



FileMaker Pro

The FileMaker Web Viewer

About This Technical Brief

It is the intent of this technical brief to help the new or experienced FileMaker developer better understand the new FileMaker Pro 8.5 Web Viewer control feature. Reading this document will assist developers in assessing the key features and benefits of the new Web Viewer control and how to setup and integrate the Web Viewer control into their solutions. Authored by Cris Ippolite, FileMaker Solutions Alliance Partner and President of iSolutions, Inc., this paper is written as a supplement to existing documentation.

For additional technical materials, please refer to printed and electronic manuals and online help that ship with FileMaker Pro 8.5 and FileMaker Pro 8.5 Advanced.

Introduction

FileMaker, Inc. has recently released the FileMaker® 8.5 product, the latest edition of the company's database development and deployment platform. The Web Viewer control feature of the FileMaker Pro 8.5 product is available in the new FileMaker Pro 8.5 and FileMaker Pro 8.5 Advanced products.

This feature is a new layout control that renders virtually anything that can be displayed in a web browser directly within a FileMaker layout. It allows database developers to include web content in their FileMaker solutions that is determined by the data in their database.

This paper will introduce the new Web Viewer control, and its behavior in Browse, Find, Layout and Preview Mode in FileMaker Pro 8.5. In addition, we will explore options in the Web Viewer Setup Dialog and introduce some suggested uses in existing and future FileMaker solutions.

What to expect from the Web Viewer

The Web Viewer control allows developers to integrate web browser "viewing" functionality into their FileMaker Pro layouts. The layout designer draws a rectangular region on the layout and then specifies a starting URL via static text, a text expression, or a calculation resulting in text. Developers will be able to use the Web Viewer Control Setup Dialog to construct URLs based on field values or calculation expressions for a predefined handful of popular data driven websites. FileMaker 8.5 will ship with setup support for Google Web Search, Google Maps, FedEx Tracker, and various Wikipedia services by simply using the interface in this feature's setup dialog. Users can also simply enter an expression that will evaluate to a valid URL.

The new Web Viewer takes advantage of the native controls provided by the operating system. On Windows the Web Viewer control is based on Internet Explorer, on Mac OS X it is based on Safari.

Web Viewer control: What it is not

It is important to note that the Web Viewer control is not a web browser. It does not inherently provide navigation, address bar, history, preferences, menus, etc. It will not launch additional Web Viewer windows within FileMaker Pro, the contextual menus will not be as rich as those provided in your web browser.

Please try to remember that this feature is intended to "view" Web content, not to replace all the functionality of a web browser. That is why FileMaker, Inc very carefully named this the Web Viewer control and not the web browser control.



That being said, users should be able to view virtually anything in the Web Viewer that they are able to view within Safari on Mac OS X and Internet Explorer on Windows.

Developers must also be aware that the Web Viewer will not have the ability to write data back to the database locally, even though it can receive data from the active database locally.

Functionality (Overview)

The new Web Viewer objects can be placed in layouts like other objects in the same way portals, buttons, tab controls, and container fields are placed in layout mode. When placed, each Web Viewer has an associated calculation which tells it what URL to initially display. The setup dialog will also provide a few options for controlling the Web Viewer's behavior as well as an interface for entering or configuring the URL string calculation.

When viewed in Browse mode the Web Viewer will evaluate the calculation to determine what URL to display. Once an initial page is displayed in the Web Viewer, a user may navigate to other linked pages by clicking on links just as in a normal web browser if the "allow user interaction" option has been selected when setting up the Web Viewer object.

The Web Viewer Setup dialog, in addition to allowing a layout developer to directly enter a calculation for the URL, will also provide some assistance for constructing URLs for some common web sites.

In addition to manually configuring the Web Viewer, several script steps are provided to allow developers some control over Web Viewer behavior and content. These are covered later in this paper.

Working with Web Viewer in Layout Mode

In order to add Web Viewer functionality to a FileMaker solution, developers must first choose the desired layout for which they wish to add the functionality, then access this layout in Layout mode. Once in layout mode, there are 3 ways to add a new Web Viewer to a layout:

1. The Status Area "Web Viewer" tool

The Web Viewer tool behaves like the rectangle tool; once selected, the developer may then click in the layout area and drag out a rectangle where the new control will be created. Like other tools, the Web Viewer tool may be "locked" as the current tool by double-clicking on the tool.

The tools section in the layout-mode status area in FileMaker 8.5 has been changed to make room for the new Web Viewer tool. The new tool looks like a "globe" (Fig 1).



Figure 1: Web Viewer tool is activated by selecting the "globe" button in the middle of the bottom row.



2. The Tools Palette “Web Viewer” tool.

The tools palette Web Viewer tool is used just like the status area version.

Once the Web Viewer tool has been chosen from either the status area or the tool palette, the cursor will change to a crosshair in the same way it does when a user selects the portal drawing tool. The user will press and hold their mouse and drag the cursor to the size and location where they wish the Web Viewer to appear.

3. The “Insert --> Web Viewer...” menu.

Developers can also insert a Web Viewer in their layout. They will first choose their desired layout, then select the “Web Viewer” option under the “Insert” menu. When selected, this command creates a Web Viewer on the layout at the location of the last mouse-click.

The Web Viewer’s initial size will be 300 points wide and 150 tall. As with other “insert” operations, the object will be moved so it completely fits on the layout, or if it is too big to fit on the layout then a dialog will ask the user if it is OK to extend the layout. If they choose not to extend the layout in this case, then the insert operation will be canceled.

Once drawn or inserted, the Web Viewer’s border and fill will be drawn (assuming they are not set to “transparent” or 0 pen width), and an image that looks like the Web Viewer tool icon will be drawn in the middle of the rectangle (Fig 2).

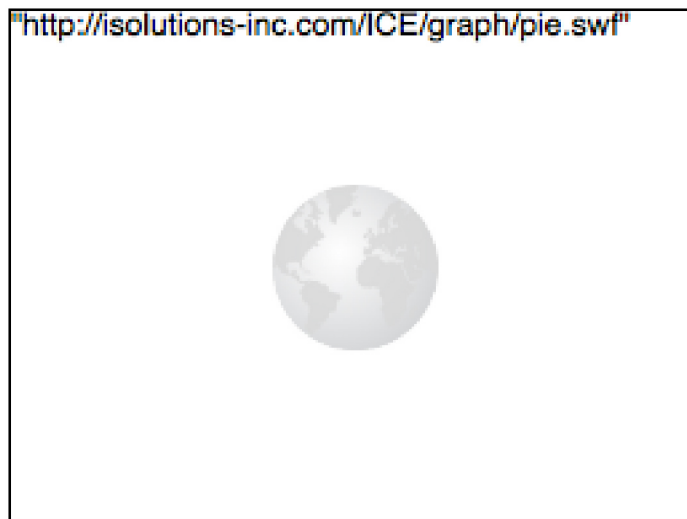


Figure 2: When drawn, the Web Viewer looks like a container field with a globe in the center

In addition, the following URL text will display over the globe image

just inside the border on the upper left and will wrap down to multiple lines if necessary:

- If “sample data” is off, then the text of the calculation that controls the URL will be displayed
- If “sample data” is on, then the calculation that controls the URL will be evaluated and the resulting webpage will be displayed.



Web Viewer Placement

Web Viewers may be placed anywhere on a layout except in a portal. Developers may place them in headers, footers, title headers, and title footers, and they will behave normally. Note that the data available to Web Viewers in a header or footer will be the data from the current record in Browse/Find mode; for printing and preview mode the header gets data from the first displayed record and the footer gets data from the last displayed record.

The layout designer must take into consideration that Web Viewers behave in Browse/Find mode as if they were “in front” of all other objects on a layout and will draw over all other objects in the same rectangular space. Furthermore, Web Viewers layered upon other Web Viewers will behave oddly.

Web viewers can also be placed into tab panels, and will hide or show as appropriate when the tab panels are switched. When a Web Viewer is on a non-front tab panel it should also be silent. When placed on a tab, the Web Viewer does not populate until the tab is viewed. However, the contents are retained if control is changed to another tab, so the data does not need to be requested again.

Developers can copy and paste existing Web Viewers to other layouts. Copies of a Web Viewer will initially be the same as the original, including size, URL calculation, object name, and other attributes. The Web Viewer setup dialog will not be automatically invoked when a Web Viewer is copied, duplicated, or pasted.

To prevent movement after placement, a Web Viewer may be locked and unlocked. While locked, a Web Viewer cannot be moved, resized, deleted, or have its format changed. However, the setup dialog may be invoked for a locked Web Viewer, but no changes can be made in the dialog and the dialog will indicate such by disabling buttons and other controls as appropriate.

A Web Viewer may slide but will not shrink if enabled via the “Set Sliding/Printing” dialog in layout mode. Web viewers will obey the “Do not print” setting if assigned.

Web Viewer Setup Dialog

The Web Viewer Setup dialog will appear whenever a new Web Viewer is created on a layout (but not when an existing control is duplicated or pasted). The same setup dialog may be opened for an existing Web Viewer in these standard ways:

- Double-click on an existing control
- From the shortcut menu invoked on an existing control
- The new “Web Viewer Setup...” item in the Format menu

Once a Web Viewer control has been placed on a layout, developers will immediately be presented with the “Web Viewer Setup Dialog” window (Fig 3) to allow configuration of the Web Viewer.

The developer will then choose to use one of the supplied template websites or they will type in their own URL.



Using Templates

Developers can choose from one of the following website templates that ship with the FileMaker 8.5 product (you can find examples of each in the Web Viewer Example file that ships with FileMaker 8.5):

- Google Maps (US, UK, CAN)
- Map Quest
- Google Web Search (US, CAN, UK, AU, NZ)
- FedEx
- Wikipedia
- Wikinews
- Wikidictionary
- Wikibooks
- Wikisource

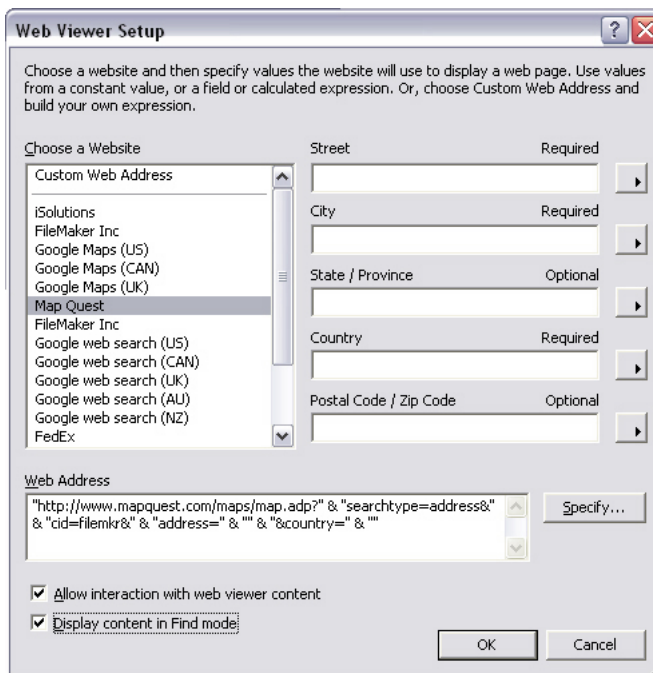


Figure 3: Developers can choose from several website templates included in the Web Viewer Setup window

As they click on any of the Website templates visible in the “Choose a Website” window, they will see that different sets of fields will be listed to the right of the window with several predefined fields visible. Each set of fields is specific to the template chosen. Once the website is chosen, the number of possible parameters that the website needs is determined. The Custom Web Address for that website will be visible in the dialog. Developers will then choose a field value, or define a calculated expression (which includes using a static string) for each parameter edit box.



As each value is either entered as static text, or pointed to any field from a table occurrence found on the Relationship Graph, developers will see the Web address being built in the Web Address edit box window on the bottom of the dialog. Users will first see the Custom Web Address built with "placeholder" text within the URL. For example, if users select the "Map Quest" website template, they will see that one of the parameters needed is the "Country" parameter. That parameter edit box will appear on the right side of the window and the parameter placeholder will also appear in the Web Address edit box on the bottom of the screen as "&country=". Once they have entered a static text value into the parameter edit box or pointed to a field defined in the file, they will see the placeholder in the Web Address edit box change to the static text value or field name they entered in the parameter field. In this example, "&country=" will change to "USA" in the Web Address edit box (Fig 4).

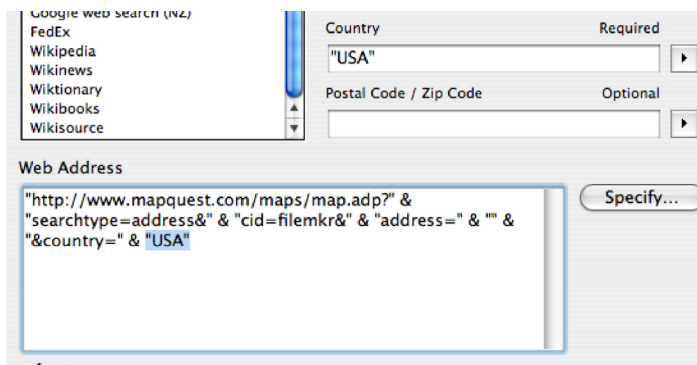


Figure 4: Values entered by the designer in the parameter field will be displayed in the Web Address box wrapped in quotation marks and delimited by an &.

The initial string parameter and the user specified parameters must be delimited by & and must be wrapped in quotation marks to be properly loaded in the Web Viewer control. The Web Control Setup dialog will automatically delimit and wrap the text or field reference, but developers must make sure not to remove the values and syntax from the Web Address edit box.

The Web Address edit box will also be used to modify the Web Viewer object's behavior once it's created. The Web Address edit box contains a calculation expression, not the actual URL that a user could paste into a browser. So, for example, even though the individual parts of the URL are concatenated with the FileMaker concatenation operator, "&", the operator will not appear in the URL string. Developers must adhere to the same syntax rules that apply in a calculation expression.

If they wish to display dynamic data from fields on the active record, they can press the arrow button to the right of the field parameters and they will have the option to specify a previously defined field or they may specify a calculation. If a field is specified, developers will see the parameter changed from "&country=" will change to Contacts::Country in the Web Address edit box (assuming the table occurrence is named "Contacts" and the defined field is named "Country").

Creating Custom URLs

Developers are not limited to only using predefined templates sites to display in the Web Viewer control. One of the most powerful features of the Web Viewer control is the ability for developers to author custom URLs directly in the Web Address edit box.



Creating custom URLs allows users to add functionality from any website on the Web. Developers can direct users to websites allowing the users to interact with the sites from within the Web Viewer control, which adds browser viewing functionality to any FileMaker Pro layout. However, the most powerful use of the Web Viewer control is to author custom URLs that use values from either the active record or compiled data from the FileMaker Pro file to send customized strings to external web sources to display dynamic content.

The concept is the same when using a template, but users are not limited to only the sites and parameters provided inside the Web Viewer Setup window. In order to take advantage of this flexibility, developers must first place a new Web Viewer control on a FileMaker Pro layout and when the Web Viewer Setup dialog appears, they will select the first option in the "Choose a Website" window named "Custom Web Address". Upon selection, the parameter edit boxes will disappear from the right side of the window and any predefined URL will disappear from the Web Address edit box (unless the previously defined URL is still displayed from the previous control setup).

Developers can now type a URL calculation expression directly into a Web Address edit box or may click a button to open the Specify Calculation dialog, where a calculation expression for the URL is constructed.

Keeping in mind that the value in the edit box and the calculation dialog must be the URL calculation expression NOT the URL itself, developers can compose custom strings to send to the Web Viewer that contain hard coded value and/or name-value pairs using fields from tables within the FileMaker Pro file.

Using the custom feature can be very powerful. It is a good idea to review the syntax and delimiters of the website templates to help understand how to construct an expression. The URL syntax must adhere to the required syntax of the receiving domain, but any of the values sent within the string can be hard coded or can be extracted from fields.

Developers can use several methods for dynamically building those strings. For example, Custom Functions can be created to extract field data from several sources and combine them together into a specific syntax that can be referenced within the URL calculation expression.

Developers can also compose scripts that can create record sets and loop through them to compile data that can be used in the calculation expression. Developers may want to write to a global field that can be referenced in the URL expression and delivered via the Web Viewer control to the host site.

The combinations of scripts, calculations, and even custom functions is truly limitless, giving the Custom Address option significant power and possibilities. Developers should look at the Web Viewer Example file shipping with FileMaker 8.5 for examples of all of these techniques.

One thing to keep in mind when composing URL expressions is that browsers have a URL length limitation. The Web Viewer uses platform specific Browsers and the rules and limitation of those browsers are also maintained. For example, on Windows, the Web Viewer uses Internet Explorer and Microsoft Internet Explorer has a maximum uniform resource locator (URL) length of 2,083 characters. Internet Explorer also has a maximum path length of 2,048 characters. This limit applies to both POST request and GET request URLs. Therefore, any URL (not expression) must adhere to this character limit.



Tabbing to and within the Web Viewer

In FileMaker Pro 8.5, developers can include Web Viewers in the tab order of their layouts. When viewed in Set Tab Order mode, the Web Viewer will have a tabbing order arrow on both sides; one for tabbing to the button, and one for tabbing into the Web Viewer.

If you include the Web Viewer in the tab order on your layout, then users can tab into the viewer. Once a user has tabbed into the Web Viewer, the keyboard focus will move into the fields on the displayed Web page, similar to simply clicking into the Web Viewer with a mouse. Users will then need to click outside the Web Viewer to continue tabbing through the tab order on the layout.

Web Viewer in Browse/Find Mode, Form and List View

Once the Web Viewer control has been added to the desired layouts, users may now interact with the Web Viewer in Browse and Find modes.

General Appearance and Behavior in Browse/Find Mode

Once a Web Viewer has been placed on a layout and a user navigates to that layout in Browse or Find mode, the initial appearance before any web page has loaded is like a standard rectangle or a container field. Web Viewer has pen and fill attributes just like a layout rectangle object. Its attributes may be configured so that it appears as a simple rectangle, or even transparent if the designer decides to hide the border lines. There are also slight differences in the transparency and outline support across platforms. Windows always has a little outline, Mac does not.

There are other platform specific differences to note. For example, when users click on a downloadable item, Windows asks if you want to download, Mac just drops the file in the default download directory. Also, Windows allows you to show Microsoft Office documents in Web Viewer, but Mac just allows users to download them.

As soon as a Web Viewer loads the URL calculation, it will display "Loading:" followed by the URL that is being loaded inside the border of the Web Viewer. Displaying this data cannot be turned off and it will only appear for a brief moment as the data loads. The faster the processor and network connection, the less time it will take to load the content and, therefore, the shorter the period of time it will appear on screen. Note that the "Loading:" message is displayed only when the Web Viewer is directed to a new page via some FileMaker action (such as a record change, script step, etc.). The "Loading:" message will not be displayed when a user clicks on a link within an existing web page.

As soon as the web page is received it will be drawn, replacing the "Loading: " message. The web page is drawn inside where the "fill" part of the rectangle would go, so if a border was specified for the object it will still be visible once the content is loaded. Again, the developer may configure the pen and fill attributes so the border is a simple rectangle (the default) or is completely transparent (via pen width of zero or pen pattern of none).

When a Web Viewer first becomes visible its URL calculation will be evaluated and the URL content will be requested. Since web pages typically take a second or longer to load, the Web Viewer may be drawn initially without any content. Web Viewers on non-front tab panels will not be created and loaded until their panel becomes the front facing panel.



Once the web page is drawn, the web page itself has complete control over its background, so the “fill” specified for the Web Viewer object will not be visible except around the edge, since the fill color is used in the border for the “embossed”, “engraved”, and “shadow” fill effects. If the Web Viewer’s URL calculation evaluates to an empty string then no web page will be loaded and it will continue to look like a simple rectangle layout object.

Once loaded, a Web Viewer behaves as expected. The user may click on links and manipulate controls in the web page in the exact manner they would if they were using a web browser to access the page instead of Web Viewer.

However, since the web browser top toolbar and address bar are not showing in the Web Viewer, users can use the context menu (right click WIN and control click on MAC) to go forward/backward in the history and to reload the page if needed (Fig 5). You can also use the context menu to copy images or text, just as you would in a browser.

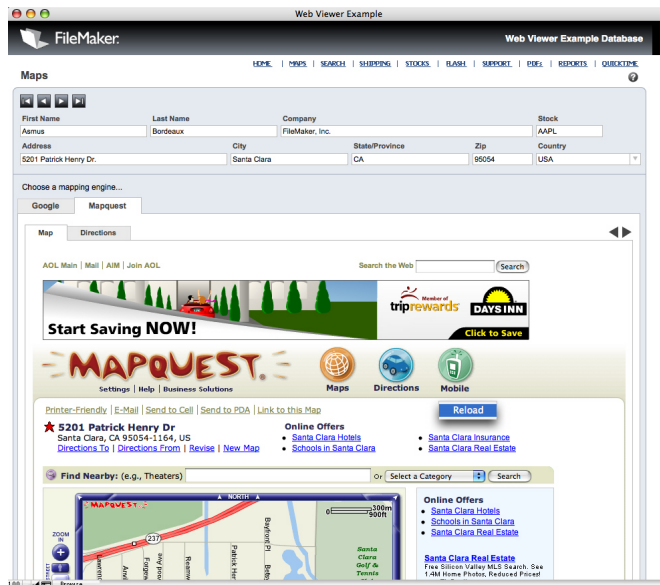


Figure 5: Users can use the context menu to go “Back”, “Forward” and “Reload” the web page.

The user has the ability to use the context menu to control the Web Viewer. If the developer leaves the “Allow interaction with Web Viewer content” option checked in the Web Viewer Setup Dialog (Fig 6), users will be able to use the context menu controls. If the option is NOT checked, users will see the content in the Web Viewer as “read only”.



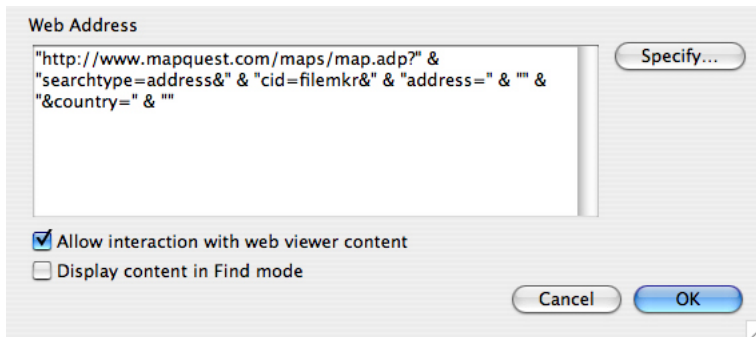


Figure 6: Developers can control whether the context menu can control web page interaction via the “Allow interaction with Web Viewer content” option in the Web Viewer Setup Dialog

List View

In List view, developers may be creating and maintaining many Web Viewers on one layout. Although both Mac and Windows machines are capable of creating and maintaining many Web Viewer objects in one layout, the load placed on a machine and network connection depends on the Web pages being loaded, and so it is up to the developer to take into consideration how many Web Viewers will be visible at a time and whether the users’ machines and networks can handle the load.

Table View

Web Viewers can be viewed in Browse mode using a Form view and List view, but Web Viewer objects will not appear in the table in Table view. However, they may be placed in the header or footer, and if the header or footer are configured to show in Table view then the Web Viewer(s) in the header or footer will show and work normally. Since the data available to a control in a header or footer is the data from the current record, switching between records in a table view will cause the URL calculation for a Web Viewer in the header or footer to be re-evaluated.

Find Mode

Developers can also control whether the Web Viewer appears in Find mode. Web Viewer content can be visible in Find mode or the blank box can appear. Developers control this by checking the “Display content in Find mode” option in the Web Viewer Setup dialog (Fig 7). This option is OFF by default. It controls whether the URL expression is evaluated (and the webpage displayed) in Find mode. This allows the use of a static URL, a URL that is based on a global field , or a URL based on fields that are being entered into in Find mode.



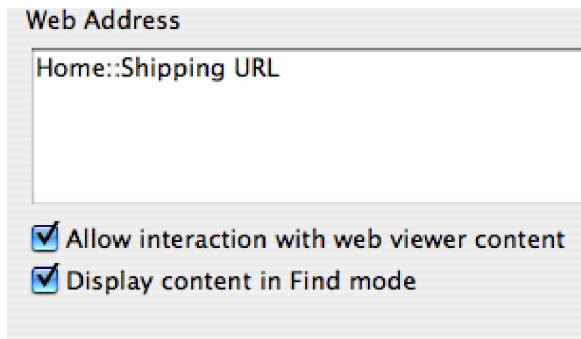


Figure 7: Developers can control whether Web Viewer content can be viewed when in Find mode.

The default option is unchecked, which will display only a blank box when viewed in Find mode. If developers turn the feature on by checking the box, then the users could see the same Web Viewer content in Find mode as appears in Browse mode, if the Web Viewer is based on a global value. Its important to note, however, that if no content has been loaded in the Web Viewer before entering Find mode, the Web Viewer will appear blank. Also if user navigates somewhere in the Web Viewer in Browse mode, then enters Find mode, the original site is redrawn. Going back to Browse returns to the user's original navigation results.

If the Web Viewer content is dependent on specific (non global) field values, then the web page will be visible in Find mode, but only the prefix values will load. For example, if your Web Viewer calculation is:

```
"http://local.google.com/maps?" & "q=" & /*Address=*/ Contacts::Address & ";" & /*City=*/  
Contacts::City & ";" & /*State=*/ Contacts::State Province & ";" & /*Zip Code=*/ Contacts::Postal Code  
& ";" & /*Country=*/ Contacts::Country
```

If the values indicated in the calculation are pulled from local field data, then when users view the content in Find mode, only the **http://local.google.com/maps?** portion will be viewed because the Web Viewer will not have access to active record data when in Find mode. If the Web Viewer calculation is static and does not pull active record data, the entire web page will be displayed in Find mode. Switching to find mode will cause any Web Viewers on the layout to have their URL calculations re-evaluated displayed in the find (which would initially be blank).

Printing and Web Viewer in Preview Mode

Another powerful use for Web Viewer is the ability to print the content displayed in the Web Viewer control. Developers can add dynamic content or even reporting from web pages to their existing reports to add unprecedented richness to outputs.

The web content that is printed or shown in Preview mode will display the same way in Browse mode for the records visible in Browse mode. Records that have not been recently displayed and therefore the Web Viewer content had not been maintained, will have their URL calculations evaluated and the web pages loaded "fresh" for each record printed or displayed in the Preview mode. For example, if a user has navigated away from the calculated URL in a Web Viewer, then that will be reflected in the printed output.



When previewing or printing web pages that have not been downloaded yet (where the URL expression has not yet been evaluated), a progress dialog will appear while the Web Viewer is downloading the page. The dialog will show the same “Loading:” message that appears in the Web Viewer itself in browse mode, and the progress bar will be a rough estimate of the page completion. The estimate reflects the underlying web browser’s own estimate of the page completion, which may be different between platforms (Safari and Internet Explorer) for the same page. The user can skip the loading of a page, in which case the output will be partially incomplete.

Additional Web Viewer Features

Each Web Viewer will maintain its own history (for going backward and forward). Clicking on a link that requests a new window will result in a new window being opened in the default web browser application for that machine. If a Web Viewer is set to not allow user interaction (via the setup dialog), then there will also be no outer scroll bars around the web page, and consequently the user will not be able to scroll around in the web page.

Web viewers will enlarge or shrink their content to reflect the current zoom setting. The implementation of scaling is different between Mac and Windows. On Windows, the Web Viewer will adjust the font size to simulate scaling. On Macintosh, the Web Viewer will do a true scaling of all the drawing in the Web Viewer including the scroll bars and other controls that appear in the Web Viewer. Vector sites or files (ex: .swf or .svg) will not carry scaling restrictions that other sites will. Vector sites or files will stretch to fit the size of the Web Viewer control.

Cut/Copy/Paste, Drag/Drop To and From a Web Viewer editing operations will be available within web pages in a way that is similar to how they work in that platform’s web browser. For example, an image in a web page can be copied, then pasted into a container field; or the image could be dragged from the web page into the container field on Mac OS X only. Similarly, text can be selected in the web page and copied or dragged. Also, text can be pasted into a selected edit box inside a web page.

Web viewers may also interact with the OS and other applications on the computer (invoking a mail program or downloading a file to disk, for example). These sorts of operations will be supported, and they are configured within the default web browser application.

Backward Compatibility

If a FileMaker file that includes a Web Viewer is opened in a prior version of FileMaker Pro, the Web Viewer will not be displayed. In FileMaker Pro 8.0 the Web Viewer will be blank in Browse mode and will appear as a rectangle with a cross through it when viewed in Layout mode. In versions of FileMaker prior to FileMaker Pro 8.0, the Web Viewer will be completely missing. If the layout containing the Web Viewer is modified in the prior version, the Web Viewer object should survive the edit operation (assuming it is not deleted).

“Set Web Viewer” Script Step

In addition to configuring the Web Viewer control on the layout, developers may also script the configuration and evaluation of the Web Viewer to include static or dynamically generated data in the URL.



A new script step called "Set Web Viewer" has been added under the "Miscellaneous" group in Scriptmaker®, just before the Open URL script step.

This script step will allow developers to control any named instance of the Web Viewer object - they can re-evaluate the URL calculation, go to a different URL, navigate forward and backward, and reload a webpage.

This script step has a calculation to specify the target object on the layout by name, and a drop down menu, which will allow the different actions.

Note that in this release FileMaker Pro introduces "Object Names." Any layout object may be assigned an object name, which is a user-specified string.

When getting the source (URL) or content (the html) from a Web Viewer via the GetLayoutObjectAttribute function, if the Web Viewer has not completed loading (either it's on a tab panel that has not yet been accessed, it's scrolled out of view, or it simply hasn't completed the download of all of the web page), then the source and content will be empty.

Prior to calling the Web Viewer object from a script, developers must first provide the Web Viewer object with an object name. Once the Web Viewer object has been provided with an object name, the object can be referenced via the script. However, the object name cannot be specified in the "Set Web Viewer Options" dialog, it is done in the Object Info palette as with any other layout object.

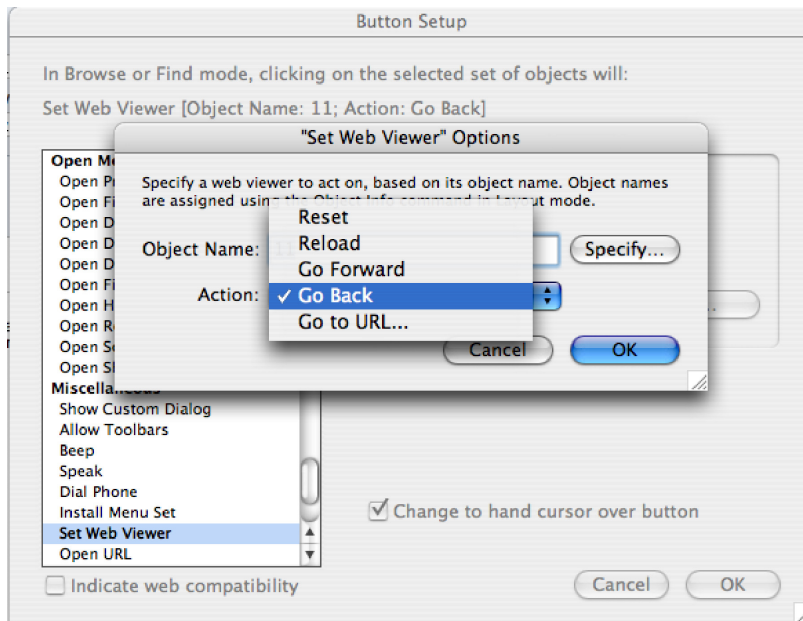


Figure 8: Set Web Viewer Options are displayed when the developer selects the "Specify" button



The option for this script step consists of a Specify button, which will launch the "Set Web Viewer" Options dialog. When developers select the "Set Web Viewer" script step and select 'Specify', they will see the following options:

- **Reset** - will reset the Web Viewer object to the original URL that was specified for the object. It will also clear the "Back" and "Forward" session history.
- **Reload** - will reload the web page that the Web Viewer is currently displaying.
- **Go Forward** - will do what current web browsers do when users click the Forward button and go forward one page.
- **Go Back** - will do what current web browsers do when users click the Forward button and go back one page.
- **Go to URL** - will allow the user to specify a new URL to load in the Web Viewer object. The new URL is a calculation expression, which can be specified through the scripting version of the Web Viewer Setup dialog.

The "Set Web Viewer" Options dialog allows the developer to specify the action to be performed. They can either enter constant values directly or specify a calculation expression using the standard calculation text edit box that is widely used in scripting.

Viewing technologies other than HTML

JavaScript, Java, Flash, Browser Plugins, Etc.

These technologies will be available and function within web pages in a Web Viewer if they are installed and function in Safari (Mac OS X) or Internet Explorer (Windows).

Suggested Uses

See Web Viewer Example file shipping with FileMaker 8.5 for examples of:

- Mapping
- Package Tracking
- Email
- WAP sites
- Flash
- Graphing
- Conclusion

The new Web Viewer allows unprecedented functionality to be added to FileMaker Pro solutions. With virtually endless sites to embed and countless ways to provide local FileMaker data to these web sites, developers can enjoy layout and reporting functionality like never before. Learning about Web Viewer and the Web Viewer Script Step can help developers make the most of the new FileMaker 8.5 product.

For more information on Web Viewer, be sure to see the FileMaker web site (www.filemaker.com). You will also find an example file called "Web Viewer Example.fp7" in the English Extras/Examples directory in your FileMaker application folder. This file contains several Web Viewer controls as well as examples on how to configure the Web Viewer.



About the Author

Cris Ippolite [cris@isolutions-inc.com] is President and Founder of iSolutions, a FileMaker consulting and development firm in Los Angeles. Cris has written thirteen articles on FileMaker and the Web for FileMaker Pro Advisor Magazine as well as a white paper on FileMaker Server Advanced for FileMaker, Inc. Cris also speaks at Macworld Expo, Flash-Forward Conference and is a featured speaker for the FileMaker Developer Conference speaking on topics ranging from FileMaker and the Web and FileMaker Development Processes. He has been working with FileMaker for 14 years and is a FileMaker Partner level FSA member and an authorized FileMaker Professional Training Series trainer. iSolutions is a pioneer in Flash FileMaker development. For more on iSolutions' services, visit <http://www.isolutions-inc.com> or <http://www.isolutions-inc.com/ice> for more information on Web Viewer and Flash.

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