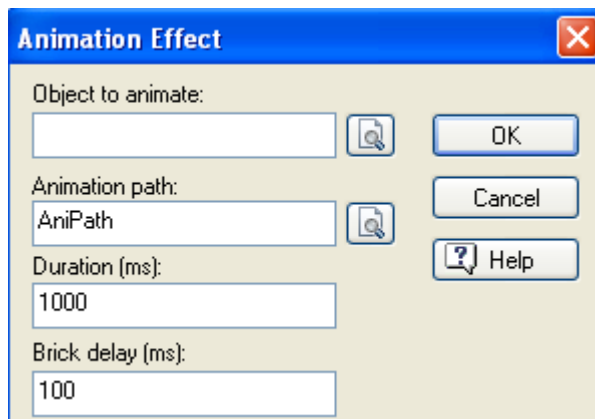
Object to animate: Here you select the object you wish to animate. Click the Browse button and select the object from the Object list.

Animation path: Here you select the animation path the object should follow. Click the Browse button and select the animation path from the Object list. If you have only created one animation path it will automatically appear in this field.

Duration: Here you set the animation time for each brick. You set the value in milliseconds (1000 milliseconds = 1 second). The time is independent of the speed control.

The Duration field accepts variables and expressions. This means that you can specify a variable instead of a fixed value in this field so that then the animation effect starts, the value of the variable will be read and used as its duration. Changing the value of the variable during an animation effect only affects subsequent animations effects that use the variable. For more information on variables and expressions, see "Using expressions".

Brick delay: Each brick is animated along the animation path. Here you set the delay between each brick in milliseconds.

Defining the brick size

The options shown in the 'Brick size' part of the dialog vary depending on the object being animated.

Text-based objects

If you have selected a text-based object (headline or text object), the 'Brick size' part of the dialog will look like this:
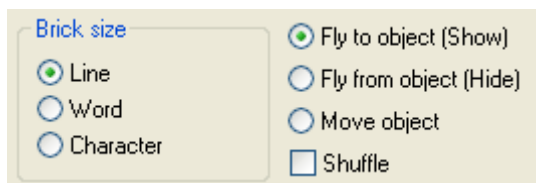
Line: Click to animate the selected text object one line at a time (this only works with text objects made up of several lines as a headline consists of one line only).

Word: Click to animate the selected text-based object one word at a time.

Character: Click to animate the selected text-based object one character at a time.

To show one character at a time without animating the characters, create an animation path with just one animation point. In the Animation Effect dialog select 'Character' and 'Fly to object'.

Glow and shadow are disabled while the animation effect is running. As soon as the animation effect is complete glow and shadow are applied.

Other objects

If you have selected any other type of object or group (not text-based), the 'Brick size' part of the dialog will look like this:
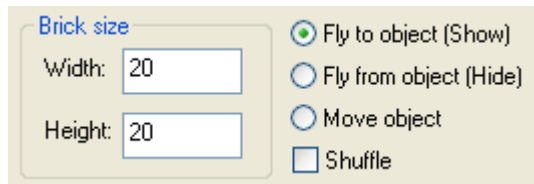
When the animation effect is executed the selected object or group is divided into bricks and each brick is animated along the selected animation path. Here you select the size of the bricks that your object or group will be divided into.

Width: Sets the width of the bricks in pixels.

Height: Sets the height of the bricks in pixels.

Unless you select the Shuffle option, the first brick shown is the top left corner brick, the second brick shown is the second brick in the top row, then the third in the top row, and so on until the last brick in the top row. Then the first brick in the second row, second brick etc.

Division of objects into bricks

The number of pixels entered in 'Brick size' is used to divide the object into bricks, going from left to right, top to bottom. If however the object size values are not exactly divisible by the brick size values (and therefore do not result in whole number values), the bottom row bricks and/or right-hand side bricks will be larger than the other bricks.

Animation effects look best when all bricks are the same size. Therefore it is often a good idea to take the time to calculate a height and width that will work well for the specific object:

- Check the size of the object in its Properties dialog (Height and Width in the General tab).

- Choose an appropriate size for your bricks, by finding a number that your object is divisible by.

- Enter this brick size in the Animation Effect dialog.

Defining the effect

On the right-hand side you define the animation effect.

Fly to object (Show): Check this option when you wish to show an invisible object or animate an object that is located outside the page. The object is divided into the specified bricks and animated one brick at a time. When the animation is over the object remains shown.

Fly from object (Hide): Check this option when you wish to hide a visible object or animate an object off the page. The object is divided into the specified bricks and animated one brick at a time. When each brick animation is over the brick is hidden.

Move object: Check this option when you wish to move a visible object on the page. The object is divided into the specified bricks and animated one brick at a time. When the animation is over the object remains shown.

Shuffle: When this option is unchecked the bricks are animated one by one starting from the top left corner or with the first letter, word, or line. Check it to animate the bricks randomly.

Defining the speed

The bottom of the dialog lets you set the speed of the effect, exactly as with the Animate action. See "Animate" for details.
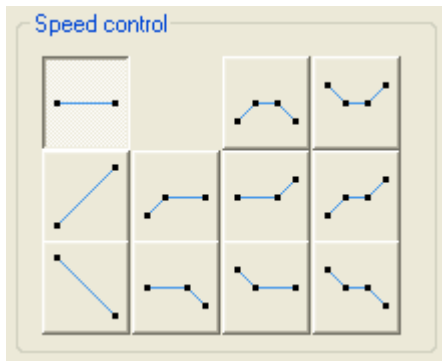
Calculating the overall duration

The total duration of the animation effect can be calculated as follows:

```
[(number of bricks - 1) x brick delay] + Duration
```

Animation Track (Multimedia tab)

 The Animation Track action gives you complete control over object positioning during an animation. It also lets you change one or more object properties simultaneously, even while animating the object. See "Appendix 2: Mediator object properties" for more about all the available properties.

When you drop the Animation Track action in the Events dialog active field the Animation Track dialog appears.

The top of the dialog looks like this:
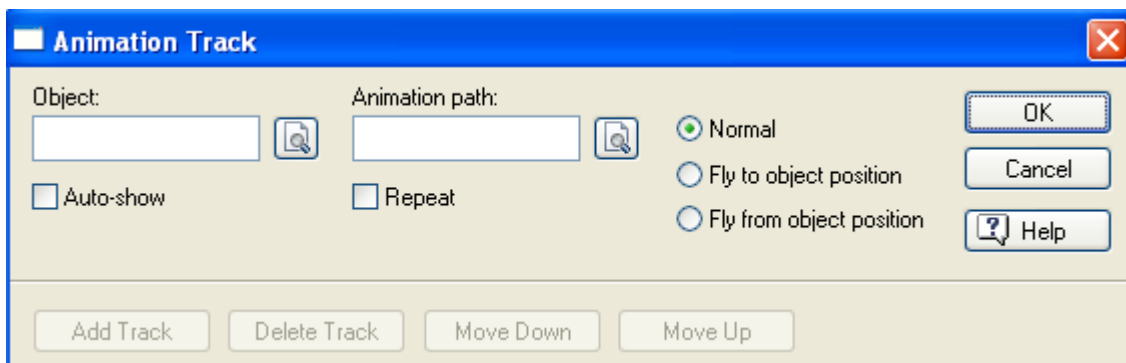
➢ Select the object whose properties you would like to change in the **Object** field

➢ Select the animation path you would like the selected object to follow in the **Animation Path** field.

Selecting an animation path is optional, and you can use the Animation Track action to change properties on the selected object without animating it.

Auto-show: Shows a hidden object when the animation starts

Repeat: Repeats the animation endlessly

Normal: Normal animation (starts at first animation point)

Fly to...: Animation finishes at current object position

Fly from...: Animation starts at current object position

Using the PathPosition track

When you select an animation path Mediator asks you if you would like to add a "PathPosition track".

The PathPosition track lets you animate an object back and forth on an animation path. You can set the total time for the animation, and decide when and where on the animation path you want to reverse or pause the animation.

- If you click No the object will be animated along the selected animation path, using the method you select (Normal, To, From) and the time allocated at the bottom of the Animation Track dialog.

- If you click Yes a PathPosition track is added.

The PathPosition track looks like this:
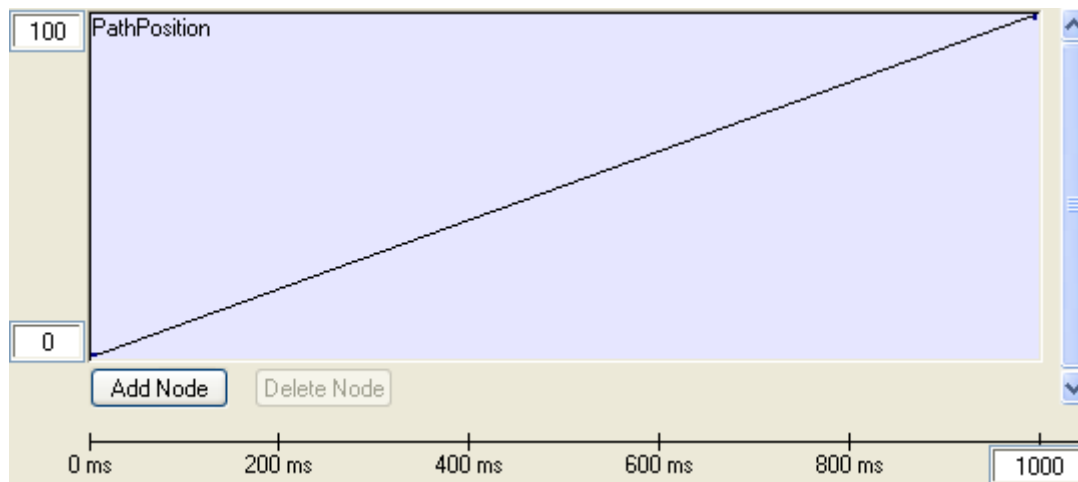
Remember that you can resize most dialogs in Mediator by pulling the sides or bottom of the dialog.

The PathPosition track (and all other tracks added in the Animation Track action) have two fields labeled 0 and 100 on their left-hand side. These are percentage fields indicating the starting and finishing point of the animation path, 0 representing the first point of the path, 100 the last point of the path.

The bottom right of the dialog shows the allocated time (1000 ms by default). You can change the time by clicking the field and entering a new value. The timeline shown at the bottom of the dialog indicates the time used for the animation.

The PathPosition track holds two nodes connected with an upward sloping line. A PathPosition node is a reference point (not a point on the animation path) that indicates where - as a percentage - the animated object is on the animation path.

The two nodes are by default always placed at 0 and 100, but you may change this if you like. Placing the nodes at 0 and 100 means that the object is animated from the first point of the animation path to the last. However, you can add more nodes to slow, speed up, reverse or pause the animation.

Adding nodes

➢ Click **Add Node** to place another node on the track.

The cursor changes to a cross and you can click anywhere on the track to place a new node. A yellow dot (node) is placed on the track connecting the nodes between which it is placed.

- An upward sloping line between two nodes indicates that the animation is proceeding along the animation path.

- A downward sloping line between two nodes indicates that the animation is reversed.

- A straight horizontal line between two nodes indicates that the animation is paused.

The steeper the slope is between two nodes, the faster the animation moves in the corresponding time span.

Often it is impossible to place the node exactly where you want to. For complete control over the position, you may enter the placement values manually in the fields under the track. The values are set in milliseconds (1000 ms = 1 second).

The left field is the time placement of the node (X axis). The right field is the animation path completion percentage (Y axis).

Selecting and manipulating nodes

Any new node you place is shown in yellow, indicating that it is the currently selected node.

➢ To select another node, simply click it so that it becomes yellow.

➢ Click and hold the left mouse button down to drag it (up, down, right, left) to the desired position on the track.

You can also change the position of a node manually. When a node is selected, its placement values and curve settings are displayed at the bottom of the dialog.

You can change the values in the two fields by clicking them and entering a new value manually.

The curve tool lets you set the acceleration and deceleration of the animation.
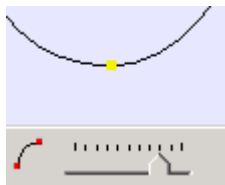
➢ To do this, select a node, and drag the slider to change the shape of the animation track, thereby changing the acceleration parameters of the animation.

Deleting nodes

➢ To delete a node, select it and click **Delete Node**. You cannot undo a node deletion.

Changing the animation duration

You can change the total time allocated for the animation in the Time field (located in the bottom right corner of the dialog). Click the field and enter the total time in milliseconds (1000 ms = 1 second).

Node positioning is not fixed, but proportional to the allocated time. When you change the total time the nodes you have placed on all tracks (PathPosition and Property tracks) are distributed proportionally on the new time track.

Example:

The total duration of your animation is 1000 ms. You have placed nodes at 250, 500, 750 (e.g. at ¼, ½, and ¾ of the total time).

You change the time to 4000 ms. The nodes are redistributed to 1000, 2000 and 3000 (still the same as ¼, ½, and ¾ of the total time).

The total time allocated is not unique to one track, but influences all added tracks (PathPosition and Property tracks). Changing the Total time therefore affects all the added tracks and their nodes.

Using Property tracks

The Animation Track action also gives you the ability to change one or more object properties at runtime.

With a few exceptions (e.g. string properties such as path names or file names) all the object properties that you see in the Properties dialog are also available as Property tracks.

You can add as many Property tracks to the Animation Track action as you would like, but you can only change properties for one object with each Animation Track action. If you wish to change properties on several objects simultaneously, simply drag another Animation Track action into the active field and select another object.

➢ To add a Property track, click the **Add Track** button.

Depending on the selected object the following dialog appears:
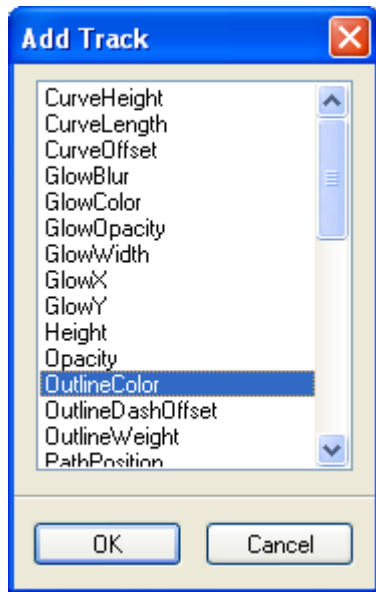
➢ Select a property from the list and click OK to add the Property track to the Animation Track dialog.

 You do not have to add a PathPosition track to add Property tracks.

The look and default values of a Property track depends on the selected property:

- If you select any **Color** property (Color, Color2, FillColor, FillColor2, ShadowColor, GlowColor, etc.) a color track is added.

- If you select **Height** or **Width** a track is added with a minimum value of 0 and a maximum value of twice the size of your document, e.g. the maximum size of any object in Mediator.

- The **Opacity** tracks goes from 0 to 100 (percent).

- The **Size** track (allowing proportional change of Height and Width) goes from 100 to 0 (percent).

Adding nodes

When you add or select a Property track the button Add Node becomes available.

A node is a time reference point that indicates when and how the selected object property changes.

➢ Click **Add Node** to add a new node.

The cursor changes to a cross and you can click anywhere on the track to place a new node.

Working with color tracks

The description below applies to any of the color tracks.

When you place a node on the track the Color dialog appears and you may select the preferred color.

The color track changes, and you can see the fade from one color to another. The further apart you place the nodes, the longer the fade takes.
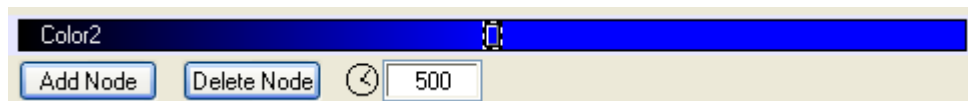
Once you have placed the node, you can change the time positioning by selecting the node and dragging it to the preferred position or enter the value manually in the time field.

997
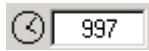
➢ Click Add Node to place another node on the color track.

| Color2 |
| Add Node | Delete Node | 800 |
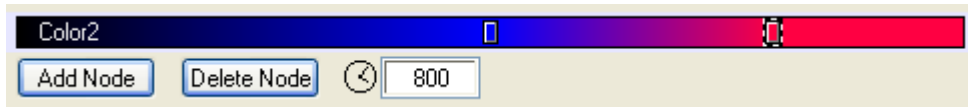
Working with other tracks

Any node you place on the track is represented by a yellow dot (node).

The placement and property change of the node are displayed in the two fields below the tracks.

296 **#** 201

The left field is the node's time placement in milliseconds (X axis). The right field is the property change (Y axis).

Once you have placed a node, you can change the time and property positioning by selecting the node and dragging it to the preferred position or enter the values manually in the corresponding fields.

➢ Click Add Node again to place another node on the track.

360 Rotate
0

| Add Node | Delete Node | | 706 | **#** | 274 |

0 ms   200 ms   400 ms   600 ms   800 ms   1000
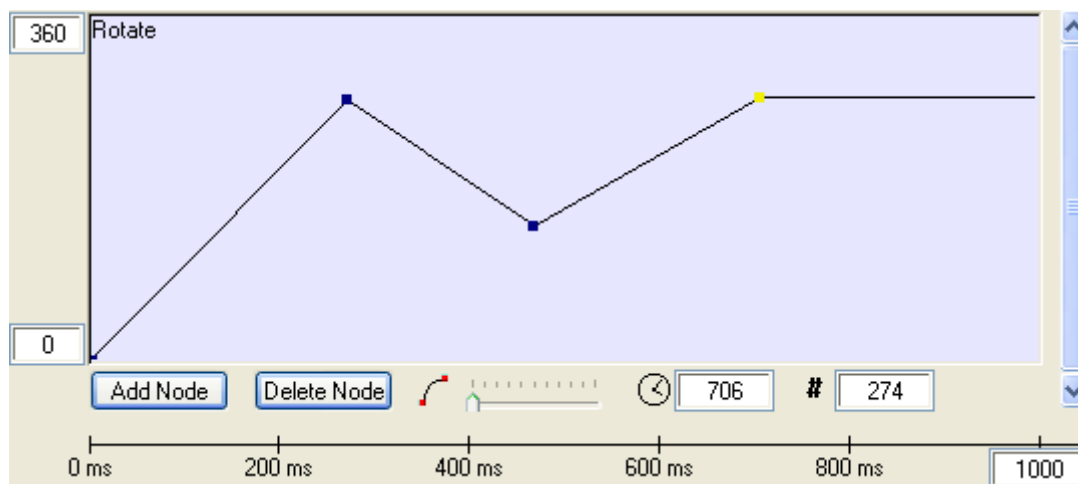
• An upward sloping line between two nodes indicates that the property value increases.

• A downward sloping line between two nodes indicates that the property value decreases.

• A straight horizontal line between two nodes indicates that the property remains unchanged.

The steeper the slope is between two nodes, the faster the value changes in the corresponding time span.

The curve tool lets you set the acceleration and deceleration of the property change.

➢ To do this, select a node and drag the slider to change the shape of the property track, thereby changing the acceleration parameters.
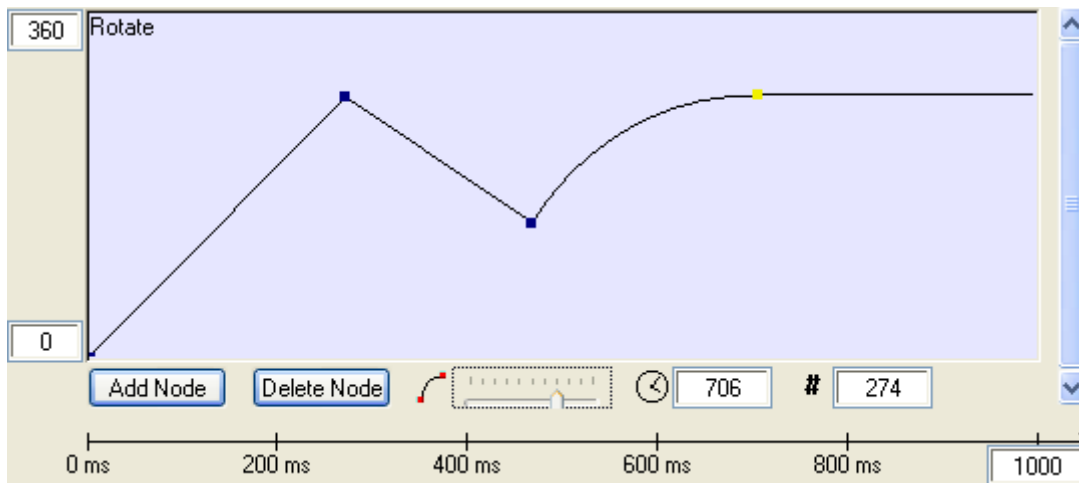
Moving and deleting tracks

➢ To delete a track, select it by clicking it, then click **Delete Track**. You cannot undo a track deletion.

When you have added more than one track the buttons Move Up and Move Down become available. These buttons have been provided to let you move a track up or down in the Animation Track dialog for a better overview.

Sound (Multimedia tab)

With this action you can start and stop a sound. As soon as you drop the action in the active field the Sound dialog appears:
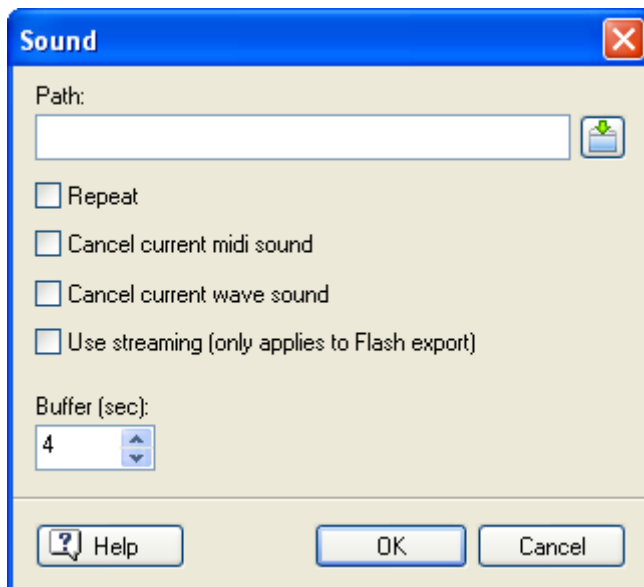
You can also drag sounds directly from the Sounds category of the Multimedia Catalog. A Sound action is then created automatically and placed in the Events dialog of the page or object you dragged it to. To preview the sound, just place the mouse pointer over it in the Multimedia Catalog. See "Contents of the Multimedia Catalog" for more information.

➢ Click the Browse button to choose the sound file you would like to play.

Mediator supports WAV (*.wav), MIDI (*.mid) and MPEG3 (*.mp3) formats. To include a WMA sound in your project, use the Media Player object instead.

Repeat: If this is checked, the sound is repeated continuously until it is stopped, for instance by another Sound action.

Cancel current midi sound: If this is checked, any midi file currently playing will be stopped. Unless your computer supports multiple midi sounds, Mediator can only play one midi sound at a time.

Cancel current wave sound: If this is checked, any wave file currently playing will be stopped. If you do not stop existing wave sounds, Mediator mixes all the active sounds together.

The *.mp3 format is actually a compressed *.wav. In order to stop the current *.mp3 file, check 'Cancel current wave sound'.

Use streaming (only applies to Flash export): When this option is unchecked, the sound is downloaded as soon as the page containing the Sound action is shown. If it is checked, the sound is only downloaded when the Sound action is triggered. Checking this box may therefore improve the performance of your Flash project if you have several Sound actions on the page, particularly if it is unlikely that they will all need to be played.

There are however two limitations in the Flash Player that affect this option:

- You can only use this streaming option on MP3 sounds.

- It is not possible to repeat (by setting the 'Repeat' option) a sound that is streamed in this way.

Buffer (sec): The default size of 4 seconds is normally suitable. If however your project uses simultaneously a sound and a processor-intensive effect lasting more than 3 or 4 seconds, you might want to increase the buffer size to avoid any gaps in the sound.

Sound Volume (Multimedia tab)

The Sound Volume action lets you control the volume and balance of any sound.
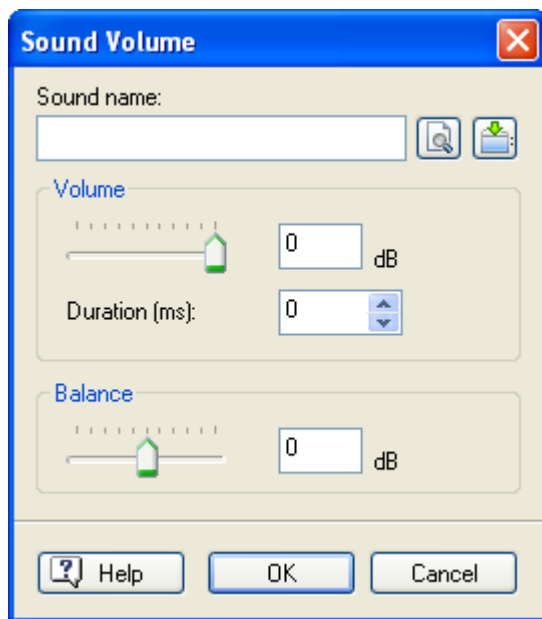
Sound name: Select the sound you wish to adjust. The sound can be a sound file, a video object or a sound resource.

Sound resources and video objects are straightforward to select, just use the Object list as normal.

With sound files you must enter the file name without the path. If you are playing a sound file, for instance "c\data\sounds\song.wav", you reference it by entering "song.wav". You can even do this with sound files which have been started on another page.

If only one sound source is present on the page it is automatically selected.

Volume: Use this field to set the new volume level, either entering it or using the slider. The scale goes from 0 to -100, where 0 is unchanged and -100 turns the volume off.

Some music files and sounds are recorded at such a low volume that the sound may disappear long before -100. Sound volume is measured in decibels, which is a logarithmic scale, not a linear scale. Entering -50 is therefore not equivalent to turning the volume down by half. To reduce the sound volume by half, you should set the volume to about -12.

Duration: Use this field to set the fade time to the new sound volume level (in milliseconds).

Balance: Adjusts the balance between the two speakers. This only works with stereo sound.

Possible uses

- Adjusting the sound volume for sound and music.

- Adjusting several sounds to the same volume level.

- Turning background music down when another sound (e.g. speech) is being played and turning it back up when the other sound is finished.

- Accompanying motion on the screen (an object moves from left to right on the screen and the sound follows the movement to give true stereo).

The Sound Volume action can only be used on sounds which have already started playing. If for instance you want to fade in a sound, you need to use the Sound action first, then the Sound Volume action. When these actions are placed in the Events dialog, the Sound Volume action is executed immediately after the Sound action, giving the required result.

Start/Stop/Pause (Multimedia tab)

Start

This action lets you start a video, an animated GIF, a resource or an or input object.

When you drop the action in the active field, the following dialog appears:
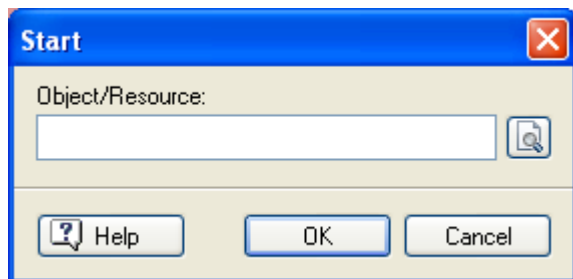
➢ Click the Browse button to open the Object list. Select the object you wish to start.

Stop

Use this action to stop a video, an animated GIF, a resource or an input object.

Unlike the Pause action, the Stop action rewinds the video or GIF to its first frame.

➢ Click the Browse button to open the Object list. Select the object you wish to stop.

Pause

Use Pause to temporarily stop a video, an animated GIF or a resource.

➢ Click the Browse button to open the Object list. Select the object you wish to pause.

Wind (Multimedia tab)

 The Wind action lets you skip back and forth in a video or animated GIF.

When you drop the action in the active field the following dialog appears.
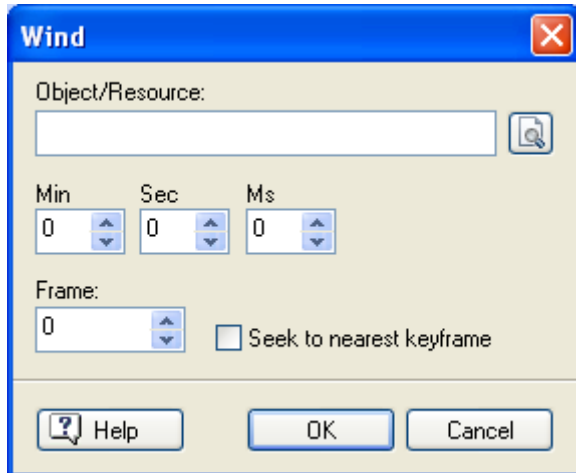
> ➢ Click the Browse button next to the 'Object/Resource' field to open the Object list and select the required video or animated GIF.

Min - Sec - Ms: In these three fields, you set the time in minutes, seconds and milliseconds. This time value refers to the exact position in the object that you wish to reach.

Frame: A video often consists of many single pictures, also called "frames". This option lets you wind to a specific frame. If necessary, you can use one of the freeware tools available on Internet to determine the frame rate of your video.

Seek to nearest keyframe: If you do not need to wind to a specific frame or an exact time position in your video, the winding operation will often be faster if you use this option. Although most videos consist of full frames (also called "keyframes"), they may also contain intermediary frames that only store the changes made since the last full frame. Since the keyframes may occur only every 10 or 12 frames in the video, their use reduces the size of the video. When you use this option, the computer can use the keyframe instantly, rather than having to generate the picture from the intermediary frames.

Drag & Drop (Multimedia tab)

 The Drag & Drop action lets the end user drag and drop objects when running your project. This enables you to create projects with enhanced interactivity, such as jigsaw puzzles, interactive games, CBT sessions, etc.

 The Drag&Drop action is often used with the Mouse Down and Mouse Up events and the system variable @ThisObject to refer to the object. You can find this combination in the User tab of the Events dialog.

When you drop the Drag&Drop action in the active field the following dialog appears:

Object to drag: Select the object you wish to drag (or drop) by clicking the Browse button to display the Object list.

 This action is not applicable to all objects. Only relevant objects are listed in the Object list.

Drag: Check this option to allow the selected object to be dragged as long as the associated event occurs. Usually the Mouse Down event is used, so that the user is able to move the object as long as he or she holds the left mouse button down.

Drop: Check this option to drop the object when the associated event occurs. Usually the Mouse Up event is used (in combination with the Mouse Down event), so that the object is dropped when the user lets go of the left mouse button.

Toggle: When this option is checked, the object is dragged when an event is triggered and dropped when that same event is triggered again. Toggle is designed especially for the Mouse Click event, letting the user click the object to drag it and click it again to drop it.

Do not drag outside window: The object cannot be moved outside the page (the Mediator window). It stops when it reaches the page boundary. If this option is not checked, the user can drop objects outside the page (and not drag them back in). Often this is inconvenient, so depending on the nature of your drag & drop, you are advised to leave this box checked.

Move dragged object to front: As soon as an object is being dragged, it is placed in front of all other objects. This prevents it from disappearing behind other objects.

 Usually the object you apply the Drag & Drop action to is the object you select in 'Object to drag' (e.g. clicking a particular rectangle lets you drag that rectangle). In that case you can use the system variable @ThisObject to select the object. It is however also possible to click one object and drag another.

 If you want your dragged object to snap back to its original position under some circumstances, store its original X and Y values in variables before dragging it. You will then be able to move it back with the Set Property action.

CD Audio (Multimedia tab)

 The CD Audio action lets you play audio tracks from a CD so that you can include high quality sound or music in your project. This action however requires Mediator to be able to read from the CD drive. It is therefore not suitable for use with the 'CD-ROM (without installation)' export format.
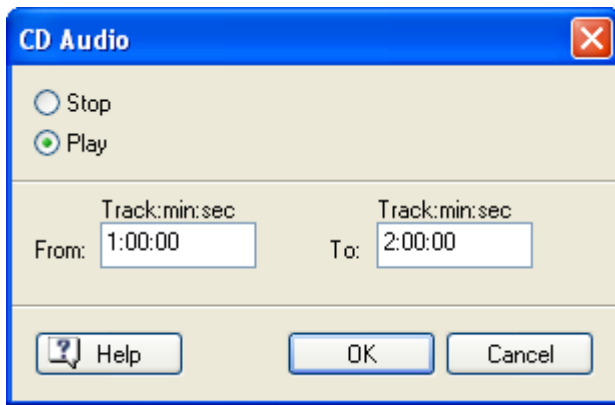
Stop / Play: The CD Audio action lets you start or stop play back. Select the option required.

From / To: Here you set how many audio tracks you wish to hear by setting the exact start point and the exact end point in the format "track:minutes:seconds".

Examples:

- From "1.00.00" to "2.00.00" (default setting) means that the first track on the CD should be played.

- From "2.01.22" to "4.03.52" means that the CD should play from track 2 at 1 minute and 22 seconds to track 4 at 3 minutes and 52 seconds.

External

Execute (External tab)

 The Execute action lets you start other programs directly from Mediator.

When you drop the Execute action in the active field the following dialog appears:
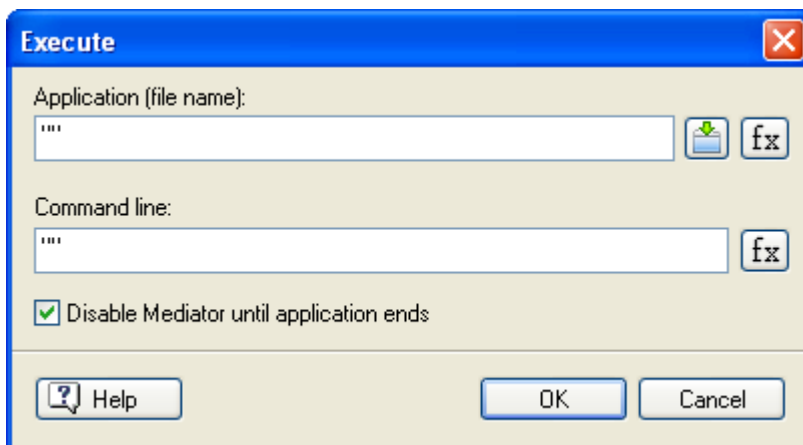
Application (filename): Enter the full path and name of the program you wish to open. You can enter the program name manually or use the Browse button to access the Open dialog.

For programs that are part of Windows, such as WordPad or Paint you don't need to enter the full path. The program name is enough.

Note that this field accepts text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc.

The **Expression** button fx helps you create such expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

If you intend to export your project, you need to make sure that the end users will have access to the program:

➢ Use **Prepare | Additional Program Files** prior to exporting to add the main program file (.exe) and any additional .dll files required to the project. This ensures that Mediator will include the program file(s) in the export.

➢ Instead of specifying the full path, use the **@ProgramDir** system variable to refer to the main program file. This ensures that Mediator will look for it in the program folder.

See "Adding data and program files" for more information on this.

Command line: Here you set the parameters for the file to be opened, i.e. its path and file name.

This field also accepts text expressions.

For instance, to open the text file MyTextFile.txt using WordPad, the file being located in the same folder as the md8 file, the dialog should be filled in as shown here:
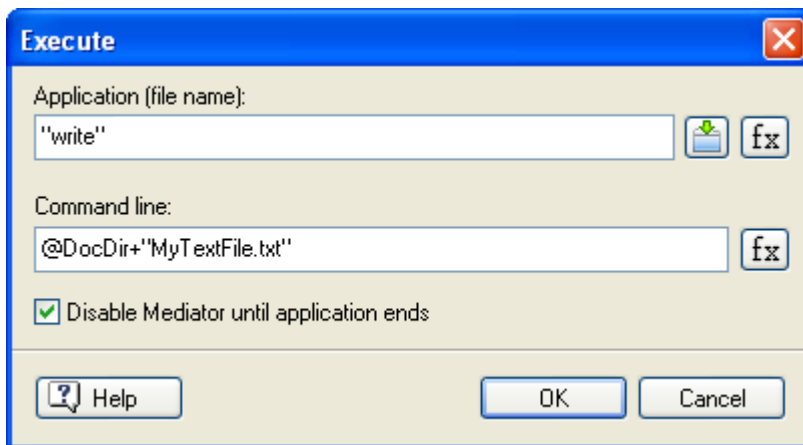
where Application = Write (you do not need a path for WordPad, as Mediator automatically recognizes the program) and Command line = @DocDir+"MyTextFile.txt".

Disable Mediator until application ends: Here you can select to hide Mediator as long as the other application is running. Mediator reappears as soon as the end user closes the application.

In practice, you should not need to use this option unless you have a particular reason for doing so. If your application opens up in its maximized state, the Mediator window will disappear underneath it anyway until the end user closes the application. If the application opens in a smaller window, the Mediator window is placed in the background.

Web Link (External tab)

The Web Link action lets you display web documents and other data files.

When you drop the Web Link action in the active field the following dialog appears:
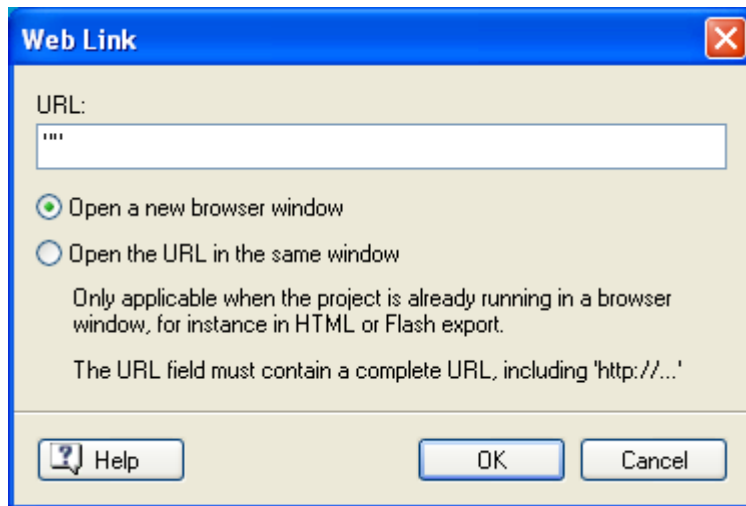
➢ To create a link to a web page enter the URL address in the 'URL' field between the quotes. Note that you need to enter an exact URL, starting with "http://".

The radio buttons are only relevant for HTML and Flash projects which are already running in a browser window. They let you select if you want to:

- open the selected web page in a new browser window, or

- continue to use the same browser window to display the selected web page.

→ Advanced The URL field accepts text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc. For more information on variables and expressions, see "Using expressions".

You can also use the Web Link action to open a folder or a file located on your computer by entering the relevant path with forward slashes between the quotes, e.g. "C:/" or "C:/My documents/bird.gif".

If you intend to export your project for distribution to other users, you should just enter the file name and extension between the quotes, without the path. You will also need to ensure that Mediator includes the file in the exported version by using the command **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

INI File (External tab)

→ Advanced

INI The INI File action helps you store information for later use. Here are a couple of examples:

- Storing scores / points / values in games, assignments, training programs etc. on the hard drive, for instance to let the user resume from where they left the project.

- Saving the contents of your project variables when you switch between two or more Mediator documents.

- Reading data stored in database-like structures using a word processor.

An INI file is a pure text file which can be created and read by any word processor. The easiest way to create an INI file is to use Notepad, which comes with any standard Windows installation. INI files are saved as ASCII files. Make sure you give the file the extension 'ini', otherwise it will automatically receive the extension 'txt'.

Structure of an INI file

An INI file consists of one or more sections. Each section header is placed in brackets, e.g. [Section]. Each section has one or more entries (the number of entries may vary from section to section). Each entry can be assigned a different value.

Example:

[First Section]
First entry = value1
Second entry = value1
...

[Second Section]
First entry = value2
Second entry = value2
Third entry = value2

Using the INI Action dialog

The INI Action dialog lets you create, read and write INI files.

The different fields in the dialog let you select the section and entry to read from or write to.
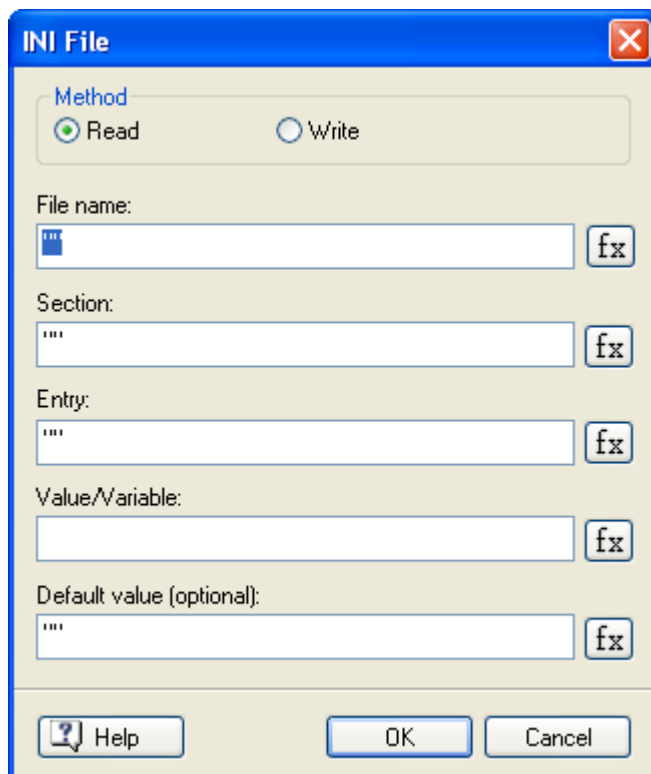
All fields in the dialog accept text variables and expressions. You can use the **Expression** button fx to build these expressions. Be aware that all fixed text strings must be placed between quotes. If you do not use quotes, the entry is regarded as a variable. You may use a combination of variables, system variables, numbers, object properties in the *Object.Property* notation, functions and fixed text between quotes, all linked with operators, provided that the resulting expression is of text type.

For more on variables and expressions, see "Using project variables" and Using expressions".

Read / Write mode: Check 'Read' to read from an existing INI file or 'Write' to write to one. If you try to write to an INI file that does not exist, Mediator automatically creates it.

File name: Here you enter the name of the INI file and its path. If you do not enter a path Mediator assumes the INI file is placed in the same folder as the .md8 file. To place the INI file in the user's temporary folder, use the system variable @TempDir, e.g. @TempDir + "Filename.ini".

If you have created an INI file that you wish to include in the exported version of your project, you must add it manually with **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

Section: Enter the section that you wish to read from or write to, but do not enter the square brackets, only the section name. If, in Write mode, you enter a section that does not exist in the INI file, Mediator automatically creates it.

Entry: Enter the specific entry in the section that you wish to read from or assign a value to. If, in Write mode, you enter an entry that does not exist in the INI file, Mediator automatically creates it.

Value/Variable:

In Write mode: Here you enter the value to assign to the Entry selected above. The value can be a fixed text string, the contents of a text variable or a text expression using the notation *Object.Property*, for instance the contents of an input object. If the variable is not of type text, you must use the STRING function to convert it to text.

In Read mode: Here you enter the name of the text variable that the INI file action will fill with the contents of the specific entry. If you are reading a number from the INI file, you must assign it to a text variable and use the Assign action to convert it from text to integer or floating point. Note that you cannot use the *Object.Property* notation in this field in Read mode. If you want to read the contents of the entry into an input object for instance, you must first assign the contents to a text variable, and then use the Assign or Set Property action to transfer the contents of the variable to the input object.

Default value (optional)

This field is only available in Read mode.

If the selected entry in the INI file does not have a value or does not exist, the variable selected in Value will be set to the default value specified here. This ensures that your variable will always contain a value. You do not have to enter a value in the 'Default value' field, and may leave the quotes as they are.

The INI files that the INI File action refers to are ordinary INI files that can be found everywhere in a Windows installation. Therefore the Mediator INI File action is subject to the same specifications as Windows INI files, i.e. each file may *not exceed 32 KB* and each entry may *not exceed 256 characters*.

If data exceeding these figures is written to an INI file, the excess data is simply ignored. The same applies if you read from an INI file exceeding these limits, so make sure your INI file respects them.

Open Doc (External tab)

The Open Doc action lets you create, open and print external data files.

The standard actions available depend on the program associated with the file extension (e.g. bmp, doc, xls, md8, etc.) on your computer.

When you drop the Open Doc action in the active field the following dialog appears:

Document: Enter the file name in this field between the quotes. Remember the extension.

You can also use text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc., for instance @DocDir + "MyPicture.bmp".

The **Expression** button fx helps you create such expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

Action: As soon as you specify the file extension in the Document field, the Action field lists the options available for that type of file on your computer.

The most common options are Open, New, Print.

As the program associated with the file extension may be different on the end user's computer, you should only use these common options. You must also make sure that your end users have a program enabling them to open the file type you have selected. The Open Doc action will only work on files that are associated with a program on the end user's computer.
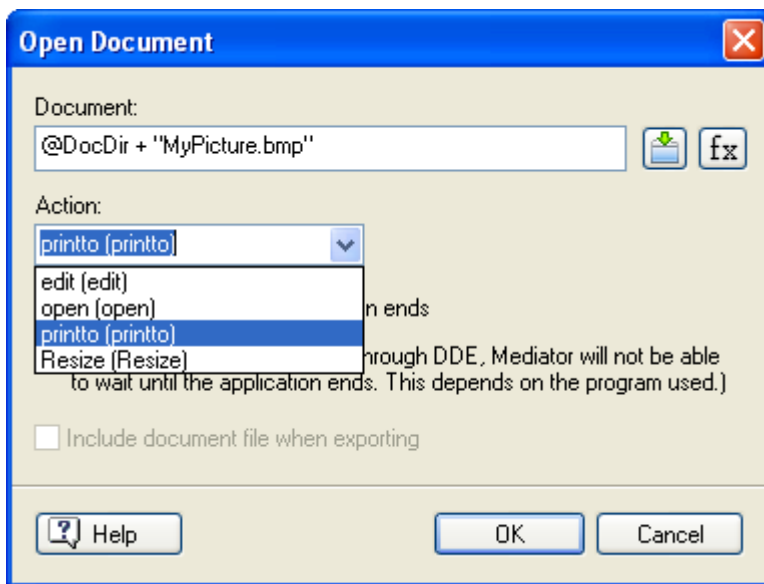
Select the option you require from the list.

Disable Mediator until application ends: Here you can select to hide Mediator as long as the program associated with the file extension is running. Mediator reappears as soon as the end user closes the program.

In practice, you should not need to use this option unless you have a particular reason for doing so. If your application opens up in its maximized state, the Mediator window will disappear underneath it anyway until the end user closes the application. If the application opens in a smaller window, the Mediator window is placed in the background.

Include document file when exporting: If you intend to export your project for distribution, checking this box will ensure that Mediator includes the document in the exported version.
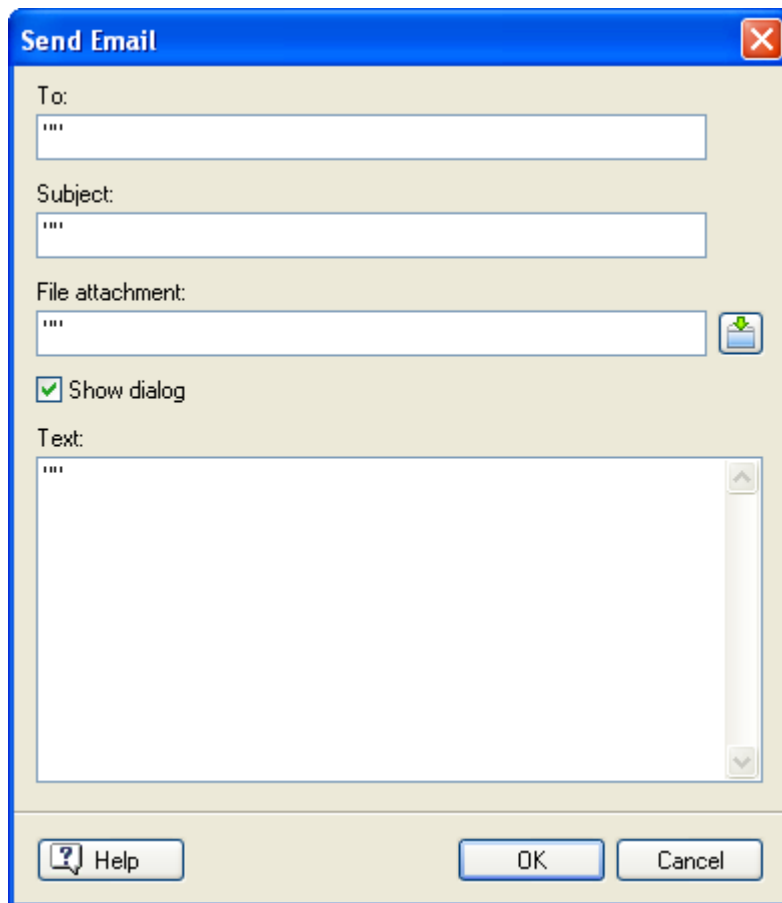
However if you have used an expression to specify the location of the document, you will need to include it manually by using the command **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

Email (External tab)

 The Email action lets you create a message in the end user's default e-mail program.

When you drop the Email action in the active field the following dialog appears:

You can fill in all the fields of this dialog or leave some of them empty.

To: Enter the e-mail address between the quotes. To enter more than one e-mail address place a semicolon between each address, e.g.myname@me.com ;yourname@you.com.

Subject: Enter the subject of the message between the quotes.

File attachment: If you would like to attach a file to the message, enter its path or use the Browse button to locate it.

Show dialog: Disabling this option lets you place a ready-to-send message in the end user's Outbox without displaying it. The end user can of course open the Outbox to see the mail.

Text: Enter the actual content of the message between the quotes.
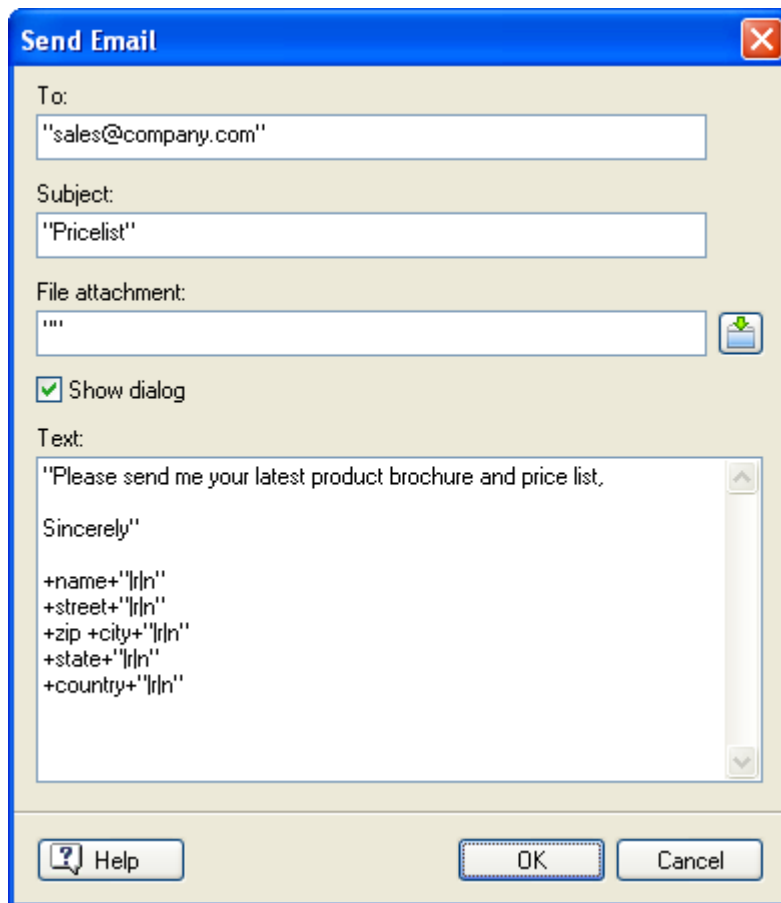
 All the fields of this action accept text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc. This allows the contents of the various fields to depend on input received at runtime. If you use several variables to create a street address or any other content you can use the control characters '|r|n' to force a new line and '+' to combine variables and control characters. For more information on variables and expressions, see "Using expressions".

If you attach a file and intend to export your project for distribution to other users, you should just enter the file name and extension between the quotes, without the path. You will also need to ensure that Mediator includes the file in the exported version by using the command **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

Open MD8 Doc (External tab)

 This action lets you switch to another Mediator document at runtime. If both documents have an identical layout, the jump from one to the other is practically unnoticeable.

 As soon as you switch to the other document, Mediator closes the current document. This means that all the values that you may have stored in its variables are deleted. If you want to access them from the new document or keep them for use at a later date, you must first store them in an external file such as an .INI file, which you can re-open when needed. See the description of the INI file action for more information.

When you drop the action in the active field the following dialog appears:
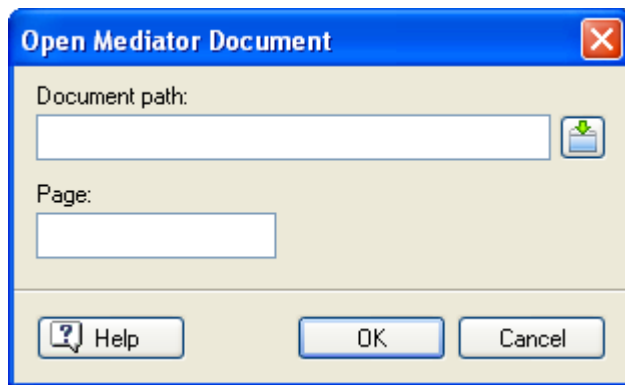
Document path: Here you enter the name of the Mediator document you wish to open. You can enter the document path manually or use the Browse button ⬇️ to access the Open dialog.

If you use several Mediator documents in the same project, you must place them all in the same folder, and enter the name of the document (with its extension but without a path) in the path field. This ensures that Mediator can find the document you are referring to.

When you export your project to CD-ROM, Mediator does not automatically include other Mediator documents you may have used. You must copy these Mediator documents and all their data files manually in the folder containing the main Mediator document, before you proceed to burn the CD-ROM. You can also use the command **Prepare | Additional Data Files** to perform this operation, but this is not very practical for large projects containing many data files. See "Adding data and program files" for more information.

Page: Here you enter the page on which you want the new Mediator document specified above to open. You must enter the page name manually and make sure that it is accurate. If you do not specify a page, Mediator opens the new Mediator document on the first page of its Page list.

💡 *To make the jump from the current document to the new document as smooth as possible, make the page you are opening identical to the page you are coming from, for instance by using the same menu on both.*

🔍 This action is only recommended if you have a particular reason to keep your Mediator documents separate or if you always use the same computer to run your projects, thereby avoiding any difficulties with document paths. In all other circumstances, it is preferable to merge the separate Mediator documents into a single document or to build a single Mediator file from scratch in multi-user mode. See the topics "Merging documents" and "Using multi-user mode" respectively for more information.

Report (External tab)

➡️ Advanced

🔻 The Report action takes input from the end user and uses this to generate an external output file (the report).

Here are possible uses:

- Letting the end user fill out order forms, interest forms, questionnaires etc.

- Exporting complete text fields and screenshots to a separate document

🔍 You will find a ready-made Print Page combination using Report and Open Doc in the User tab of the Events dialog.

Using the Report action

Imagine that your project prompts the end user to make some choices, which it then saves in different variables. You would like to let the user print a professional-looking form containing all his or her choices or e-mail it to you.

➢ Using your word processor, you first need to design the form you require, saving it as an RTF file. You can use your company letterhead, place a picture of yourself or your company logo on the form, type an introduction, enter a descriptive text, etc. The visual design of the form is completely up to you.

This form is referred to as the Input file.

In the following we will suppose that your project asks the end user for his or her first name and last name, and stores the names in the two variables FirstName and LastName.

➢ You then define exactly where in the RTF file you want the user's choices to be inserted, by using special tags to determine the position of each field.

These tags consist of the variable name with a % sign on either side, e.g. %FirstName%.

For instance, to export the values stored in the variables FirstName and LastName from Mediator into the Input file, thereby generating the Output file, you must first define in the Input file where you want Mediator to place the values.

Your Input file (created using your word processor) could look like this:

My name is %FirstName% %LastName%

When Mediator executes the Report action, it inserts the end user choices exactly where you want them in the RTF file. The Output file is saved as a form, ready for the end user to print it or mail it to you.

In our example, if the end user enters Mark as FirstName and Smith as LastName the Output file will look like this:

My name is Mark Smith

To print the Output file, place an Execute or Open Doc action after the Report action. See the topic "Printing text and pictures" for more information.

Notes:

- Using variables and % tags lets you export not only values and pictures from Mediator, but also text or other content from external data files by storing the information temporarily in variables and exporting it to the RTF file.

- If you wish to place a screenshot of the current Mediator page in the Output file, enter the command **%#ThisPage,80,60%** in the Input file at the position where you want the screenshot to be inserted, where 80 and 60 are the width and height of the picture (in millimeters). You can choose different values for the width and height, as required.

Using the Report dialog

When you drop the Report action in the active field the following dialog appears.
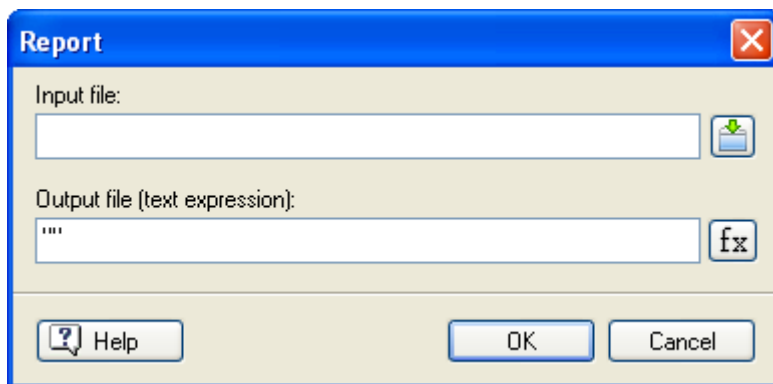
As you can see there are not many options in the dialog, as most of the work is done outside Mediator in a word processor.

Input file: Enter the complete path and name of the RTF file that you have prepared or click the Browse button to access the Open dialog. This file is the basis of the Output file.

If you intend to export your project for distribution to other users, you will need to ensure that Mediator includes the file in the exported version, by using the command **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

Output file: Enter the name of the completed form you are going to generate. If you do not enter a path the file is saved in the same folder as the Input file.

You can use text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc. in this field, as long as the complete expression creates a valid full path and file name. You could for instance use a variable to let the user determine the path at runtime, or use the system variable @TempDir to place the output file in the end user's temporary folder.

The **Expression** button fx lets you build such expressions. For more on expressions, see "Using expressions".

File actions (External tab)

The File actions let you create, read and write text files.

These actions are useful when you want to store information for later use, have a large chunk of text that you want to read into an input object, or even create a batch file that you later run with the Execute action.

The File actions are fairly simple and are described below.

Assign File

In the Assign File action you specify whether you want to read from a file or write to a file. When you drop the action in the active field the following dialog appears:
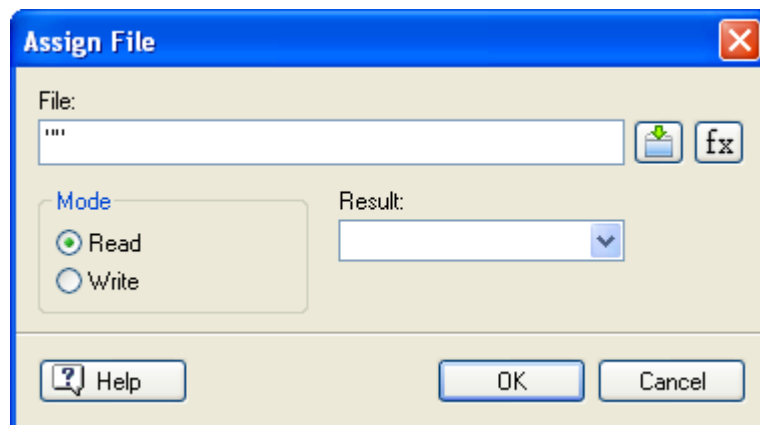
You must always assign a file before you can use the Read or Write actions.

File: Enter the path and name of the file or click the Browse button to access the Open dialog.

You can use text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc. in this field.

The **Expression** button fx helps you create such expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

If you intend to export your project for distribution to other users, do not enter a complete path, but only the file name and an appropriate system variable, e.g. @TempDir. This way you can be certain that the folder you are referring to will exist on the destination computer. If you are reading from an existing file, you will also need to make sure that Mediator includes it in the exported version, by using the command **Prepare | Additional Data Files** prior to exporting. See "Adding data and program files" for more information.

Mode: Select if you wish to Read from an existing file or Write to a file. If you choose to write in a non-existing file, Mediator automatically creates it.

Result: Here you may enter a boolean variable (True/False) that receives the value True if the File action completes successfully. This lets you react to any error that may occur.

Read File

The Read File action reads the text from the ASCII file specified in Assign File and places it in a Mediator variable.

String variable: Select the text variable into which you want to read the content of the external file. Click the arrow to select the variable from a list or enter it manually.

If you have not yet created a variable you must do so using **Page | Programming | Variables**.

At the bottom of the dialog you can select to read just one line from the text file (**Single line**) or the entire text file (**To end of file**).

Result: Here you may enter a boolean variable (True/False) that receives the value True if the Read File action completes successfully. Checking this variable allows you to ensure that all the data has been read before you use it elsewhere in your project. You can also react to any error that may occur while reading from the file.

Write File

The Write File action lets you write text to the ASCII file specified in Assign File. You can write a specific word or phrase to the selected text file, or the contents of a variable.

Expression to write: Enter the complete text expression in this field. You can use a combination of fixed text (which you must place between quotes), variables, functions etc.

Result: Here you may enter a boolean variable (True/False) that receives the value True if the Write File action completes successfully. This lets you react to any error that may occur while writing to the file.

Delete File

 If you don't want to store the text file permanently, but would like to delete it once your project has finished using it, this action allows you to do so.

File: Enter the path and name of the file you wish to delete. You can use text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc.

Result: Here you may enter a boolean variable (True/False) that receives the value True if the Delete File action completes successfully. This lets you react to any error that may occur.

Programming

Assign (Programming tab)

 With the Assign action you can give a variable a new value, combine two text variables, subtract an integer variable from another, convert a floating point variable to text, switch a boolean from True to False, and much more.

When you drop the action in the active field the following dialog appears.

Variable: Select the variable to which you want to assign a new value. You can enter the name of the variable manually or select it from the list of available variables. Selecting from the list ensures you avoid typing errors.

You can also use the Assign action to set the property of an object dynamically by entering here an expression using the *Object.Property* notation as in the Set Property action. Refer to the appendix "Mediator object properties" for a list of all the properties that can be set for each object.

Assignment expression: This is where you define the value to be given to the variable selected above.

Depending on the type of the variable you have selected, the expression could be a numeric value, a text value or a boolean (true/false) value.

If you wish to assign a fixed text string to the variable, you must place this text between quotes ("like this"). Text that is not placed between quotes will be regarded as a variable which Mediator will expect to be able to find.

You can also use variables in the 'Assignment expression' field. Any variable you use must be of the same type as that of the variable selected in the Variable field. In other words you can only assign an integer value to an integer variable, a text string to a text variable, a boolean value to a boolean variable and so on.

Note that you can change the type of a variable by using assignment functions.

You can for instance convert the value of a text variable to an integer value by placing the INT function in front of the text variable in brackets, e.g. INT (variable).

The conversion functions available are as follows:

- To convert a Text or Floating point value to Integer: **INT** (variable)

- To convert a Text or Integer value to Floating point: **FLOAT** (variable)

- To convert an Integer or Floating point value to Text: **STRING** (variable)

You can assign the value of an integer variable to a text variable. An integer value converted to text can no longer be used in calculations.

You can also use a combination of variables, system variables, numbers, object properties in the *Object.Property* notation, functions and fixed text between quotes, all linked with operators (see the topic "Using operators"). Text variables are combined using a + sign.

The **Expression** button fx lets you build such expressions. For more on expressions, see "Using expressions".

Here we combine the variables FirstText and SecondText with the text "Have Fun" and assign the combination to the variable FullText.
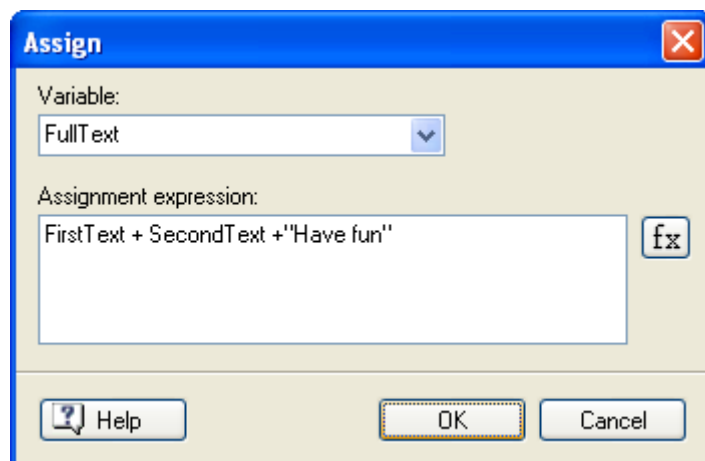
If (Programming tab)

 One of the most important programming features in Mediator is the use of conditions.

In other words:

IF a condition is true

THEN option 1 is executed,

ELSE option 2 is executed.

When you drop the If action in the active field the following dialog appears:
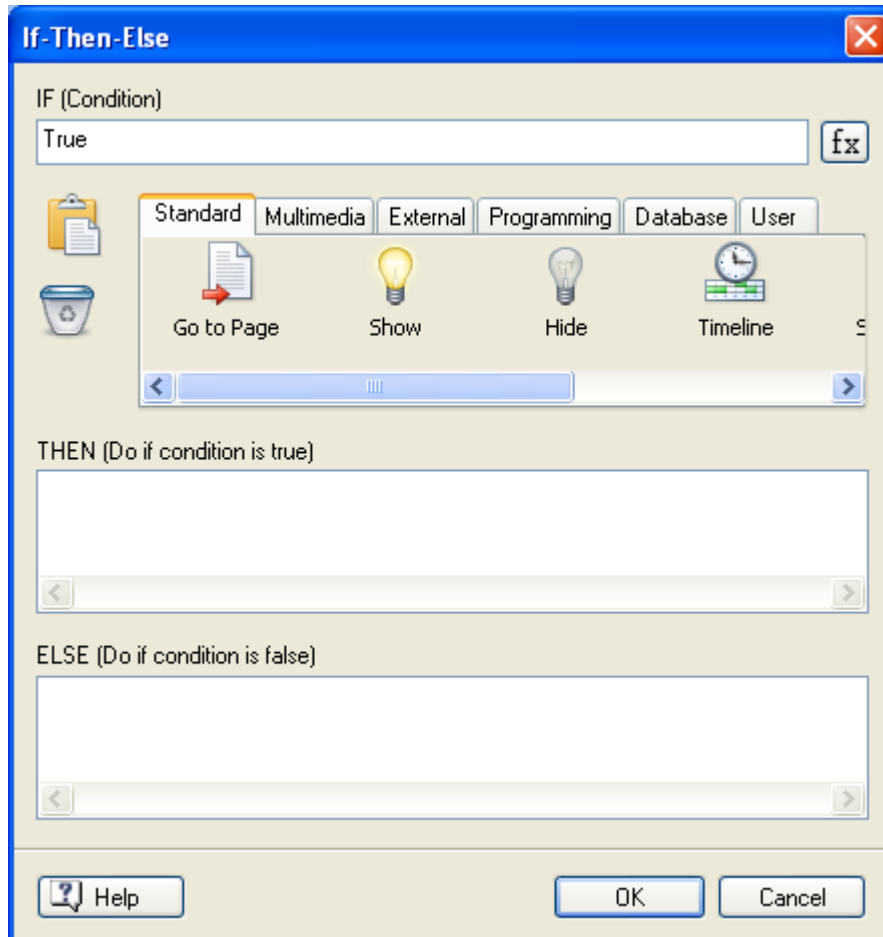
IF (Condition): Here you define the condition that executes option 1 or option 2, depending on whether it is fulfilled (true) or not.

To determine if the condition is fulfilled (true), you must enter an expression, such as **MATH = 30** or **t+a+d > 36** or **name = "Peter"** etc. (where MATH, t, a, d and name are variables).

This field accepts any combination of variables, system variables, object properties in the *Object.Property* notation, functions, fixed text and operators, thereby giving you extreme control on your actions.

The **Expression** button fx helps you create expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

Any fixed text that you want to include in an expression must be placed between quotes ("like this"). Text that is not placed between quotes will be regarded as a variable.

THEN (Do if condition is true): Here you drag the action or series of actions (you can even start a timeline or resource) which you want to execute if the condition is true.

The condition will be true if the expression in the Condition field is true. If you don't want to execute any particular actions when the condition is true, simply leave the field empty.

ELSE (Do if condition is false): Here you drag the action or series of actions that you want to execute if the condition is false. If you do not want anything to happen if the condition is false, simply leave this field empty.

Loop/Break (Programming tab)

→ Advanced

Loop

The Loop action lets you repeat an action or series of actions as fast as possible, until it is stopped by the Break action.

When you drop the Loop action in the active field the following dialog appears:
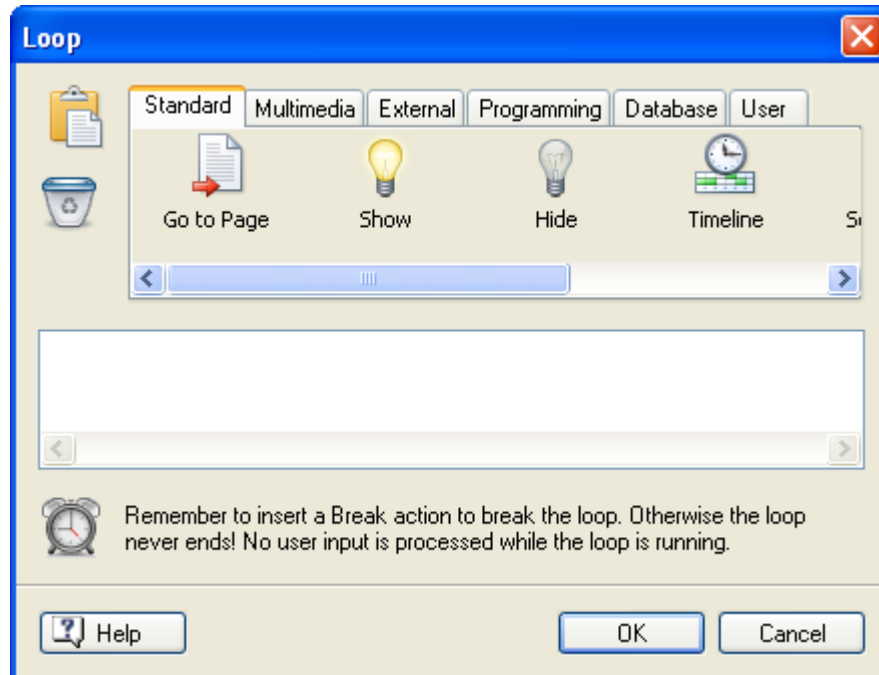
Although you can use all the available actions, the Loop action is only relevant when working with variables in an If-Then-Else structure, as in classical programming.

Important: As long as the Loop action is running, Mediator will not react to other interactive events. The only way to stop a Loop action is to use the Break action (see below).

Do not confuse the Loop action with an action that repeats another action a number of times over a given duration. To repeat an action in this way, you are advised to use a Timeline resource (see "Timeline").

You can also use a Loop action if you want to execute several actions one after the other in a resource, with the guarantee that each action is completed before the next one starts: drag an empty Loop action from the Events dialog into the Resources dialog, add the required actions to it and place a Break action at the end (without any condition).

Possible uses

- Repeat the same actions with different values, for instance to increase a counter by one. Break the loop when the counter has reached a given value.

- Automate the same actions for different objects.

- Start the same actions from different places (breaking the loop without conditions). Just drag the loop action by copy/paste to the Resources dialog.

Break

This action is used to stop the Loop action, meaning that the repetition started by the Loop action is terminated.

The Break action does not have any parameters, and therefore no dialog appears when you drop it in the active field. Since Mediator does not react to any events as long as the Loop action is running, you must always use a Break action in conjunction with the Loop action.

The Break action is normally used in an If action that determines when the loop is to be broken (or exited) in a Loop action (for instance when a counter reaches a given value after a certain number of iterations).

Sub Procedure (Programming tab)

This action allows you to group other actions together for a better overview of the Events dialog if you have a long list of actions.

It also allows you to define a series of actions that you can copy in the Events dialog clipboard, ready to be pasted on another object. See "Using events and actions" for how to copy and paste actions in the Events dialog.

Finally the Sub Procedure action can also be used as a resource. This helps you start the same series of actions from different places on your page, by allocating it to different objects. See "Using resources" for more information.

When you drop the Sub Procedure action in the active field, the following dialog appears.
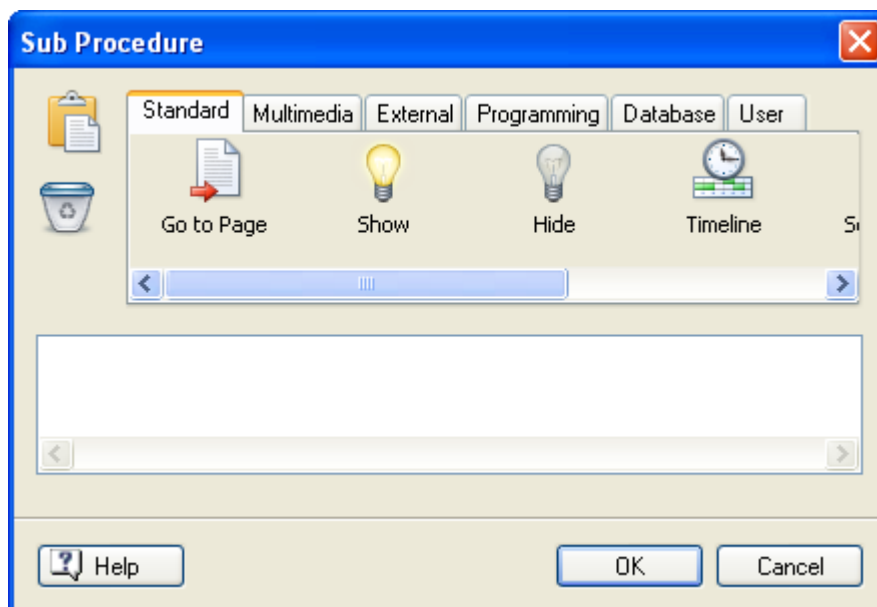
Just drag the actions you require and click OK.

Script (Programming tab)

The Script action itself is very simple. All it does is to start the script procedure you specify.
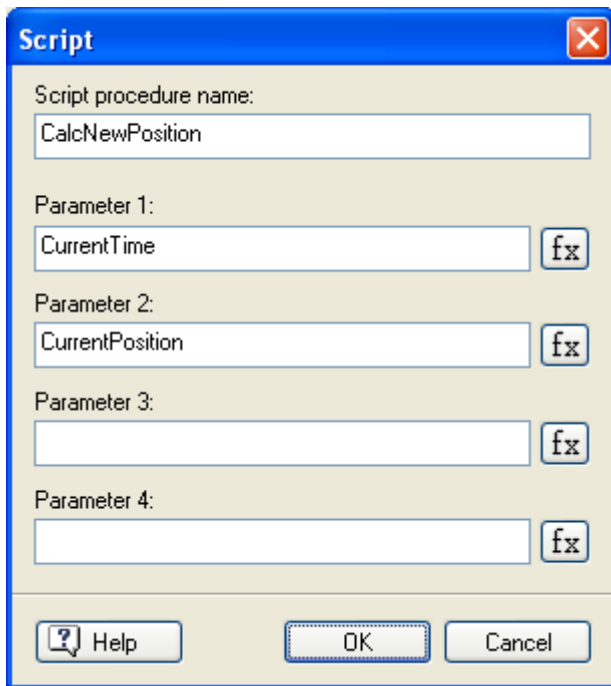
You can pass up to 4 parameters to the procedure using the parameter fields. A procedure corresponding to the above dialog could look like this:

```
Sub CalcNewPosition(cTime, cPosition)

  ...

End Sub
```

For information about how to write script in Mediator, refer to the topic "Using runtime script".

Set List Box Data (Programming tab)

The Set List Box Data action only applies to list boxes of Data type 'Page list'. It is used to add or remove pages dynamically from a list box while the user runs the project.

By contrast, list boxes of Data type 'Index', 'Search word' or 'Data' (i.e. containing respectively keywords, search words, or your own entries) are filled from the data you enter in design mode and cannot be updated dynamically during runtime.

You can use the Set List Box Data action to update the page list contained in a list box in different ways:

- You can for instance get the user to select a search word in one list box and use the action to display all the pages containing the word in another list box.

- You could achieve the same result by getting the user to enter the search word in an input object and use the action to display all the pages containing the word.

- You could also use the Set List Box Data action to create a complete list of all the pages in your project.

When you drop the Set List Box Data icon in the active field the following dialog appears:

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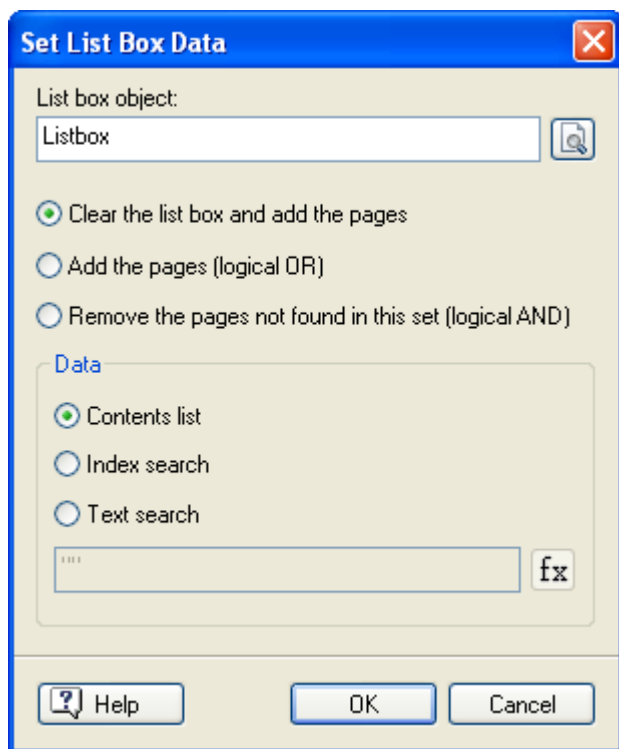
List box object: Specifies the list box object in which to add or remove pages. Click the Browse button to select it from the Object list.

Defining the list box update mode

The three options below the object field let you define how you want the page list to be updated.

Clear the list box and add the pages: This setting clears the list box before adding new pages to it.

Add the pages (logical OR): This setting adds new pages to the existing contents of the list box.

Using this option, you can obtain a list of all pages containing *only one* of two given words, as follows:

➢ Search all pages containing the first word (the search procedure is explained below) using 'Clear the list box and add the pages'. This clears the list box and places all the pages containing the first word in it.

➢ Then search all pages containing the second word using 'Add the pages (logical OR)'. This adds to the list box any new pages containing the second word, without removing the first pages.

The list box now contains all the pages found in the first search, as well as all the pages found in the second search. You can use this approach with more than two search words.

Remove the pages not found in this set (logical AND): This setting removes from the list box any page not found in the search.

Using this option, you can obtain a list of all pages containing *two* given words, as follows:

➢ Search all pages containing the first word using 'Clear the list box and add the pages'. This clears the list box and places all the pages containing the first word in it.

➢ Then search all pages containing the second word using 'Remove the pages not found in this set (logical AND)'. Any page which does not contain the second word is removed from the list box.

The list box now contains all the pages found in the first search that were also found in the second search. You can use this approach with more than just two search words.

Defining the search function

The Data field at the bottom of the dialog lets you select the Mediator list to be used as a basis for updating the contents of the list box.

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- **Contents list**

This updates the list box with a complete list of all the pages in your project (except pages you excluded by unchecking the 'Use in Contents' option of their Properties dialog).

When you choose this option the entry field at the bottom of the dialog is not used.

💡 *If you are using the list box as a table of contents simply place the Set List Box Data action after an On Start event to update the list immediately.*

- **Index search**

This lists the pages of your project that contain the keyword typed between the quotes or referred to as a variable in the entry field below.

- **Text search**

This lists the pages in your project that contain the search word typed between the quotes or referred to as a variable in the entry field below.

💡 *If you are using the list box to show the result of a search, you could place the Set List Box Data action on a button and update the page list box when the button is clicked.*

Defining the word to be searched

If you are using this action to perform an Index search or a Text search, you use the entry field at the bottom of the dialog to specify the word to be searched. You can either type the word itself between quotes, enter the name of a variable containing that word, or refer to the contents of an input object or list box using the *Object.Property* notation, e.g. Input.Text or Listbox.SelectedString. This allows you to search for a word entered by the user at runtime.

- To search for a specific word enter the word between the quotes, e.g. "France".

- To refer to the contents of an input object, enter the expression *Input*.Text, where "Input" is the name of your input object.

The **Expression** button 𝐟𝐱 helps you create expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

Message Box (Programming tab)

 Advanced

 This action allows you to display a standard message box as a result of a particular event.

Title: Type here the title of the message box you want to display to the user. This field accepts text expressions using a combination of fixed text (which you must place between quotes), variables, functions etc.

The **Expression** button fx helps you create such expressions. It gives you access to all the functions, system variables and operators that are built into Mediator, as well as all the project variables you may have defined. For more on expressions, see "Using expressions".

Text: Type here the text of the message box. This field also accepts text expressions.

Result variable: You can use this drop-down box to choose an integer variable in which Mediator will place a value representing the button clicked by the user to exit from this message box.

The possible values are:

- 1 for OK

- 2 for Cancel

- 6 for Yes

- 7 for No

Buttons: Here you select the buttons which you want the message box to contain.

Icon: Here you choose an icon representing the type of message your message box is intended to convey.

Database

DB Pointer (Database tab)

 Advanced

 The action DB Pointer is used to move the database pointer within a database.

To find out how to connect Mediator to a database, refer to "Using databases".
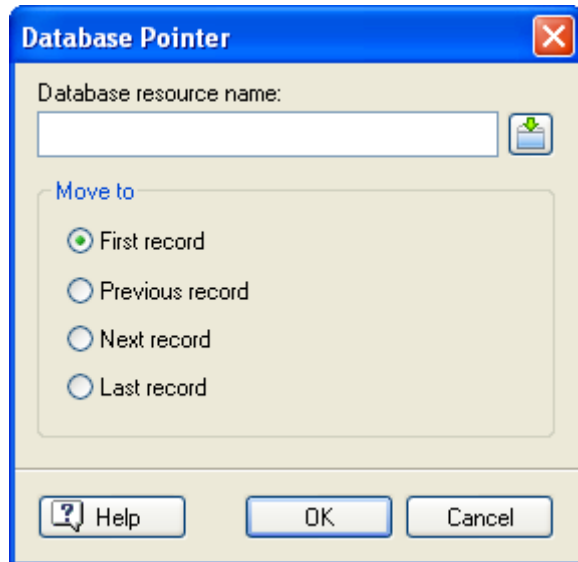
There are four options: First, Last, Previous or Next Record.

The DB pointer is always moved to the last search result. When a database is opened all records are included in the search result. If a database contains 2000 records and a search matches 20 records, the DB pointer is moved between these 20 records. A search that matches all records can be executed to enable the user to browse the entire database.

DB SQL (Database tab)

 Advanced

 The DB SQL action can send a SQL expression to a database.

To find out how to connect Mediator to a database, refer to "Using databases".

SQL is a complete database programming language and it is out of the scope of this documentation to teach SQL. However, you can find examples of the most often used SQL expressions in the "SQL statements" topic.
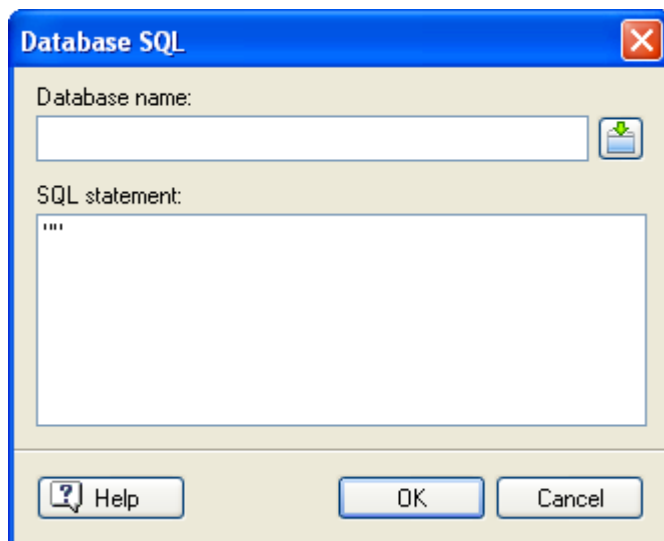
SCORM

Set SCORM Variable (SCORM tab)

The 'Set SCORM Variable' action lets you send data to the Learning Management System (LMS) used when creating a SCORM compliant e-learning project.

Please refer to the topic "Using SCORM" for a complete description of SCORM and how to create a SCORM course using Mediator.

If you want to send and save data about the student's progress to the LMS (for example to keep a record of how well the student performed in a quiz), the 'Set SCORM Variable' action allows you to specify the name of the SCORM variable that you want to set, and the value it should be set to.
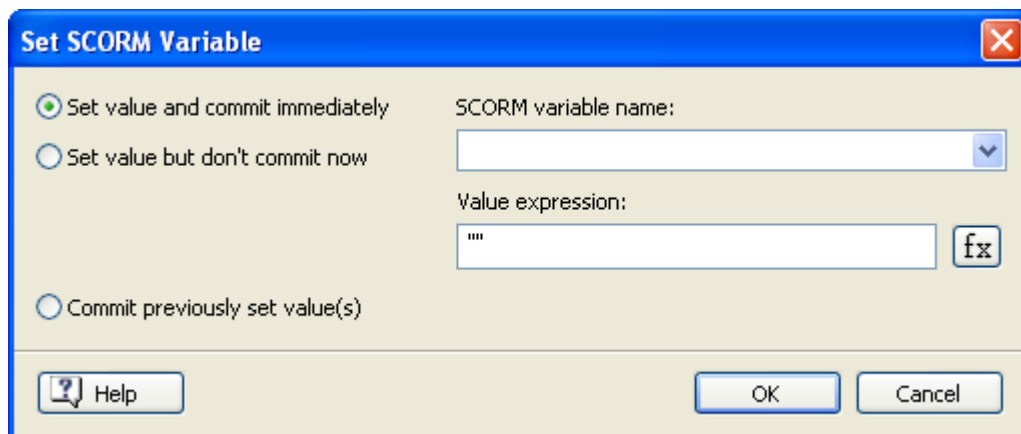
Supposing for instance that you want to set the current score of the student in the course to 93:

➢ Check **Set value and commit immediately**.

➢ In the **SCORM variable name** list, select "cmi.score.raw".

➢ In the **Value expression** field, enter 93.

➢ Click OK.

When setting SCORM array variables (with square brackets) you must specify an array index as described for 'Get SCORM Variable'. When adding new items to the array, you must make sure you fill it sequentially. Always start with array index 0, before adding an item to array index 1. Empty "slots" in the array are not

permitted, and an error will result if you try to set an item in index 2 of an array that only contains one item (at index 0). You will be able to detect such errors with the 'Get last error' functionality of the 'Get SCORM Variable' action.

If you just want to change the content of an existing item in a SCORM array variable, you must specify the array index by entering a number that is greater or equal to zero, and less that the number of items in the array.

The current number of elements in a SCORM array variable can be determined with 'Get SCORM Variable' and the related "_count" SCORM variable, as shown above.

Supposing you wanted to add a new comment from the student to the list of existing comments:

➢ Drag a **Get SCORM Variable** action in the Events dialog.

➢ Check **Get value**.

➢ In **SCORM variable name**, select "cmi.comments_from_learner._count".

➢ In **Mediator variable name**, select a Mediator variable that you have previously created, e.g. CommentCount. If the variable does not exist, Mediator will create it automatically.

➢ Click OK.

➢ Now drag a **Set SCORM Variable** action in the Events dialog.

➢ Check **Set value and commit immediately**.

➢ In **SCORM variable name**, select "cmi.comments_from_learner.[].comment", and type in "CommentCount" in the square brackets so the field contains:

    cmi.comments_from_learner.[CommentCount].comment

➢ In **Value expression**, enter the name of the Mediator string variable that holds the comment just entered by the user (typically via an input object).

➢ Click OK.

When these 'Get SCORM Variable' and 'Set SCORM variable' actions are performed, you are guaranteed that the new comment will be added to the end of the "cmi.comments_from_learner.[].comment" array, leaving no empty (and disallowed) gaps.

The radio buttons in the 'Set SCORM variable' dialog determine if the new value is sent to the LMS immediately, or if it should just be cached in the browser to be sent to the LMS later:

• If **Set value and commit immediately** is checked, the value will be sent and stored on the LMS immediately, thus eliminating any risk of "losing" the value should the browser crash, or the user navigate away from the course.

• If **Set value but don't commit now** is checked, the value will only be cached locally in the browser. This means that any subsequent 'Get SCORM variable' action referencing the SCORM variable will get the correct value (from the cache), but the LMS will not get an updated value of the variable until the course is completed.

If you need to use many 'Set SCORM Variable' actions in a row, it makes sense not to commit each value immediately, but to check **Commit previously set values** only on the last action in the row. This will commit all the previously set values to the LMS in just one communication, thus saving time and network traffic. This is also likely to make the Mediator project work more smoothly and appear more responsive, since the student will only notice one delay for the data transfer, rather than many delays for multiple data transfers.

When the course is completed and the learning session ends, all cached data is automatically committed to the LMS. It is good practice however to commit the data more often to reduce the risk of data loss, should the browser crash or something else unexpected happen.

Get SCORM Variable (SCORM tab)

→ Advanced

[SCORM] The 'Get SCORM Variable' action lets you receive data from the Learning Management System (LMS) used when creating a SCORM compliant e-learning project.

Please refer to the topic "Using SCORM" for a complete description of SCORM and how to create a SCORM course using Mediator.

Supposing for instance that you want to retrieve the name of the current student:

➢ Check **Get value**.

➢ In the **SCORM variable name** list, select "cmi.learner_name".

➢ In the **Mediator variable name** list, select a Mediator string variable that you have previously created, or just type in a new variable name, which Mediator will create automatically.

➢ Click OK.

You can now use this Mediator variable, for instance to construct a personalized greeting for the student.

The 'Get SCORM Variable' action has a few other uses, which are all related to debugging to project:

- **Get last error (as error code)** lets you determine if the previous 'Get SCORM Variable' or 'Set SCORM Variable' action resulted in an error. Generally the code returned is "0" (zero) if the previous SCORM action succeeded. If the code returned is not "0", then an error occurred. Please refer to the SCORM specifications for a complete list of error codes. A typical error is to try to retrieve a variable whose name is not recognized by the LMS due to a spelling mistake (e.g. "cmi.learner_nae" instead of "cmi.learner_name").

- **Get last error (as descriptive text)** also lets you determine if the previous 'Get SCORM Variable' or 'Set SCORM Variable' action resulted in an error. The difference is that the string returned contains a textual description of the error. This is usually much easier to interpret than an error code.

- Checking **Get diagnostic** and specifying a parameter in the **Diagnostic parameter string** text field lets you retrieve vendor specific error information. The parameter string to be used is defined by the vendor of the LMS and is outside the scope of this topic.

Some of the variable names listed in the 'SCORM variable name' field contain square brackets, e.g. "cmi.comments_from_learner.[].comment". The square brackets are meant to contain an array index, which must be typed manually.

The "cmi.comments_from_learner" variable for instance is an array of one or more text strings previously submitted by the student. To retrieve one of these strings you must specify a number in the brackets, as in the following examples:

- To get the first comment submitted by the student, you would enter:

  ```
  cmi.comments_from_learner.[0].comment
  ```

- To get the third comment, you would enter:

  ```
  cmi.comments_from_learner.[2].comment
  ```

If you try to retrieve a comment that does not exist, you will receive an empty string. Another 'Get SCORM Variable' action with 'Get last error (as descriptive text)' selected would indicate that you specified an invalid (out of range) array index.

Note that you can also enter expressions or Mediator variable names in the square brackets, as in:

```
cmi.comments_from_learner.[MyVariable-1].comment
```

When dealing with SCORM array variables (that is, with square brackets), you can determine how many elements the array contains by first performing a 'Get SCORM Variable' action with the related "_count" SCORM variable name.

To determine the current number of student comments for instance, you would use the variable "cmi.comments_from_learner._count". If you stored this number in a Mediator variable named "NumOfComments", you could then use it to retrieve the last comment submitted with "cmi.comments_from_learner.[NumOfComments-1].comment".

Resources

The Database Resource

→ Advanced

The Database Resource is used to establish a link between Mediator and a database whose fields you would like to access from within your Mediator project.

The whole process of establishing the link is described in "Using databases".
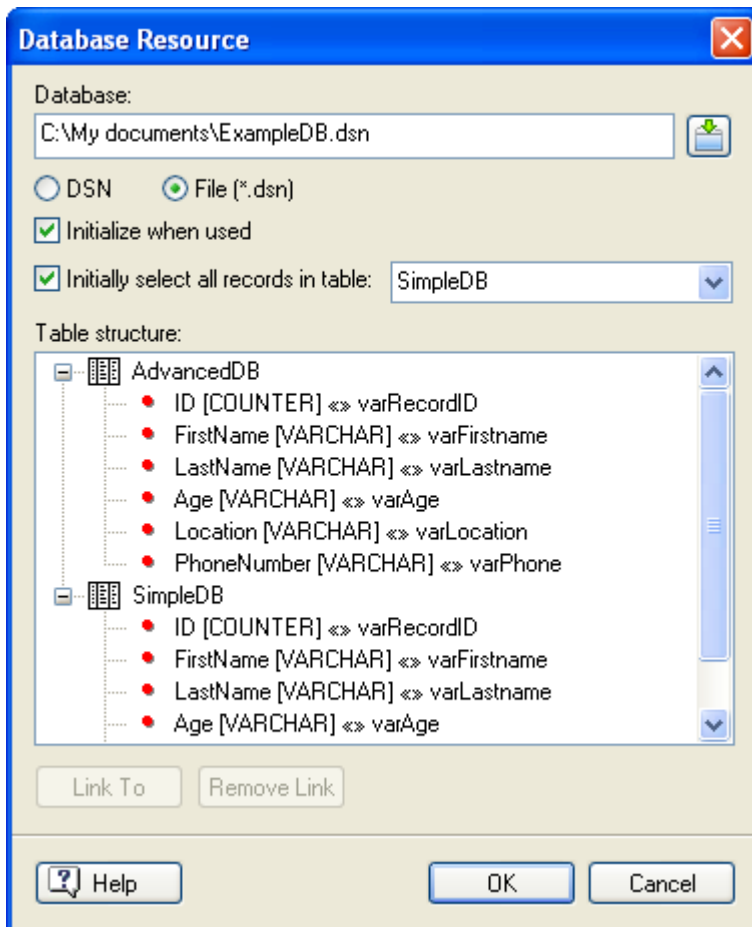
Database: Enter the name and path of the DSN file or click Browse to select it.

DSN: Make sure this option is unchecked, as Mediator always uses the 'File (*.dsn)' method.

File (*.dsn): Make sure this option is checked.

Initialize when used: Select this option if you want the chosen table to be initialized when starting the connection.

Initially select all records in table: If this option is checked all the records in the table whose name is shown on the right are selected. Do not disable this option unless you have a particular reason for doing so.

Access databases can contain more than one table. If this is the case for your database, use the 'table' field to select the table to display initially.

Table structure: When the connection between Mediator and the database is setup correctly, this field shows all the tables contained in the database, as well as all the fields contained in these tables.

- A green dot shown on the left of a field indicates that the field is not connected to a Mediator variable.

- A red dot indicates that the field is connected to a Mediator variable.

If the table structure field remains empty, despite the fact that you have filled in the rest of the dialog, something in the setup is incorrect (normally the DSN file does not point to the database file).

Link To: Use this button to connect the selected field of the table structure with a Mediator variable.

Remove Link: Use this button to remove a link between a database field and a Mediator variable.

The HTTP Request resource

The HTTP Request resource is used to communicate with web servers via its Post and Get functions.

In its simplest form you can get an HTML page and load it into a Mediator variable for further processing. In the above screenshot the resource is set up to load the HTML content of www.matchware.com into the variable ResponseVar.

You can also communicate with ASP or PHP pages to access data in databases on web servers. This resource obviously requires that you have access to a web server.

In the field **URL** you type in the complete URL of the page you want to send data to and/or receive data from. Examples could be:

```
"http://www.matchware.com/test/test.asp"
"http://www.matchware.com/product/textinfo.txt"
```

Note that this field accepts expressions. Any URL typed directly into it must therefore be enclosed in double quotes.

In **Verb** you choose whether you want to Get or Post data. Both Get and Post can send and receive data. With the HTTP protocol Get method, the data to be sent is appended to the URL as in this example:

http://www.matchware.com/test/test.asp?myvariable=20&myname=Bob

Mediator automatically attaches the data to the URL.

By contrast, the Post method inserts the data to be sent in the body of the HTTP request.

Since Get's arguments are appended to the URL, Get should only be used for sending small amounts of data (less that a few hundred characters), since servers may have a limit on the length of the URL they can handle. If in doubt, use Post rather than Get.

Data can be any expression. You can also refer to arrays in this field. See "Using project variables" for more information about arrays.

In **Response** you select the variable that will receive the response from the web server. If you asked for an HTML page it will contain the HTML code. An ASP page will usually respond with a text or a code indicating for instance whether a database transaction was successful or not.

Status Code and **Status Text** represent the same message, but Code shows it as a number and Text as explanatory text. Do not confuse this with the Response field. Although both are often used for OK/Error messages, they do not come from the same place. The Status message relates to the connection. It will for instance indicate if the file you specified in the URL does not exist or if your connection has gone down.

HTTP Request events

The reason why the HTTP Request is a resource rather than an action is that it needs to be able to react to events. The Status message is used together with the **HTTP OK** and **HTTP Error** events on the resource as follows:

- If the connection is working normally the OK event is triggered. The Status Code and Status Text variables are not changed since all is fine.

- If an error occurs or if there is no response the Error event on the resource is triggered and you can get the error code/message from Status Code and Status Text.

The Response reflects "what you are doing" on the web server containing the URL file. It may well happen that the connection is fine and that the Status fields show OK, but that you get an error because the server could not handle or figure out the request you sent.

Sometimes responses from servers can take several minutes. You should take care of this situation by starting a timeline when you send the request. After 60 seconds (or whatever you find appropriate) you can assume that the connection is not working and display a message or respond in any other way according to your specific situation.

Flash export restrictions

The following restrictions apply to the HTTP Request resource when exported to Flash:

- The server you post the request to should be located in the same domain as the Mediator Flash file.

- The data string that you post must be formatted as name-value pairs, e.g.
  name=thomas&age=26&occupation=teaching

- If the data to be posted is not specified as a string, but by setting the DataArray property, the array index names will be used as names in the name-value pairs, while the array values will be used as the values.

  For example, using a data array where myArray[name] = "thomas", myArray[age] = 26 and myArray[occupation] = "teaching", the data posted to the server will be equivalent to the data string example above.

  See "Using project variables" for more information about arrays.

- The data to be posted must not contain the characters "=" or "&", except as separators between name-value pairs.

- The data returned from the server to the Flash player should be formatted in the same way as when specifying a data string to be posted.

- In the case of an HTTP error, the Flash player does not provide any error information other than the Status Code.

HTML export restrictions

The following restrictions apply to the HTTP Request resource when exported to HTML:

- The server you post the request to should be located in the same domain as the Mediator project.

- The data to be posted must not contain the characters "=" or "&", except as separators between name-value pairs.

- The HTTP Request returns Status Code 200 if OK, 400 if an error occurred.

- If the page you post to redirects you to another URL, the response will be an error.

System variables

→ Advanced

Mediator system variables are very helpful. They can give you information about the end user's computer, the time and date, location of specific folders, etc. The system variables are particularly useful when you use Mediator's programming functions.

You can access the list of all the system variables provided by Mediator by clicking the **Expression** button fx found in most programming dialogs.

All system variables begin with the character @.

All the Mediator system variables are listed below. The type of variable that the system variable returns is shown between brackets.

@ColorBits (integer)

Description: Returns the number of colors on the screen in bits. Values are 8, 15, 16, 24 or 32.

Usage: Identical to @Colors, but @ColorBits can also detect 32-bit color resolution.

@Colors (integer)

Description: Returns the number of colors on the screen. Typical values are 16, 256, 65536 or 16777216. Screen drivers with 256 or less colors normally have a palette. Returns 1 for 32-bit color resolution.

Usage: If your project is created for a specific color resolution, you can check the color resolution of the end user's computer, and perhaps ask the user to change it before continuing. To check for color resolutions higher than 256 colors, you can use the condition:

IF @colors > 256 OR @colors < 2

This condition will be true for all color resolutions higher than 256 (including 32 bit).

@ComputerName (text)

Description: Returns the NetBIOS name of the local computer.

@CPU (integer)

Description: Returns a number representing the processor type. This is detected by a Windows call. @CPU returns 586 for unknown CPU's.

Usage: If you have created different versions of your project depending on the computer power of the end user, you can check the processor type first and run the corresponding project.

@CursorXpos and **@CursorYpos** (integer)

Description: Returns the X and Y position of the mouse pointer. For more on coordinates, see "Moving objects".

Usage: Determine if the pointer crosses a specific line or point or exits the screen. Then show an object, play a sound etc.

@Date (text)

Description: Returns a text string indicating today's date. The string format varies according to the Windows installation of the computer on which Mediator is running. This means that if Windows is using the US standard, May 10th 2010 will give the text string 5-10-2010.

Usage: You can use the date system variables to show the date, day, month, year etc. in an input object.

@DateDay (integer)

Description: The number of the current day. If the date is May 10th 2010, the content of this variable will be 10.

Usage: Check the current date using @DateDay, @DateMonth and @DateYear (see below) to see if the demonstration period for your project has expired.

@DateMonth (integer)

Description: The number of the current month. If the date is May 10th 2010, the content of this variable will be 5, since May is the 5th month.

@DateYear (integer)

Description: Indicates the current year. If the date is May 10th 2010, the content of this variable will be 2010.

@DesktopDir (text)

Description: Returns the path to the desktop folder.

Usage: Gives you the exact path to the desktop of the end user's computer. Use this for instance to place a file on the desktop during the project.

@DocDir (text)

Description: Returns the path to the folder containing the Mediator project file (.md8).

Usage: If you are planning to export a project containing actions or expressions that refer to external data files, using @DocDir to specify the location of these external data files will enable Mediator to find them when running the exported version. For this to work, you also need to copy these external data files in your Mediator project folder using the command **Prepare | Additional Data Files** before exporting the project. See "Adding data and program files" for more information.

If for instance your Mediator project file is stored in the folder "C:\MyProjects", the expression @DocDir + "MyDocument.doc" will be equivalent to the path name "C:\MyProjects\MyDocument.doc".

@Key (text)

Description: Returns the value of the last key pressed.

Usage: Check which key the user presses. Use an If action to set up actions depending on the key pressed last.

For more information about how to use this function, see "Using keyboard events".

@OS (text)

Description: Returns a text string identifying the operating system used ("Windows 2000", "Windows XP", "Windows 2003", "Vista", "Unknown").

Usage: Some commands may vary depending on the operating system used. Using @OS you can check the operating system, and then set up the corresponding commands with the If action.

@PageCount (integer)

Description: Returns the number of pages in the document.

Usage: Gives you an easy way to create a page counter, for instance with:

"You are now on page " + @PageNum +" of " + @PageCount

@PageName (text)

Description: Returns the name of the current page.

Usage: You can save the name of the current page for further use, e.g. if the end user leaves the project and wants to return to the same page later. Or you can place the value of @PageName in an INI file, and jump to the page the next time the user opens your project.

@PageNum (integer)

Description: Returns the number of the current page. The first page is number 1.

Usage: See @PageCount.

@PageRange (integer)

Description: This variable indicates the number of pages in the current chapter (see "Using the Page list").

Usage: Gives you an easy way to create a page counter within the current chapter, for instance with:

"You are now on page " + @PageNum +" of " + @PageRange

@ProgramDir (text)

Description: Returns the path to the folder containing the runtime Mediator Viewer (md8rntm.exe).

Usage: Lets you place additional program files in the same folder as the md8rntm.exe file.

If you are planning to export a project containing actions or expressions that refer to external program files, using @ProgramDir to specify the location of these external program files will enable Mediator to find them when running the exported version. For this to work, you also need to copy these external program files in the same folder as the md8rntm.exe file using the command **Prepare | Additional Program Files** before exporting the project. See "Adding data and program files" for more information.

@ScreenXsize and **@ScreenYsize** (integer)

Description: Returns the width (X) and height (Y) of the screen indicated in the number of physical pixels.

Usage: Check if the end user's screen resolution is high enough for your project. If not ask the end user to change it, or create a project for each screen resolution.

@SystemDir (text)

Description: Returns the path to the Windows system folder.

Usage: When you create INI files (or other files) you can choose to save them in the Windows system folder, enabling you to access them later.

WARNING: This is for advanced users only. Do not use if you are uncertain of the consequences.

@TempDir (text)

Description: Returns the path to the user's Temp folder (a folder that stores files temporarily).

Usage: When you create INI files (or other files) you can choose to save them in the user's temporary folder, enabling you to access them later. However, if the user deletes the temp folder, the files created in it are also deleted.

@ThisObject

Description: Is used in actions to refer to the object to which the action is applied.

Usage: If you have programmed an object to be hidden when clicked, you can use @ThisObject instead of the object name. This is especially useful if you copy the same action to many objects that all use this action. Also useful when creating Drag&Drop functionality.

@Time (text)

Description: Returns a text string holding the computer system time.

Format: "HH:MM:SS", HH=hours, MM=minutes and SS=seconds.

Usage: You can use the time system variables to show the time, hour, minutes etc. in an input object.

@TimeHour (integer)

Description: Returns the specific "hour" number for the computer system time.

Usage: Check the time required by the user to perform a particular action using @TimeHour, @TimeMin and @TimeSec (see below).

@TimeMin (integer)

Description: Returns the specific "minute" number for the computer system time.

@TimeSec (integer)

Description: Returns the specific "second" number for the computer system time.

@Timer (integer)

Description: The number of seconds since Mediator was started

Usage: Use this for instance to calculate the time spent on a specific task by saving the @Timer value at the start of the task and subtracting this initial value from the value of @Timer at the end of the task.

@UserName (text)

Description: Returns the name of the user currently logged on the computer.

@WindowDir (text)

Description: Returns the path to the Windows folder.

Usage: When you create INI files (or other files) you can choose to save them in the Windows folder, enabling you to access them later.

WARNING: This is for advanced users only. Do not use if you are uncertain of the consequences.

Functions

→ Advanced

Mediator provides many different built-in functions that you can use in your expressions.

You can access a list of all these functions by clicking the **Expression** button fx available in most of the programming dialogs.

An expression may be a combination of project variables, system variables, numbers, object properties in the Object.Property notation, functions and fixed text between quotes, all linked with operators. See "Using expressions" for more information

Syntax

All functions in Mediator have one of the two following formats:

- **Function (x)**, where **x** is the variable on which the function is performed.

    Example:

    Here the function COS (Cosine) is applied to the variable Trig, and the result is placed in the variable Input.
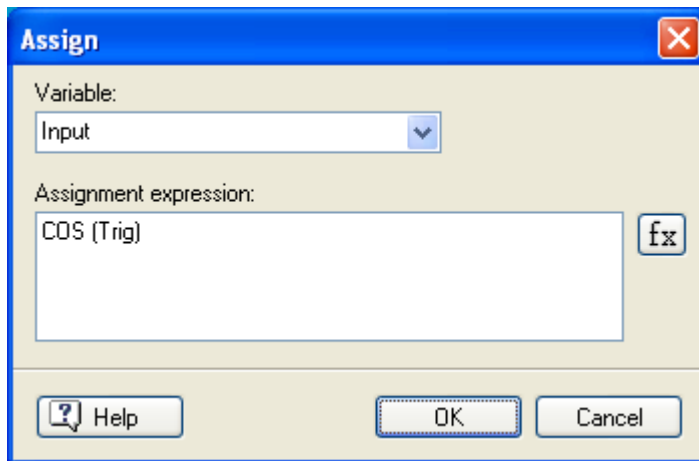
- **Function (x, p)** where **x** is the variable and **p** represents one or more parameters, each separated with a comma.

    Example:

    Here the function FORMAT is applied to the floating point variable Num. The extra parameter ".2f" specifies the number of digits after the decimal point (rounding the last digit if necessary). The result is placed in the variable Input.
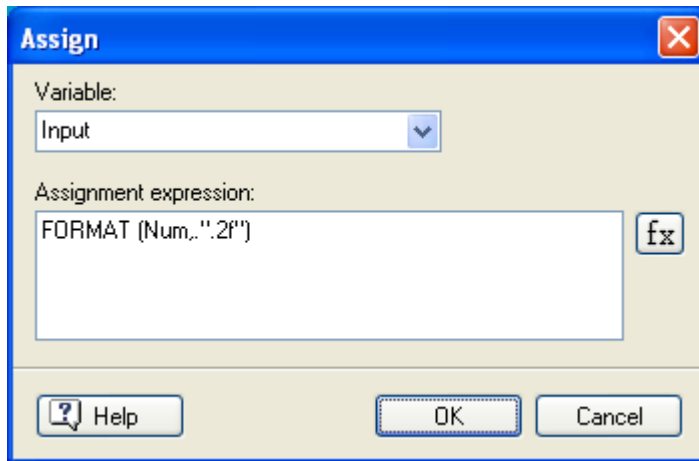
List of functions

Each function is described below, with an example of its format and possible use. The following abbreviations are used for representing the various expression types available:

txt   Text variable, expression or fixed value

f   Floating point variable, expression or fixed value

n   Integer variable, expression or fixed value

b   Boolean (True / False) variable

x and **y**   Variables that the function is applied to

The functions available are listed below in alphabetical order.

ABS (n) or ABS (f)

ABS is short for "absolute". Returns the numerical (absolute) value of the variable or expression. Returns an expression of the same type as the input type.

Examples:

ABS (x)   Returns the positive value of x

ABS (-10) = 10

ABS (5) = 5

ABS (-10.25) = 10.25

ARCCOS (n) or ARCCOS (f)

ARCCOS is the trigonometric function "arc cosine".

Examples:

ARCCOS (x)   Returns the value (in radians) of the arc cosine of x.

ARCCOS (0) = 1.571 ($\pi/2$)

ARCCOS (1) = 0

ARCCOS (0.5) = 1.047 ($\pi/3$)

ARCSIN (n) or ARCSIN (f)

ARCSIN is the trigonometric function "arc sine".

Examples:

ARCSIN (x)   Returns the value (in radians) of the arc sine of x.

ARCSIN (0) = 0

ARCSIN (1) = 1.571 (π/2)

ARCSIN (0.5) = 0.524 (π/6)

ARCTAN (n) or ARCTAN (f)

ARCTAN is the trigonometric function "arc tangent".

Examples:

ARCTAN (x)   Returns the value (in radians) of the arc tangent of x.

ARCTAN (0) = 0

ARCTAN (1) = 0.785 (π/4)

COS (n) or COS (f)

COS is short for the trigonometric function "cosine".

Examples:

COS (x)   Returns the value (in radians) of the cosine of x.

COS (0) = 1

COS (π) = -1

COS (π/2) = COS (1.5*π) = 0

COS (π/3) = 0.5

See SIN further down.

FLOAT (n) or FLOAT (txt)

FLOAT is short for "floating point". Converts an integer or text to a floating point number.

Examples:

FLOAT ("10.25") = 10.25

FLOAT (10) = 10

To control the number of digits after the decimal point, use the function FORMAT or set the number in the Properties dialog of the input object that shows the value of the variable.

FORMAT (n) or FORMAT (txt)

FORMAT converts integer or floating point variables to text. FORMAT is similar to STRING, however FORMAT lets you add one or more extra (optional) parameters to format the number.

You must enter the extra parameter between quotes, e.g. FORMAT (x, "010.2f")

f The most commonly use parameter is probably f. It allows you to control the number of digits after the decimal point.

Examples:

FORMAT (10.25,".4f") = "10.2500" Converts 10.25 to text with 4 digits after the decimal point

FORMAT (x,".2f") Converts the variable x to text with 2 digits after the decimal point

FORMAT (x,".0f") Converts the variable x to text with 0 digits after the decimal point

e Returns the value as a decimal number multiplied by the appropriate power of 10.

Examples:

FORMAT (50000, ".e") = 5e + 004, which means 5 x 10 to the power 4

FORMAT (6594, ".3e") = 6.594e + 003, which means 6.594 x 10 to the power 3

FORMAT (6594, ".5e") = 6.59400e + 003, which means 6.594 x 10 to the power 3

FORMAT (x, ".e")

E Same as e but using E as the indicator for exponent.

Examples:

FORMAT (50000, ".E") = 5E + 004, which means 5 x 10 to the power 4

FORMAT (6594, ".3E") = 6.594E + 003, which means 6.594 x 10 to the power 3

g Shows the value using the **f** format if possible, otherwise the **e** format. The maximum amount of digits allowed when using the **f** format is 6. After 6 digits, the **e** format is used. Decimal point and following zeros are only included if necessary.

Examples:

FORMAT (50000, "g") = 50000

FORMAT (50000.33, "g") = 50000.3   (using 6 significant digits)

FORMAT (5000000, "g") = 5E + 006   (as the number has more than 6 significant digits, the **e** format is used)

FORMAT (x, "g")

G Same as g but using G as the indicator for exponent.

If an error occurs in the formatting parameter, or if this is left out, the "g" format is used.

Adding leading or trailing zeros or spaces using 0n1.n2 or n1.n2

You can add leading zeros in front of any given variable by using the parameter **0n1.n2**, where:

- n1 is the total number of digits in the number (including the decimal point)

- n2 is the number of digits after the decimal point

Similarly, you can add leading spaces in front of any given variable by using the parameter **n1.n2**, where n1 and n2 have the same meaning as described above.

Using the minus sign (-) you can specify that trailing spaces should be inserted to the right of the decimal point.

Examples:

FORMAT (x, "010.2f") Returns 2 digits after the decimal point, and up to 7 zeros in front of the variable.

FORMAT (x, "8.4f") Returns 4 digits after the decimal point, and up to 3 spaces in front of the variable.

FORMAT (x, "-8.4f") Returns 4 digits after the decimal point, and up to 3 spaces after the decimal digits.

INT (f) or INT (txt)

INT is short for "integer". Converts floating point or text variables to integers.

Examples:

INT (x)   Converts the content of variable x to an integer.

INT ("10") = 10

INT (10.25) = 10

INT (10.7) = 10

Floating point variables are not rounded up. The decimal part is truncated instead. To make sure the value will be rounded up when necessary, just add 0.5 to the number before performing the INT function, e.g. INT (x + 0.5).

LEN (txt)

LEN is short for "length". Returns the length of the text, i.e. the number of characters in the text expression.

Examples:

LEN ("Test") = 4

LEN ("") = 0

LOG (n) or LOG (f)

LOG is the mathematical function "logarithm".

Examples:

LOG (x)   Returns the value of the logarithm (to base e) of x.

LOG (1) = 0

LOG (10) = 2.3026...

LOG (100) = 4.6051...

LOWER (txt)

Converts all the characters of a text variable to lower case.

Examples:

LOWER ("HORSE") = "horse"

LOWER ("Horse") = "horse"

LOWER ("HoRsE") = "horse"

See the function UPPER further down.

NOT (n) or NOT (b)

Inverts a True/False expression. Although the inversion is done at the bit level, since a True/False expression has a value of either 1 or 0, this function returns its inverse.

Objname functions

These functions allow you to get information about an object at runtime. During an animation, you can for instance check if an object has reached the edge of the screen.

In all the Objname functions below, 'Objname' indicates the name of the object.

The parameter is one of the object properties, such as X, Y, Height, Width. Please refer to the appendix "Mediator object properties" for a list of all the properties available for each object.

Objname.X

Returns the position of the left edge of an object.

Example:

Button.X

Objname.X + Objname.Width

Returns the position of the right edge of an object.

Objname.Width returns the width of the object, so adding this to Objname.X will give you the right edge of the object.

Example:

Picture.X + Picture.Width

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Objname.Y

Returns the position of the top edge of an object.

Example:

Polygon.Y

Objname.Y + Objname.Height

Returns the position of the bottom edge of an object.

Objname.Height returns the height of the object, so adding this to Objname.Y will give you the bottom edge of the object.

Example:

Video.Y + Video.Height

Objname.Visible

This function returns True if the object is visible.

Example:

Picture.Visible will return the value TRUE if the picture is currently shown, and FALSE if it is hidden.

RGB (n1,n2,n3)

Combines the RGB (Red, Green and Blue) values in the range 0 to 255 given in the n1, n2 and n3 parameters and returns a single value that can be used to set the color of a particular object.

Example:

A Set Property action with "Rectangle.FillColor = RGB(128,0,128)" would change the rectangle color to purple.

RND (n1,n2)

RND is short for "random". Returns a random integer in the interval n1 to n2 (both included). The interval between n1 and n2 cannot exceed 65536.

Examples:

RND (1,10) Generates a random number between 1 and 10.

RND (1,x)   Generates a random number between 1 and x.

RND (x, y) Generates a random number between x and y.

SIN (n) or SIN (f)

SIN is short for the trigonometric function "sine".

Examples:

SIN (x)   Returns the value (in radians) of the sine of x.

SIN (0) = SIN (π) = 0

SIN $(\pi/2)$ = 1

SIN $(1.5*\pi)$ = -1

SIN $(\pi/6)$ = 0.5

See COS at the top.

STRING (n) or STRING (f)

Converts a number to text.

Examples:

    STRING (10) = "10"   Converts an integer to text.

    STRING (-5) = "-5"   Converts an integer to text.

    STRING (10.25) = "10.25"   Converts a floating point number to text.

    STRING (x) Converts the variable x to text.

SUBPOS (txt1,txt2)

Returns the position of one piece of text in another (e.g. txt2 in txt1).

Please note that this function is case-sensitive. In other words, it makes a distinction between upper-case and lower-case characters.

If txt2 is not found in txt1, a zero is returned.

Examples:

    SUBPOS ("aaaBBB","aB") = 3   (the combination aB starts from the third letter of the first text)

    SUBPOS ("aaaBBB","ab") = 0   (the combination of a lower a and lower b is not present)

    SUBPOS ("abCdefghijk","def") = 4

    SUBPOS ("22334455","45") = 6

    SUBPOS (x,y)   Returns the starting position of the content of variable y in variable x.

SUBSTR (txt,n1,n2)

Returns a part (a sub-string) of the text expression txt. n1 indicates the start position of the sub-string to be returned and n2 indicates its length (i.e. the number of characters to return).

Please note that this function is case-sensitive. In other words, it makes a distinction between upper-case and lower-case characters.

Examples:

    SUBSTR ("abCDefghijk",4,3) = "Def"   (starts at letter 4, 3 letters long)

    SUBSTR ("ABCDEFGHIK",2,4) = "BCDE"   (starts at letter 2, 4 letters long)

    SUBSTR ("abCD",3,4) = "CD"   (starts at letter 3. Only 2 letters long, since the end of the original string is reached)

    SUBSTR (x,3,5)   Returns a sub-string of 5 characters long, starting at character 3 in the content of variable x.

SQR (n) or SQR (f)

SQR is short for "square root". Returns the square root of the variable or expression.

Examples:

    SQR (x)   Returns the square root of the variable x.

    SQR (x + y)   Returns the square root of the sum of variable x and variable y.

    FORMAT (SQR (x), ".2f")   Returns the square root of the variable x with 2 decimals.

TAN (n) or TAN (f)

TAN is the trigonometric function "tangent".

Examples:

    TAN (x)   Returns the value (in radians) of the tangent of x.

    TAN (0) = 0

    TAN ($\pi/4$) = 1

UPPER (txt)

Converts all the characters of a text variable to upper case.

Examples:

    UPPER ("horse") = "HORSE"

    UPPER ("Horse") = "HORSE"

    UPPER ("HoRsE") = "HORSE"

See the function LOWER further up.

SQL statements

ODBC databases uses SQL (Structured Query Language) for queries. SQL is a very comprehensive language in which you can create, alter, delete and maintain databases. This section is only a brief description of the SQL commands used to perform the main tasks from Mediator. If you want go look further into SQL the following literature could be useful.

Learning SQL by Alain Beaulieu (2005, O'Reilly & Associates, ISBN 0596007272)

Introduction to SQL: Mastering the Relational Database Language by Rick F. Van der Lans (2006, Addison Wesley Professional, ISBN 0321305965)

SQL Cookbook by Anthony Molinaro (2005, O'Reilly, ISBN 9780596009762)

Understanding SQL by Martin Gruber (1990, SYBEX San Francisco, ISBN 0895886448)

SQL Instant Reference by Martin Gruber (1993, SYBEX San Francisco, ISBN 0782111483)

A Guide to the SQL Standard by C.J. Date and Hugh Darwen (1993, Addison Wesley Boston, ISBN 020155822X)

The SELECT command

SELECT * FROM DemoTable SELECT FirstName FROM DemoTable SELECT FirstName, LastName FROM DemoTable	This is the single most used SQL command in its simplest form. The * symbol will select all fields (not records) in the table. In Mediator you normally always use the * instead of specifying individual field names. If Individual fields are selected, all other field links are frozen and only the selected fields changes when the user browses.

The WHERE clause

SELECT * FROM DemoTable WHERE FirstName = 'mike'	All records where the field FirstName equals "mike" are selected. After the command is executed, the user can browse in the result records only. To gain access to the entire table again, execute the command SELECT * FROM DemoTable
SELECT * FROM DemoTable WHERE FirstName = 'mike' OR LastName = 'peters'	All records where the field FirstName equals "mike" or LastName equals "peters" are selected. For a result where both conditions are met, use AND instead of OR.

The ORDER BY clause

Sorts a query's resulting records on a specified field or fields in ascending or descending order.

Syntax: SELECT field list

FROM table

WHERE select criteria

ORDER BY field1 [ASC | DESC][, field2 [ASC | DESC][, ...]]

SELECT * FROM DemoTable ORDER BY LastName	Selects all records and sorts them by LastName in ascending order.
SELECT * FROM DemoTable ORDER BY LastName DESC	Selects all records and sorts them by LastName in Descending order.
SELECT * FROM DemoTable WHERE LastName LIKE 'peters' ORDER BY LastName DESC, FirstName ASC	Selects the records where LastName matches "peters" records and sorts them by LastName in Descending order and FirstName in ascending order.

Comparison Operators

Operator	Comparison
=	Equal
= =	Exactly equal
LIKE	SQL LIKE
<>, !=, #	Not equal
>	More than
>=	More than or equal to
<	Less than
<=	Less than or equal to

LIKE Operator

You can use the Like operator to find values in a field that match the pattern you specify. For search patterns, you can specify the complete value (for example, Like "Smith"), or you can use wildcard characters like those recognized by the operating system to find a range of values (for example, Like "Sm*").

The following example returns data that begins with the letter P followed by any letter between A and F and three digits:

SELECT * FROM DemoTable WHERE LastName LIKE 'P[A-F]###'

This example returns a list of employees whose names begin with the letters A through D.

SELECT * FROM DemoTable WHERE LastName LIKE '[A-D]*'

Patterns

The following table shows how you can use LIKE to test expressions for different patterns.

Kind of match	Pattern	Match	No Match
Multiple characters	'a*a'	'aa', 'aBa', 'aBBBa'	'aBC'
	'*ab*'	'abc', 'AABB', 'Xab'	'aZb', 'bac'
	'ab*'	'abCDefg', 'abc'	'cab', 'aab'
Special character	'a[*]a'	'a*a'	'aaa'
Single character	'a?a'	'aaa', 'a3a', 'aBa'	'aBBBa'
Single digit	'a#a'	'a0a' , 'a1a' , 'a2a'	'aaa' , 'a10a'
Range of characters	'[a-z]'	'f' , 'p' , 'j'	'2' , '&'

Outside the range	'[!a-z]'	'9' , '&' , '%'	'b' , 'a'
Not a digit	'[!0-9]'	'A' , 'a' , '&' , '~'	'0' , '1' , '9'
Combination	'a[!b-m]#'	'An9' , 'az0' , 'a99'	'abc' , 'aj0'

Example SQL Queries

SELECT * FROM Book	Selects all rows and columns from table Book.
SELECT Title, RetailPriceAmount FROM Book WHERE RetailPriceAmount > 20.0	Selects columns Title and RetailPriceAmount from table Book, returning only the rows that match the WHERE clause.
SELECT * FROM Book WHERE CatCode = 'LL' OR CatCode = 'RR'	Selects all columns from table Book, returning only the rows that match the WHERE clause.
SELECT * FROM Book WHERE CatCode IS NULL	Selects all columns from table Book, returning only rows where the CatCode column is NULL.
SELECT * FROM Book ORDER BY Title	Selects all columns from table Book, ordering by Title, in ascending order. To specify descending order, add DESC after the ORDER BY Title clause.
SELECT Title FROM Book WHERE RetailPriceAmount >= 20.0 AND RetailPriceAmount <= 35.0	Selects records where RetailPriceAmount conforms to the WHERE expression.

Appendix

Appendix 1: Keyboard shortcuts

The table below lists all the keyboard shortcuts provided by Mediator.

Keyboard shortcut	Description
Ctrl + N	Create a new document
Ctrl + O	Open and browse for an existing document
Ctrl + P	Print the active document
Ctrl + Q	Export the project using Quick Export
Ctrl + S	Save the active document
Ctrl + C	Copy the selected data to the clipboard
Ctrl + X	Cut the selected data to the clipboard
Ctrl + V	Paste the data contained in the clipboard
Ctrl + Z	Undo the last action
Alt + F4	Exit
Insert	Create new page
Ctrl + A	Select all the objects on the page
Ctrl + B	Place the selected objects behind all the other objects
Ctrl + D	Duplicate the selected objects
Ctrl + F	Place the selected objects in front of all the other objects
Ctrl + G	Group the selected objects
Ctrl + H	Define part of a text object as hypertext
Ctrl + U	Ungroup a group of objects
Ctrl + drag	Resize the selected object freely in both X and Y directions
Shift + drag	Resize the selected object symmetrically in all directions
Ctrl + click	Select several objects on the page
Shift + click	Select a range of objects in the Object list
Ctrl + double-click text object	Edit the text object on the background color last defined for it
Shift + double-click text object	Edit the text object on a white background
F1	Help
F2	Rename the selected page in the Page list, Rename the selected object in the Object list
F2	Align the selected objects
F3	Show/Hide the selected objects

F4 or **Ctrl + F10**	Show/Hide the Object list
F5	Run the document
F6 or **Ctrl + F5**	Run the page
Shift + F6	Preview the current HTML or Flash page in your default Internet browser
F7	Spellcheck the document
F8	Show/Hide the Page list
F9	Show the Events dialog for the current page
F11	Check the document for design errors
F12	Show/Hide the Properties dialog
Ctrl + F7	Spellcheck the page
Ctrl + F8	Show the Properties dialog for the current page
Ctrl + F9	Open the Variables dialog
Ctrl + F11	Check the page for design errors
Spacebar + drag	Move the page within the workspace
Alt or **F10**	Show the access keys on the ribbon
Ctrl + F1	Minimize or restore the ribbon

Appendix 2: Mediator object properties

→ Advanced

You can use the *Object.Property* notation to get or set an object property with the Set Property action, the Assign action and many actions of the Programming tab in the Events dialog.

See "Using expressions" for more information.

This appendix lists properties and methods for all the Mediator objects which you can use in these actions, as well as in runtime script and macro script. Note that some are only available from macro script (as shown in the table).

The properties marked as "Read only" in the tables below can be used in programming actions using the *Object.Property* notation, but do not appear in the list of properties of the Set Property action.

Object (all objects)

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Events	Events	X	X	
Height	Integer		X	X*
Keywords	String		X	
Name	String	X	X	X
ObjectType	String	X	X	X
Size	Floating			X*
Tab Stop	Boolean		X	
Visible	Integer		X	X
Width	Integer		X	X*
X	Integer		X	X
Y	Integer		X	X

* Only for objects that allow runtime scaling

ActiveX object

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
ActiveX	IDispatch	X		X
Event	String	X		X
Events				
Name				
ActiveX				

Animated GIF

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
AutoStart	Boolean		X	
Discardable	Boolean		X	
LoadOnShow	Boolean		X	
Path	String		X	X
Repeat	Boolean		X	
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X

Animation Path

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X

Bump Map

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Discardable	Boolean		X	
LoadOnShow	Boolean		X	
NonStretchBottom	Integer		X	
NonStretchLeft	Integer		X	
NonStretchRight	Integer		X	
NonStretchTop	Integer		X	
Opacity	Integer		X	X
Path	String		X	X
Tile	Boolean		X	

Button

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Bold	Boolean		X	
Border	Integer		X	
ButtonType	Integer (enum)		X	
DownAlphaPath	String		X	X

DownPicturePath	String		X	X
FocusAlphaPath	String		X	X
FocusColor	Integer		X	X
FocusPicturePath	String		X	X
Font	String		X	
Italic	Boolean		X	
Margin	Integer		X	
NonStretchBottom	Integer		X	
NonStretchLeft	Integer		X	
NonStretchRight	Integer		X	
NonStretchTop	Integer		X	
NormalAlphaPath	String		X	X
NormalColor	Integer		X	X
NormalPicturePath	String		X	X
PictureAlignment	Integer (enum)		X	
PictureDiscardable	Boolean		X	
PictureEnableTransparent	Boolean		X	X
PictureLoadOnShow	Boolean		X	
PictureTransparentColor	Integer		X	X
PressedColor	Integer		X	X
Text	String		X	X
TextAlignment	Integer (enum)		X	
TextColor	Integer		X	X
TextPaddingBottom	Integer		X	
TextPaddingLeft	Integer		X	
TextPaddingRight	Integer		X	
TextPaddingTop	Integer		X	
TextSize	Integer		X	X
Underline	Boolean		X	

Drawing

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X

GlowWidth	Integer		X	X
GlowX	Integer		X	X
GlowY	Integer		X	X
Opacity	Integer		X	X
Path	String		X	
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X

Embedded Document

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
IExplorer	IDispatch	X		X
StatusText	String	X		X
URL	String		X	X
Events				
Name				
DocumentComplete				

Flash® object

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
BackgroundColor	Integer		X	X
Flash	IDispatch	X		X
FrameNum	Integer			X
Loop	Boolean		X	X
Movie	String		X	X
Playing	Boolean			X
Quality	Integer			X
ReadyState	Integer	X		X
TotalFrames	Integer	X		X

Headline

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Antialiasing	Boolean		X	X
Bold	Boolean		X	X
CurveHeight	Integer		X	X
CurveLength	Integer		X	X
CurveOffset	Integer		X	X
Font	String		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X
GlowX	Integer		X	X
GlowY	Integer		X	X
Italic	Boolean		X	X
Opacity	Integer		X	X
OutlineColor	Integer		X	X
OutlineDashOffset	Integer		X	X
OutlineStyle	Integer (enum)		X	X
OutlineWeight	Integer		X	X
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X
Text	String		X	X
TextFillCenterX	Integer		X	X
TextFillCenterY	Integer		X	X
TextFillColor2	Integer		X	X

TextFillGradientAngle	Integer		X	X
TextFillGradientType	Integer (enum)		X	X
TextFillTextureOptions	Integer (enum)		X	X
TextFillTexturePath	String		X	X
TextFillType	Integer		X	X
WarpX	Integer		X	X
WarpY	Integer		X	X
Weight	Integer		X	X

Hypertext

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Color	Integer		X	X
Transparent	Boolean		X	X
Type	Integer (enum)	X	X	X

Input Object

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Alignment	Integer (enum)		X	X
AutoScrollHorz	Boolean		X	
AutoScrollVert	Boolean		X	
BackgroundColor	Integer		X	X
Bold	Boolean		X	X
DecimalPoint	String		X	
EnableFPdecimals	Boolean		X	
FocusSelect	Boolean		X	
Font	String		X	X
FPdecimals	Integer	X	X	X
FrameColor	Integer		X	X
FrameWidth	Integer		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X
GlowX	Integer		X	X
GlowY	Integer		X	X

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Italic	Boolean		X	X
Multiline	Boolean		X	
ReadOnly	Boolean		X	X
ScrollbarHorz	Boolean		X	
ScrollbarVert	Boolean		X	
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X
Text	String		X	X
TextArray	Array		X	X
TextColor	Integer		X	X
TextSize	Integer		X	X
Transparent	Boolean		X	
Value	Floating		X	X
VisibleFrame	Boolean		X	
Weight	Integer		X	

List Box

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
BackgroundColor	Integer		X	X
Bold	Boolean		X	
ButtonColor	Integer		X	X
Count	Integer	X		X
Data	String		X	X
DataArray	Array		X	X
Font	String		X	
FrameColor	Integer		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X

GlowX	Integer		X	X
GlowY	Integer		X	X
Italic	Boolean		X	
ScrollbarColor	Integer		X	X
ScrollbarSize	Integer		X	
ScrollPosition	Integer			X
SelectedBackgroundColor	Integer		X	X
SelectedIndex	String		X	X
SelectedString	String		X	X
SelectedTextColor	Integer		X	X
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X
TextColor	Integer		X	X
TextSize	Integer		X	
Underline	String		X	

Methods				
Name	*Return type*	*Parameters*	*Macro*	*Runtime*
AddString	None	String		X
ClearList	None	None		X

Media Player

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
AutoStart	Boolean		X	X
Balance	Integer		X	X
CurrentMarkerName	String	X		X
EnableContextMenu	Boolean		X	X
FileName	String		X	X
Mplayer	IDispatch	X		X
PlayCount	Integer		X	X
uiMode	String		X	X
uiModeEnum	Integer		X	X

Volume	Integer		X	X
Events				
Name				
MarkerHit				

Picture

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
AlphaPath	String		X	X
Antialiasing	Boolean		X	
AutoScroll	Boolean		X	
Discardable	Boolean		X	
DragScroll	Boolean		X	
EnableScrollbar	Boolean		X	
EnableTransparent	Boolean		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X
GlowX	Integer		X	X
GlowY	Integer		X	X
LoadOnShow	Boolean		X	
Opacity	Integer		X	X
Path	String		X	X
PictureHeight	Integer	X	X	X
PictureWidth	Integer	X	X	X
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
ScrollbarButtonColor	Integer		X	X
ScrollbarColor	Integer		X	X
ScrollbarFrameColor	Integer		X	X
ScrollbarSize	Integer		X	
ScrollPositionX	Integer			X
ScrollPositionY	Integer			X
ShadowBlur	Integer		X	X

ShadowColor		Integer		X	X
ShadowExclObjShape		Boolean		X	
ShadowOpacity		Integer		X	X
ShadowWidth		Integer		X	X
ShadowX		Integer		X	X
ShadowY		Integer		X	X
Tile		Boolean		X	
TransparentColor		Integer		X	X
XwrapAround		Boolean		X	
Methods					
Name	*Return type*	*Parameters*		*Macro*	*Runtime*
AdjustSize	None	None		X	

Polygon

Properties					
Name		*Return type*	*Read only*	*Macro*	*Runtime*
ArrowSize		Integer		X	
ArrowStyle		Integer (enum)		X	
End		Floating		X	X
EndArrow		Boolean		X	
FillCenterX		Integer		X	X
FillCenterY		Integer		X	X
FillColor		Integer		X	X
FillColor2		Integer		X	X
FillGradientAngle		Integer		X	X
FillGradientType		Integer (enum)		X	X
FillTextureOptions		Integer (enum)		X	X
FillTexturePath		String		X	X
FillType		Integer (enum)		X	X
GlowBlur		Integer		X	X
GlowColor		Integer		X	X
GlowExclObjShape		Boolean		X	
GlowOpacity		Integer		X	X
GlowWidth		Integer		X	X
GlowX		Integer		X	X
GlowY		Integer		X	X
IsClosed		Boolean	X	X	

Opacity	Integer		X	X
OutlineColor	Integer		X	X
OutlineDashOffset	Integer		X	X
OutlineStyle	Integer (enum)		X	X
OutlineWeight	Integer		X	X
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X
Start	Floating		X	X
StartArrow	Boolean		X	

Rectangle

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
AlphaPath	String (path)		X	X
Antialiasing	Boolean		X	X
FillCenterX	Integer		X	X
FillCenterY	Integer		X	X
FillColor	Integer		X	X
FillColor2	Integer		X	X
FillGradientAngle	Integer		X	X
FillGradientType	Integer (enum)		X	X
FillTextureOptions	Integer (enum)		X	X
FillTexturePath	String		X	X
FillType	Integer (enum)		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X

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GlowX	Integer		X	X
GlowY	Integer		X	X
Opacity	Integer		X	X
OutlineColor	Integer		X	X
OutlineDashOffset	Integer		X	X
OutlineStyle	Integer (enum)		X	X
OutlineWeight	Integer		X	X
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X

Text

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
Alignment	Integer (enum)		X	
AutoAdjustHeight	Boolean		X	
BackgroundColor	Integer		X	X
ButtonColor	Integer		X	X
EnableScrollbar	Boolean		X	
FrameColor	Integer		X	X
GlowBlur	Integer		X	X
GlowColor	Integer		X	X
GlowExclObjShape	Boolean		X	
GlowOpacity	Integer		X	X
GlowWidth	Integer		X	X
GlowX	Integer		X	X
GlowY	Integer		X	X
Margin	Integer		X	
MaxScrollPosition	Integer	X		X
Opacity	Integer		X	X

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ScrollbarColor	Integer		X	X
ScrollPosition	Integer			X
ScrollbarSize	Integer		X	
ShadowBlur	Integer		X	X
ShadowColor	Integer		X	X
ShadowExclObjShape	Boolean		X	
ShadowOpacity	Integer		X	X
ShadowWidth	Integer		X	X
ShadowX	Integer		X	X
ShadowY	Integer		X	X
TopLine	Integer			X
TransparentBackground	Boolean		X	X
UseFlashDeviceFonts	Boolean		X	

Video

Properties				
Name	*Return type*	*Read only*	*Macro*	*Runtime*
AlwaysOnTop	Boolean		X	
AutoStart	Boolean		X	X
Discardable	Boolean		X	
EnableTransparent	Boolean		X	X
Frame	Integer			X
LoadOnShow	Boolean		X	
Path	String		X	X
Repeat	Boolean		X	X
Rotate	Integer		X	X
RotateCenterX	Integer		X	X
RotateCenterY	Integer		X	X
TransparentColor	Integer		X	X
Methods				
Name	*Return type*	*Parameters*	*Macro*	*Runtime*
AdjustSize	None	None	X	

Appendix 3: Macro objects

This appendix lists the properties and methods for Mediator script objects that can only be used from macro script.

Mediator script objects are Mediator objects made available to the script. By contrast, script objects are objects in the script such as the File System object.

Actions

Properties			
Name	*Return type*	*Read only*	*Macro*
Count	Integer	X	X

Methods			
Name	*Return type*	*Parameters*	*Macro*
Add	Action	String (o8o path), Integer (index)	X
Clear	None	None	X
Item	Action	String|Integer	X
Remove	None	String|Integer	

Application

Properties			
Name	*Return type*	*Read only*	*Macro*
ActiveDocument	Document	X	X
ActiveWindow	Window	X	X
Version	Integer (900 for Mediator 9)	X	X

Methods			
Name	*Return type*	*Parameters*	*Macro*
BrowseForFolder	String	String (title)	X
BrowseForPicture	String	String (title)	X
ChooseColor	Integer	Integer (defaultcolor)	X
Quit	None	None	X

Document

Properties			
Name	*Return type*	*Read only*	*Macro*
BorderColor	Integer		X
Height	Integer	X	X
IconPath	String		X
Pages	Pages	X	X
Title	String		X

Width	Integer		X	X

Methods				
Name	*Return type*	*Parameters*		*Macro*
AddPage	None	String (o8o path)		X
AddVariable	Boolean	String (name), Integer (type), String (initval)		X

Event

Properties			
Name	*Return type*	*Read only*	*Macro*
Actions	Actions	X	X
EventType	String	X	X

Events

Properties				
Name	*Return type*		*Read only*	*Macro*
Count	Integer		X	X
Methods				
Name	*Return type*	*Parameters*		*Macro*
Add	Event	String (o8o path)		X
Clear	None	None		X
Item	Event	String|Integer		X
Remove	None	String|Integer		

Objects

Properties				
Name	*Return type*		*Read only*	*Macro*
Count	Integer		X	X
Methods				
Name	*Return type*	*Parameters*		*Macro*
Item	Object	String|Integer		X

Page

Properties			
Name	*Return type*	*Read only*	*Macro*
Color	Integer		X
Description	String		X
Events	Events	X	X
Keywords	String		X
MasterPageName	String		X

Name	String		X
Objects	Objects	X	X
Resources	Actions	X	X
Searchable	Boolean		X
SizeOfPictures	Integer	X	X
TopMasterPageName	String		X
UseInContents	Boolean		X
Methods			
Name	*Return type*	*Parameters*	*Macro*
AddObject	None	String (o8o path)	X
AddVariable	Boolean	String (name), Integer (type), String (initval)	X
ConvertScale	None	Double (xfactor), Double (yfactor)	

Pages

Properties			
Name	*Return type*	*Read only*	*Macro*
Count	Integer	X	X
Methods			
Name	*Return type*	*Parameters*	*Macro*
Item	Page	String|Integer	X

Selected objects

Properties			
Name	*Return type*	*Read only*	*Macro*
Count	Integer	X	X
First Selected	Object	X	X
Methods			
Name	*Return type*	*Parameters*	*Macro*
Add	None	String (object name)	X
Item	Object	String|Integer	X
Remove	None	String (object name)	X

Window

Properties			
Name	*Return type*	*Read only*	*Macro*
Page	Page		X
SelectedObjects	SelectedObjects	X	X

Methods			
Name	*Return type*	*Parameters*	*Macro*
ArrangeBackward	None	None	X
ArrangeForward	None	None	X
ArrangeToBack	None	None	X
ArrangeToFront	None	None	X
SaveSelectedObjectsAsDropFile	Boolean	String (o8o path), Boolean (hasicon)	X

Appendix 4: Mediator action objects

This appendix lists properties and methods for action objects that can be used from macro script.

Action

Properties		
Name	*Return type*	*Read only*
Description	String	
Name	String	

Animate

Properties		
Name	*Return type*	*Read only*
AnimationPathName	String	
AutoShow	Boolean	
Duration	Integer	
ObjectName	String	
Repeat	Boolean	
Reverse	Boolean	

Animation Effect

Properties		
Name	*Return type*	*Read only*
AnimationPathName	String	
BrickDelay	Integer	
BrickHeight	Integer	
BrickWidth	Integer	
Duration	Integer	
ObjectName	String	
Shuffle	Boolean	

Go to Page

Properties		
Name	*Return type*	*Read only*
Duration	Integer	
PageName	String	

Show/Hide

Properties		
Name	*Return type*	*Read only*

Duration	Integer	
ObjectName	String	

Sound

Properties		
Name	*Return type*	*Read only*
SoundPath	String	
Repeat	Boolean	

Start/Stop/Pause

Properties		
Name	*Return type*	*Read only*
ObjectName	String	

Timeline

Properties		
Name	*Return type*	*Read only*
Count	Integer	X
Row	Integer	

Methods		
Name	*Return type*	*Parameters*
Add	Action	String (o8o path), Integer (time ms)
Clear	None	None
GetTerminationTime	Integer	None
IsTerminated	Boolean	None
Item	Action	Integer (index)
Terminate	None	None

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