



XRef Wizard 2.40 User Guide

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Chapter 1 — Introduction

Thank you for using or evaluating the XRef Wizard plugin for structured FrameMaker. If you have any comments or questions regarding the software or its documentation, please send them to info@weststreetconsulting.com.

Important disclaimer

When you use the XRef Wizard, you agree to do so at your own risk. West Street Consulting and affiliates are not responsible for any damages or loss to software, hardware, or data, whether by user or software error, or due to errors in this documentation.

What is the XRef Wizard?

The XRef Wizard is a tool that provides a variety of functions to facilitate cross-reference management in structured FrameMaker. As a broad summary, its functionality falls into two general areas:

- **General cross-reference shortcuts and tools** The plugin allows convenience functions to help an author manage cross-references more easily, such as the ability to select any element and find all cross-references in a book that target it.
- **ID control and management** With default cross-reference functionality, an author has little control over the IDs used for cross-references. Therefore, cross-references frequently become a problem during heavy content reuse, perhaps by use of native text insets or a plugin such as InsetPlus. With the Wizard, you are able to use ID control to make cross-references more “global,” such that cross-references and targets can be repurposed at will, and the links resolved afterwards by ID alone.

Specifically, the Wizard provides the following functions:

- **ID control when creating cross-references** With the Wizard, you can directly control the IDs used for cross-references and their respective targets. It provides options for generating random IDs, beyond the eight-character default used by FrameMaker, or you can simply specify your own. For more information, see [“Cross-reference insertion and ID control”](#) on page 11.
- **Resolution of cross-references based on ID alone** Normally, FrameMaker resolves a cross-references based on a filename and ID of the target. This behavior becomes a problem if a target is moved or repurposed to another file, because FrameMaker cannot natively look beyond the original file of the link during an internal resolution process, such as a book update. With the Wizard, though, you can step through an entire book and “re-resolve” any cross-references that may have been broken, due to the repurposing or movement of content, based on the ID alone. For more information, see [“Cross-reference resolution”](#) on page 14.
- **Book-wide ID “uniquification”** The Wizard can step through all files in a book and reassign any unique ID attributes it finds to be duplicates. In doing so, it automatically adjusts any cross-references that may target the respective elements. This feature may be particularly useful for XML export, which is more stringent on the “unique ID”

concept. FrameMaker enforces unique IDs within a single document, but it does not natively require uniqueness between files in a book. For more information, see [“ID “uniquification” and setting empty IDs”](#) on page 20.

- **A new cross-reference pod** The Wizard includes a cross-reference pod that provides advanced usability features and may be used in place of the native pod. For more information, see [“XRef Wizard cross-reference pod”](#) on page 19.
- **Setting empty ID attributes** The Wizard can sweep through a document or a book and set empty ID attributes. A number of options are available to control the scope of ID-setting operations, including options to automatically set IDs during key events such as saving documents. For more information, see [“ID “uniquification” and setting empty IDs”](#) on page 20.
- **Cross-reference finder, based on a selected target** With the Wizard, you can right-click on any element with a unique ID attribute and find all cross-references in a book that currently target it. This feature may be useful to check existing cross-references before moving or deleting elements such as headings and titles, which typically are potential targets for cross-references. For more information, see [“Finding cross-references to a particular element”](#) on page 22.
- **Named destination control for PDF links** FrameMaker currently has a bug that often causes cross-references to fail once a document is converted to PDF. The Wizard has a special feature designed as a workaround to this issue, which is only possible through an API client such as this plugin. For more information, see [“Setting flags for named destinations”](#) on page 23.

Overall vision and purpose

The Wizard contains cross-reference features that may help you right away, but it also has a more forward-looking vision involved with its functionality. Specifically, the software was designed to facilitate FrameMaker’s role as a powerful, granular-level single sourcing tool, especially in regards to heavy content reuse with plugins such as InsetPlus and FrameSLT.

Cross-references are a powerful and popular feature of FrameMaker, one which sets it apart from many other authoring tools. However, the nature of cross-reference handling does not adapt well to heavy content reuse, because the movement of content between files often breaks the links. Now that other plugin technology has emerged and heavy, granular reuse is possible within FrameMaker, a more global means of link maintenance has become necessary. The XRef Wizard, therefore, was created to address this need.

Scope

The Wizard may be used with any structured workflow, with structured cross-references. That is, it is only applicable to cross-references wrapped in structural elements, within a structured flow of a FrameMaker document. The plugin currently has no functionality applicable to unstructured cross-references which create their links via markers, even if they are used within an otherwise structured document.

Note the following additional items:

- **Flows** Currently, except for the book-wide named destination flag command, all functions work on the main flow of the document only, normally flow “A”. This can be expanded, however, if the need exists.
- **Element definitions and cross-reference formats** The Wizard will work with any EDD and any nature of cross-reference formats.

Anatomy of a structured cross-reference

To fully understand the functionality of the Wizard, you must first understand the fundamental nature of a FrameMaker cross-reference. This section of the document explains structured cross-references in detail, including information about internal functionality that relates directly to how the Wizard operates.

A cross-reference in FrameMaker has two main functional components:

- **A hyperlink** Clicking the cross-reference can jump you directly to the target.
- **Automatic text population** A cross-reference can automatically display text and other characteristics, such as page numbers, extracted from the target. This behavior is defined by its *format*.

XRef Wizard functionality is focused solely on the hyperlink aspect, because the automatic text population is an internal FrameMaker process based on cross-reference formats, and it cannot be changed.

How a cross-reference link is formed

In structured FrameMaker, a cross-reference object or element has two fundamental components which form the link to its target:

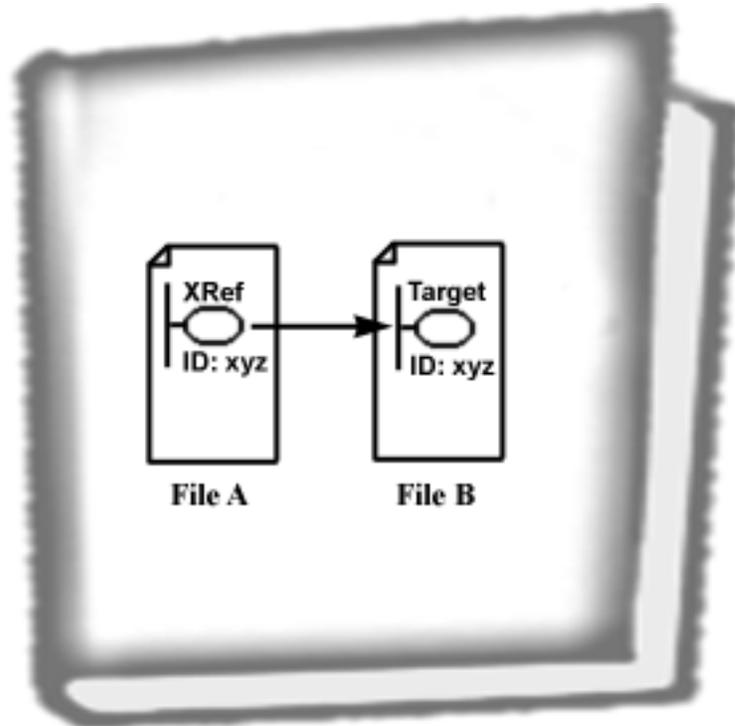
- **The ID, stored in attributes** The cross-reference element must have an “IDReference” attribute, and the target must have a unique ID attribute. When the link is formed, a common string value must populate the respective attributes on both the cross-reference and the target elements.
- **The filename** A cross-reference object always stores the filename of the target file, and uses it to resolve the link. Recall that when you insert a cross-reference, the first thing you must do is verify and/or change the filename at the top of the dialog. This filename is critically important afterwards, because FrameMaker will only ever look in that file for the target element.

This system of linking works well for normal usage. During a file or book update, FrameMaker knows exactly where to go to resolve cross-references and extract the text as necessary to populate cross-reference text. However, if you begin to move cross-references and their targets between different files, links can become broken, and FrameMaker will not be able to fix them on its own.

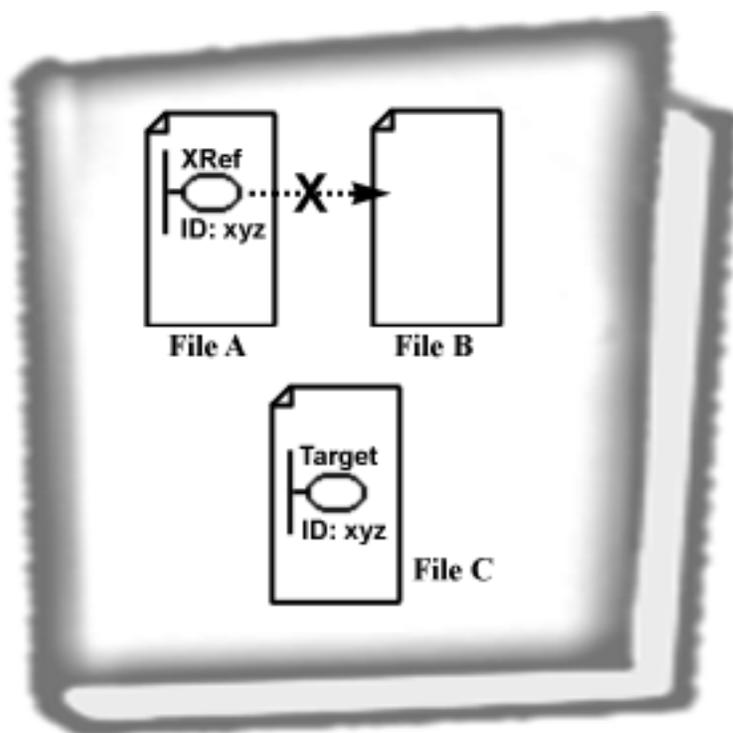
Note: In your EDD, all cross-reference elements must have an IDReference-type attribute, and all targets must have a unique ID attribute. These attributes need not have this exact syntax for the attribute name, however. For example, a unique ID attribute is often named simply “ID.” The Wizard will work with attributes of any name, provided they are properly defined in the EDD.

Moving content - how links get broken

The following is a graphic illustration of a cross-reference between files within the same book:



The cross-reference in File A is linked to the target in File B by means of the `xyz` ID. Also, the cross-reference is set to look specifically in File B for the target. If the target were moved out of File B, perhaps into File C, the following problem would result:



In this case, the target was moved from File B to File C. However, due to the filename dependency of a Framemaker cross-reference, FrameMaker will never be able to re-resolve this cross-reference on its own. It will either require a manual redirection in the cross-reference dialog, or an automated process such as the XRef Wizard. If you engage in heavy or repetitious content reuse that involves cross-references, this issue can become a burden to manage manually.

This problem, and the solution thereof, is the central focus of the XRef Wizard. With the Wizard, you can control the IDs used for cross-references, and use book-wide processes to re-resolve them based on the ID alone. Therefore, the Wizard allows you to overcome FrameMaker's dependence on filenames to resolve links throughout a book.

You should note that the choice and management of IDs is ultimately your responsibility, and the Wizard is simply a tool to allow you this capability. If you use the Wizard frequently, it will be up to you to determine a logical system of creating IDs and maintaining your links and targets. Also, you should keep in mind that the Wizard does not alter the fundamental nature of the cross-reference object in any way. FrameMaker cross-references are always dependent on filenames, and the Wizard simply provides an automated means of resetting those filenames based on book-wide queries for IDs.

General preferences

The following table describes the preferences available at **XRef Wizard > General Settings**.

XRef insertion behavior

Note: Currently, these options are not available for FrameMaker 9. Interface changes have made them generally incompatible and/or non-useful.

Option	Description
Produce XRef Wizard dialog	Produces the ID control dialog after each cross-reference insertion or redirection. No ID override takes place unless you specifically confirm it in the dialog.
Automatically use long, random ID	<p>During cross-reference insertion, automatically overrides FrameMaker-generated IDs with Wizard-generated long IDs. No ID control dialog is produced, and there is no confirmation.</p> <p>Note that this function will only cause an ID override if the target element currently has no ID. Otherwise, the Wizard will simply allow the usage of the current ID, because changing it would break any other existing cross-references to that element.</p>
Automatically use element text for ID	<p>During cross-reference insertion, automatically overrides FrameMaker-generated IDs with Wizard-generated ID from the target element text. No ID control dialog is produced, and there is no confirmation.</p> <p>Note that this function will only cause an ID override if the target element currently has no ID. Otherwise, the Wizard will simply allow the usage of the current ID, because changing it would break any other existing cross-references to that element.</p>
Do nothing	Effectively turns off any Wizard intervention during cross-reference insertion. No ID control dialog is produced.

ID generation controls

Option	Description
Prefix for long, random IDs	A standard prefix for all long random IDs generated by the Wizard, for any function that causes the generation of such an ID. This prefix is not applicable for any type of generated ID except long random IDs.
Maximum length for IDs	The maximum length for any ID generated by the Wizard for any function. If the ID would otherwise exceed this length, it is truncated to this length. For long random IDs, this is effectively the exact length that every generated ID will have.

Active warnings

Option	Description
Warning before changing ID - Post xref insertion	Enables/disables the warning when you change an existing unique ID during the process of inserting a cross-reference (using the Wizard dialog).
Warning before changing ID - Right-click ID change	Enables/disables the warning when you change an existing unique ID with the right-click menu command.
Warning before resolving xref - Post-resolution dlg.	Enables/disables the warning when you click the Resolve button in the dialog box following a book-wide resolution action.

XRef Wizard menu location - Controls where the main XRef Wizard menu appears on startup.

Chapter 2 — Cross-Reference Insertion and Resolution

Among other accessory functions, the primary focus of the XRef Wizard the control of IDs used for FrameMaker cross-references, and the resolution of those cross-references based on the ID alone. This chapter contains information on the various features of the Wizard that pertain primarily to these areas.

To fully understand the processes of ID control and resolution, you must have a thorough understanding of how FrameMaker cross-references work, at a fundamental level. Therefore, you should be familiar with the information contained in [“Chapter 1 — Introduction”](#) on page 3 before pursuing the topics in this chapter.

Although the XRef Wizard never changes your content, the processes related to ID control and resolution may make significant changes to the underlying architecture of your documents. That is, it performs reasonably complex operations on the applicable cross-reference and element objects while it works. The Wizard operates upon and manipulates these objects at a fundamental level, much like native FrameMaker processes such as a book update.

In the end, you should never notice any difference in your documents, other than the intended benefits that the Wizard brings, if the software works correctly. Nonetheless, due to the nature of the processing, you should always be cautious before running its processes on your production files, and keep backups regularly. According to your usage agreement, West Street cannot be held responsible for lost data or corrupted files, whether due to software bugs or user error. In short, make sure you know what the software is doing before you use it, and always keep backups.

Cross-reference insertion and ID control

Note: The majority of functionality described in this section and subsections have been deprecated since FrameMaker 9. The new interface with its pod functionality has made it generally incompatible and/or unnecessary. Note that you can still control IDs when inserting cross-references with the new Wizard pod. For more information, see [“XRef Wizard cross-reference pod”](#) on page 19.

With the XRef Wizard, you have the option of controlling the ID used when a cross-reference is created or redirected. That is, you can control the string ID value that populates the “IDReference” and unique ID attributes of the cross-reference and target elements, respectively. Without the Wizard, normal FrameMaker behavior would not allow user intervention for controlling these ID, at least during the cross-reference insertion process.

With the XRef Wizard active, the insertion of cross-references begins normally, by inserting the appropriate cross-reference element from the element catalog. You will receive the standard cross-reference dialog, in which you select the file and element to target. Initially, FrameMaker will generate an ID or use the existing ID, as it would normally. After you dismiss this dialog, however, is when the Wizard produces its dialog, providing an interim step to adjust the ID as you see fit.

This behavior involving the second dialog is completely optional. If desired, you can turn off the Wizard's automatic response to cross-reference insertion and FrameMaker will behave as normal. Or, you can set the Wizard to automatically use a certain type of ID that it generates itself, instead of the FrameMaker-generated ID, without producing the dialog.

Note: The right-click menus include a command to manually launch this editor, if a cross-reference element is selected. You can use this command to change the ID used for a cross-reference any time after its creation.

To activate/deactivate automatic Wizard responses during cross-reference insertion

- 1 With a book window active, select **Format > XRef Wizard > XRef Wizard Settings**.
or otherwise:

Select **Special > XRef Wizard > XRef Wizard Settings**.

- 2 In the settings dialog, select one of the following options:

Note: Currently, these options are not available for FrameMaker 9. Interface changes have apparently eliminated an important notification that was used previously to trigger these events. We will continue to monitor FM9 behavior and if a solution can be found, it will be implemented.

Option	Description
Produce XRef Wizard dialog	Produces the ID control dialog after each cross-reference insertion or redirection. No ID override takes place unless you specifically confirm it in the dialog.
Automatically use long, random ID	During cross-reference insertion, automatically overrides FrameMaker-generated IDs with Wizard-generated long IDs. No ID control dialog is produced, and there is no confirmation. Note that this function will only cause an ID override if the target element currently has no ID. Otherwise, the Wizard will simply allow the usage of the current ID, because changing it would break any other existing cross-references to that element.

Option	Description
Automatically use element text for ID	<p>During cross-reference insertion, automatically overrides FrameMaker-generated IDs with Wizard-generated ID from the target element text. No ID control dialog is produced, and there is no confirmation.</p> <p>Note that this function will only cause an ID override if the target element currently has no ID. Otherwise, the Wizard will simply allow the usage of the current ID, because changing it would break any other existing cross-references to that element.</p>
Do nothing	<p>Note: This is the only available option for FrameMaker 9 and later.</p> <p>Effectively turns off any Wizard intervention during cross-reference insertion (with the native pod). No ID control dialog is produced. Note, however, you may have some control if you are using the Wizard pod instead. For more information, see <i>“XRef Wizard cross-reference pod”</i> on page 19.</p>

Note: For more information about the types of IDs that the Wizard can generate, see *“IDs that the Wizard can auto-generate”* on page 14.

Purpose for ID control and intervention

The primary purpose for allowing control over IDs during cross-reference insertion is to facilitate the logical management of your cross-reference links. In particular, a systematic means of ID control can help you resolve links afterwards using the Wizard’s accompanying resolution tools. If you are creating a cross-reference to a piece of content that will be used in multiple locations, you may want to use an intuitive ID that makes it easier to recognize later when you are sweeping through a book to resolve cross-references to it, based on ID alone.

Also, control over IDs makes it easier to prevent duplicates, even between files. By default, FrameMaker uses an eight-character alphanumeric ID for cross-references, which has a greater possibility for being duplicated in another file in a book, than your own or a Wizard-generated random ID.

Considerations for ID type and length

Generally speaking, you can use any type or length for an ID up to 255 characters within FrameMaker, and FrameMaker will handle the cross-reference properly. If you are exporting to markup, however, you may need to consider the length of IDs, especially if you are constrained by SGML namespace limitations. If you export to markup, check the limitations of the end process that will use those files before applying longer IDs for cross-references.

Important notes about overriding FrameMaker IDs

- If a cross-reference targets an element that already has an ID, and you change it in the interim ID control dialog, you will break any other cross-references that currently

target that element! Therefore, you should be careful when working in the ID control dialog. If you attempt to override an existing ID with a different value, you will receive a warning, and should not proceed unless you are sure that the change is intentional.

- If you cancel the interim ID control dialog, the Wizard will do nothing, and FrameMaker will handle the cross-reference with default behavior.
- There is nothing inherently wrong with default FrameMaker cross-reference behavior, including the IDs it would normally use. This Wizard function is part of a more advanced scheme to allow granular content reuse involving cross-references, and keeping them resolved.

Important note about using this functionality

You should note that choosing and managing IDs properly is ultimately your responsibility, and the Wizard is simply a tool to allow you this capability. If you use the Wizard frequently, it will be up to you to determine a logical system of creating IDs and maintaining your links and targets. Also, you should keep in mind that the Wizard does not alter the fundamental nature of the cross-reference object in any way. FrameMaker cross-references are always dependent on filenames, and the Wizard simply provides an automated means of resetting those filenames based on book-wide queries for IDs.

IDs that the Wizard can auto-generate

When you insert or redirect a cross-reference, the Wizard can auto-generate two types of IDs for you:

- **Long, random ID** This ID is intended to be a truly unique ID, within all FrameMaker content that you ever author. It begins with a date and time stamp and can contain up to 100 random characters, making it extremely unlikely that it will ever be duplicated by automated processes. This ID is provided as an alternative to FrameMaker's default 8-character IDs, which stand a greater chance of duplication.
- **ID based on element text** This ID string is generated based on the text content of the target element, much like the cross-reference text itself often is. If the text of your targets is generally unique, this type of ID may be a handy means of making cross-reference IDs more intuitive.

Furthermore, when setting empty IDs, the Wizard can create 8-character IDs similar to the default FrameMaker-generated IDs. For more information on setting empty IDs, see [“ID “uniquification” and setting empty IDs”](#) on page 20.

To use any Wizard function, including book-wide resolution, you are not required to use any special IDs. These ID generators are simply provided as a convenience should you wish to better ensure that all IDs used for cross-references are unique, throughout all your content. You can always choose to use the FrameMaker-generated ID, or any custom string you desire.

Cross-reference resolution

This section of the document details the primary function of the Wizard, the book-wide resolution of cross-references based on ID alone.

With normal FrameMaker behavior, a cross-reference and its target are linked by two components: a filename, and an ID. If either are incorrect, FrameMaker is unable to resolve the reference and the link becomes broken.

Under normal usage, this system works well, because cross-references and targets generally remain in the same files, and a book update will resolve them as appropriate. However, if you are engaging in heavy content reuse, perhaps through text insets or the FrameSLT plugin, content may be regularly moved between files. If you move the target of a cross-reference to another file, that cross-reference will become broken and FrameMaker will not be able to fix it on its own.

With the Wizard, however, you can sweep through an entire book and resolve cross-references based on ID alone. That is, the Wizard will look beyond filenames and resolve cross-reference objects as it finds their targets, anywhere in a book. If you have implemented a logical system of ID control, also with the Wizard, this function allows you to reuse content in any capacity and still have the ability to keep your cross-references resolved.

Note: There is nothing inherently wrong with the default resolution behavior of FrameMaker, such as through a book update. The Wizard simply adds advanced functions primarily centered around content reuse.

To launch a book-wide cross-reference resolution, based on IDs

Note: You should be sure you understand what this function does before running it. For more information, see *“What happens during a book-wide resolution”* on page 15.

- 1 With the book window active, select **Format > XRef Wizard > Resolve XRefs**.
- 2 In the resolution dialog, select an ID prefix if desired.

This option allows you to resolve cross-references only if the ID begins with a specified prefix. This option is meant to facilitate a system where you only have certain cross-references that will ever need resolved, and you only want the Wizard to consider them during a book-wide sweep. If you select this option, any cross-references that don't match the criteria are completely ignored.

- 3 Click **OK**.

If any resolution problems exist, you can examine and/or fix them in the resolution dialog. For more information, see *“Working in the post-resolution dialog”* on page 16.

What happens during a book-wide resolution

During a book-wide sweep, the Wizard examines each cross-reference (as applicable) and attempts to find a single target for it elsewhere in the book. The search is conducted strictly based on the “IDReference” attribute of the cross-reference element, as compared with the unique ID attributes of potential targets. If a single match is made, a cross-reference is automatically resolved and no further intervention is necessary.

If the Wizard finds no potential targets, or multiple targets, the cross-reference will be reported in the resulting resolution dialog, after the process is complete. Because of the focus on the ID as the foundation of the link, multiple possible targets are assumed to be an error, and the Wizard does not make any further assumptions about how to resolve the cross-reference.

Before running a book-wide resolution, it is critically important that you understand the following points:

- **The Wizard is searching within the active book only, based on IDs** Therefore, if a cross-reference is actually resolved to a file outside the book, the Wizard will not know this, and will report the cross-reference as unresolved. In actuality, the cross-reference may be technically resolved in a FrameMaker context, but not within the Wizard's "book-centric" context. In this situation, the Wizard will not disrupt the cross-reference's current external resolution, but it will report it afterwards as unresolved.
- **If a cross-reference is resolved to an external file, but the Wizard finds the same ID somewhere within the book, it will be redirected** If a cross-reference ID matches a single target somewhere within the book, it will be resolved to that element, regardless of where it originally pointed.
- **The sweep only resolves links, not items such as cross-reference text or page numbering** After resolving cross-references with the Wizard, you should always run a standard FrameMaker book update before publishing.
- **All processed cross-references are affected** The Wizard operates on all applicable cross-references at a fundamental level. Be sure to keep backups of your data.
- **The Wizard does not save any files** If the Wizard makes changes, you must save your book and associated files afterwards to preserve them.

Always remember that the Wizard assumes a workflow focused on the book as the logical repository of content, with all cross-references targeting elements somewhere within the same book. Likewise, if content is reused and/or repurposed from another source into a book, the Wizard assumes that any cross-references that come with it should then link to somewhere within the book. If your workflow does not center on the book concept in this manner, or you normally have cross-references that purposefully target files outside a book, the book-wide resolution function will not likely be useful for you.

Working in the post-resolution dialog

Following a book-wide sweep, a dialog is produced listing any cross-references that could not be resolved within the book. These include instances when either no targets or multiple potential targets were found.

In the dialog, the list of unresolved cross-references appears on the left, by ID. They are listed by ID because this is the most distinguishing factor about cross-references, more so than other characteristics such as element names. In instances where multiple targets were found, they are listed on the right, by element name. In this case, the element name is more relevant, because the ID is already known by the selection on the left side, and the ID would be the same anyway for all of them (hence the existence of multiple possible targets).

In this dialog, you can perform the following functions:

- **Jump To** For either a cross-reference or potential target, jumps to the element in the applicable file.
- **Remove From List** Removes the selected cross-reference from the list. This function has no purpose other than to eliminate clutter from the dialog. Removing a

cross-reference from the list has no effect on the resolution (or lack thereof) of the cross-reference.

- **Resolve** If the problem was multiple possible targets, you can select a target and click Resolve. This will reset the link of the cross-reference to that element. Note that it will not fix the original problem, which was multiple possible targets... it simply allows you to pick one and resolve the link for the time being. You will have to manually examine and fix the issue of multiple possible targets, if you do not wish to see it reported again.
- **Close** Closes the dialog. This has no affect on the resolution of any cross-reference, does not affect any actions that occurred beforehand, and does not save any files.

Note: If the dialog reports a cross-reference as unresolved, that doesn't mean that the cross-reference is positively broken, in a FrameMaker context. It only means that the Wizard was unable to resolve the cross-reference conclusively within the active book. If it reports that no target was found, the cross-reference may be targeting a file outside the book. If it finds multiple targets, the cross-references may be currently resolved to one of them.

Important post-resolution note

If you have resolution problems that you fix in the resolution dialog, you should be aware that you have only performed a temporary fix, particularly in the case of multiple possible targets. That is, if you resolve a cross-reference to one particular potential target, then run the book-wide process again, you will get the same results, because the original problem of multiple possible targets still exists. Therefore, it is best that you use the dialog to identify and fix the source of the resolution problems, not just resolve links temporarily until the next run.

Chapter 3 — Cross-Reference Tools and Accessories

Aside from ID control and resolution, the XRef Wizard provides some accessory functions to facilitate cross-reference management in structured FrameMaker. Note that all of these functions are for structured Frame only.

XRef Wizard cross-reference pod

The Wizard includes an optional cross-reference pod that may be used in place of the native pod. It operates similarly to the native pod, except with a collection of features that may make it easier to use. Benefits include:

- The ability to list multiple elements in the potential targets list, including the ability to represent their hierarchy. With the native pod, you must select a single element at a time, making it more difficult to browse the complete list of potential targets in a single document.
- The ability to customize how potential targets are represented in the targets list. With the native pod, you are limited to a single representation of paragraph numbering, EDD prefixes, and the element text. With the Wizard pod, you can completely customize how targets appear, with the inclusion of element text, numbering, static text, and other parameters in any configuration.
- When cross-referencing an element that currently has no ID assigned, the optional ability to control which ID is assigned to complete the action. For more information on the types of IDs that the Wizard can automatically generate, see *“IDs that the Wizard can auto-generate”* on page 14.
- A better memory of previously-selected parameters. For example, the selected target file remains persistent after inserting cross-references and switching active documents, unlike the native pod that always reverts to the current document. Additionally, the pod remembers the most recently-selected target in the targets list, per document.
- A clear indication when you select a cross-reference that targets a file that is currently closed.
- A variety of additional settings that allow strict customization of its behavior.

By default, the Wizard pod replaces the native pod; for example, when you double-click a cross-reference, the Wizard pod appears. You can disable this behavior by selecting **Edit settings file** under the **Pod settings** menu in the pod. Additionally, this settings file contains all the settings related to the benefits listed previously.

Otherwise, West Street believes that the usage of the pod is generally intuitive to anyone who is familiar with the native pod. If you have any additional questions, please contact us.

Note: When the Wizard pod is enabled as a replacement to the native pod, you can still launch the native pod by selecting **Special > Cross-Reference**. Both may be used in parallel.

ID “uniquification” and setting empty IDs

The unification feature of the Wizard provides two main functions, which may be run together or independently:

- Ensure that all current unique IDs within the book are indeed unique from a book-wide context, and reset any that are not.
- Set values for any empty ID attributes throughout a document or book.

Within a single file, FrameMaker dictates uniqueness among unique ID attributes. This validation, however, does not extend between different files, even if they reside within the same book. Therefore, due to activities such as copy/paste, you may end up with duplicate values for unique ID attributes between different files in a book.

Normally, this situation does not cause a problem, because all cross-references include a filename component as well as the ID link. That is, with default FrameMaker behavior, cross-references will not be fooled by duplicate IDs, because they cannot occur within the same file, and all cross-references know which file to target.

In some cases, however, duplicate IDs may cause a problem. One case in particular is during the export of structured Frame content to markup, such as XML. Duplicate IDs may cause errors during the process, and may especially cause problems afterwards during transformation processes that integrate content bookwide. Or, another case may be a persistent problem with multiple possible targets during a Wizard book-wide resolution sweep.

The uniquification process, therefore, allows an automatic sweep of a book for duplicate unique ID attribute values. When found, another value is substituted, and any cross-references in the book that target the affected element(s) are reset. In the end, all IDs should be unique, without any disrupting of existing cross-references.

Before running this process, please note the following IMPORTANT ITEMS:

- **The uniquification process affects your files at a fundamental level** You should always keep backups before running it. If a critical failure occurs during the process, such as the inability to generate a unique ID, the process will abort and you may not know the exact status of your files.
- **The overall process is looking for potential cross-reference targets, not cross-references themselves** Remember that unique ID attributes generally do not occur on cross-references, only on the elements they target. Once a cross-reference is established, the “IDReference” attribute of the cross-reference takes on the unique ID attribute of the target.
- **Uniquification is only necessary if you have a compelling need** If you otherwise have no issues regarding duplicate IDs, you should probably leave your documents as is.
- **West Street understands that “uniquification” is not really a word** But we believe that “Make IDs Unique” lacks a certain zing, so we have abused our position and coined a new term.

To run a book-wide uniquification and/or set empty IDs

- 1 With a book or document window active, select **XRef Wizard > Uniquify/Set IDs Throughout Book** or **Uniquify/Set IDs Throughout Document**.
- 2 In the uniquification dialog, configure the settings as desired. Note the following:

- Uniquification is generally intended for book processing, as FrameMaker has other tools (such as EDD validation) that enforce unique IDs within a single document. However, the XRef Wizard will allow you to run the process on a single document if you want. For single document processing, note that in the event that an ID is changed that is the target of a cross-reference, that cross-reference cannot be redirected, because the Wizard cannot know which element was the originally intended target.
 - The long, random and element text IDs are identical to those produced during the cross-reference insertion process. For more information on these IDs, see *“IDs that the Wizard can auto-generate”* on page 14.
 - IDs generated during this process are controlled by the prefix and length constraints set in the general preferences. For more information, see *“General preferences”* on page 7.
- 3 Click **Start**.

Note: Any element whose unique ID attribute is reset is reported, along with any cross-references that needed to be repaired. Elements whose empty IDs are set are not reported.
 - 4 BEFORE SAVING ANY FILES, do a book update to ensure that no errors occurred, and that no unusual resolution problems have suddenly arisen.

Automatic ID-setting

Note: Read this section carefully before altering these settings!

Optionally, you can have the Wizard automatically set empty IDs during key user actions, such as inserting elements and saving documents. These options are set with **XRef Wizard > Automatic ID Settings** and include:

Option	Description
Insert an element	If checked, unique IDs are set automatically when an element is inserted with the element catalog or with a comparable shortcut. Pasted content is not affected.
Save a document	If checked, unique IDs are set automatically when a document is saved. Note: The new IDs will be saved with the document and will therefore be permanent!
Prompt for confirmation first	If checked, forces you to confirm an ID-setting action before a document save.

Option	Description
Qualifying HLE tag Qualifying HLE attribute name Qualifying HLE attribute value	Optional controls on whether IDs are actually set during a document save, operating in a cascading fashion, as follows: <ul style="list-style-type: none"> • If nothing is specified, the action occurs on all structured files upon save. • If an HLE tag is specified, a file must have that element as the root of the main flow, otherwise no action is taken on the file. • If an HLE tag and attribute are specified, the file must have that element and attribute at the root, otherwise no action is taken on the file. The contents of the attribute are not considered, only whether the attribute is defined in the EDD. • If all parameters are specified, the root element must have all the specified markup, otherwise no action is taken on the file.
New ID options	Scope of the operation and type of IDs to set. Note that IDs generated during this process are controlled by the prefix and length constraints set in the general preferences. For more information, see “General preferences” on page 7.

Finding cross-references to a particular element

For any element with a unique ID attribute (that is, a potential cross-reference target), you can right-click on the element and select **XRW - Find XRefs To This Element**. This command will search through the entire file and book, as applicable, and report on any cross-references that currently target the element.

If the Wizard finds an open book for the active document, it will search through the open files in that book. It will not open any files on its own, so if you want to search an entire book, you must open all the chapter files beforehand. If no book is open for the active document, only that document is searched.

This function is provided as an authoring convenience and has no association with the ID control and resolution functions of the Wizard.

Changing the unique ID of an element

For any element with a unique ID attribute, you can right-click on the element and select **XRW - Edit Unique ID**. This command will open an editor that allows you to view and edit the current unique ID of the element.

This function is provided as an authoring convenience for specialized use. Sometimes, an EDD will specify a unique ID element as read-only, so editing is not otherwise possible. Also, the editor provides access to the different types of auto-generated IDs that the

Wizard can produce. For more information about these IDs, see [“IDs that the Wizard can auto-generate”](#) on page 14.

If you are engaged in a systematic means of strict ID control, this command may help you manage your IDs. For example, you may use it to set the ID immediately after inserting any potential cross-reference target, so that it doesn't need to be done when the first cross-reference to it is created.

Note: The unique ID is a critical part of a cross-reference link to an element. If you change the unique ID of an element that has cross-references targeting it, you would normally break those cross-references. For this reason, when you change an existing ID, the Wizard will ask you whether it should scan the active book to automatically adjust applicable cross-references. If there is no book and/or some files are not open, the ability to complete the operation will be limited, as appropriate. The Wizard never opens any files.

Setting flags for named destinations

In structured Frame, a bug has existed for a while concerning cross-reference links when a document has been converted to PDF. More specifically, you may notice that some of your cross-references simply do not work in PDF format.

This bug is related to FrameMaker's failure to create a “named destination” for all cross-reference targets in the PDF. In a PDF, a target of a link requires a named destination, and if one is not created during conversion, that link will not work.

The bug is affected by how bookmarks, if any, are generated during the PDF conversion process. In short, if a certain paragraph format is not included in your bookmark setup, any element that uses it may fail to get a named destination, even if it is a target of a cross-reference. When this occurs, you may see messages in the Distiller log file such as:

```
% [ Warning: The following Names in Name Tree Dests were not defined ] %
G5.1583501
G5.1583609
G5.1583628
. . .
```

If you see these types of messages, or you note that some cross-references do not work in your PDFs, you should run this function to see if it solves the problem. This function places a different type of flag on all potential cross-reference targets which forces a named destination in all cases, resolving this particular issue. The function should have no noticeable effect on your FrameMaker document and relatively little effect on your PDF file size, so it should be safe to run regardless. Furthermore, the changes it makes are permanent, if you save your files afterwards.

To set flags for PDF named destinations for all files in a book

- 1 Open all files in the book, and return to the book window.
- 2 Select **Format > XRef Wizard > Set Flags For PDF Named Destinations**.
- 3 To save the changes permanently, save your files.

To have the wizard set a flag automatically on a target, when a cross-reference is inserted

- 1 With a book window active, select **Format > XRef Wizard > XRef Wizard Settings**.
or otherwise:

Select **Special > XRef Wizard > XRef Wizard Settings**.

- 2 In the settings dialog, select **Set named destination flags on targets....**

Note: This function will set a flag on a cross-reference target during the creation of the cross-reference, which will force a named destination for that element when a PDF is generated.

Chapter 4 — External Calls to the XRef Wizard

Like many FrameMaker plugins, you can make external calls to the XRef Wizard from your own API clients or supported scripts. Specifically, you can call the XRef Wizard to:

- Launch the inset editor
- Update a single inset, a tree of insets, an entire document, or an entire book.

How to send an external call to the plugin

To call the plugin, you can use one of three methods:

- **With the FDK `F_ApiCallClient()` function, from another API client** If you are working on another FDK client, you can use `F_ApiCallClient()` to call the plugin. This function is part of the normal FDK library and does not require any changes to your normal project settings. For more information on the function itself, see the *FDK Developer's Reference* provided by Adobe with the FDK.
- **With ExtendScript (FM10 and later)** ExtendScript is a native scripting utility that provides similar functionality as the FDK, including the ability to send calls to API clients.
- **With FrameScript** FrameScript[®], a scripting tool by Finite Matters, Ltd[®], has a comparable function for calling FDK clients, `CallClient`. When called from FrameScript, the plugin behaves identically to a regular API call.
- **With FrameAC** FrameAC by Mekon[®] (www.mekon.com) is a plugin that enables developers to use Visual Basic to control FrameMaker. FrameAC also provides the ability to script calls to other API clients.

For any supported operation, you pass a string to the plugin which contains a command and any applicable parameters, and the plugin sends back a numeric code indicating the results. The syntax of these strings is the same for either API or scripting calls, and is explained in detail in this document.

Tip: The call descriptions and examples in this document are written from an FDK/API perspective, using `F_ApiCallClient()`. If you are using ExtendScript, FrameScript, or FrameAC, the basic call syntax will be the same, sent using the mechanism supported by the respective tool.

General information on external calls

Before you attempt to call the plugin, note the following:

- Calls and returns sometimes involve document and element IDs, instead of names. Therefore, to use external calls effectively, you must be familiar with element and document IDs and how to convert them into the desired results.
- The default delimiter string between arguments in a call to the plugin is three dashes (---). In this document, the syntax of external calls use the default, which you should

adjust accordingly if you decide to change the delimiter. For more information on changing the delimiter, see [ChangeCallDelimiter](#).

- Due to the nature of `F_ApiCallClient()`, the plugin can only return a single integer after a call. No strings or other values can be returned. Therefore, all returns are in integer format and may represent items such as element IDs and error codes.
- Call strings are generally not case-sensitive.

Specifying document and book arguments

When a document or book identifier is required, you may use any of the following three methods:

- **An object handle ID** - The integer form of the `F_ObjHandleT` object ID for the file.
- **A filename** - A non-qualified filename, such as `MyDocument.fm`.
- **A file path** - A fully-qualified file path, such as:

```
C:\MyDocs\MyDocument.fm
```

With this method, you may substitute forward-slashes for backslashes. For example:

```
C:/MyDocs/MyDocument.fm
```

In all cases, the file must be currently open. The plugin will not open any files.

Specifying Boolean arguments

When an argument requires a Boolean true or false, you can specify it as follows:

- For **true**, you can specify `1`, `true`, or any word that begins with “t”, including just `t`.
- For **false**, you can specify `0`, `false`, or any word that begins with “f”, including just `f`.

Boolean arguments are not case-sensitive.

Call reference

This section details the external calls you can make to the plugin.

ChangeCallDelimiter

Changes the delimiter for external call arguments. The default upon startup is three dashed (“---”).

Syntax

```
F_ApiCallClient("XRefWizard", "ChangeCallDelimiterNewDelimiter");
```

Note: The new delimiter directly follows the `ChangeCallDelimiter` command. Do not separate them with the old delimiter. Anything following the command will be considered the new delimiter.

Returns

`F_ApiCallClient()` returns one of the following values:

Value	Meaning
0	A communication error occurred. Consider calling <code>Hello</code> to verify that the XRef Wizard is active.
1	The delimiter was successfully changed.
101	Unrecognized command. Make sure you spelled “ChangeCallDelimiter” correctly.
103	Incorrect number of arguments in the call string. Make sure you provided a new delimiter after <code>ChangeCallDelimiter</code> .

Syntax example

```
F_ApiCallClient("XRefWizard", "ChangeCallDelimiter++++");
```

Hello

Determines if the XRef Wizard is initialized and receiving external calls.

Syntax

```
F_ApiCallClient("XRefWizard", "Hello");
```

Usage description

`Hello` is a simple call to ensure that the XRef Wizard is available and responding to external calls.

Returns

`F_ApiCallClient()` returns one of the following values after a `Hello` call:

Value	Meaning
0	Communication with the XRef Wizard failed. Check to make sure that the XRef Wizard is initialized and running. Also, make sure that the XRef Wizard is properly registered in the <code>maker.ini</code> file under the name “XRefWizard.”
1	The XRef Wizard is installed and ready.
101	Unrecognized command. Make sure you spelled “Hello” correctly.

Syntax example

```

. . .
IntT returnVal;

. . .
returnVal = F_ApiCallClient("XRefWizard", "Hello");

if(returnVal != 1)
    F_ApiAlert("Error. The XRef Wizard is not responding.",
              FF_ALERT_CONTINUE_WARN);

```

SetIDs

Runs the ID assignment and/or “uniquification” process, similar to the **Set IDs Throughout Document / Book** commands (see “[ID “uniquification” and setting empty IDs](#)” on page 20).

Syntax

```
F_ApiCallClient("XRefWizard",
  "SetIDs---File---DoDialog---DoPrompts---DoReporting");
```

where:

<i>File</i>	File on which to run the process, either a document or a book. If a book is specified, all components of the book must be currently open. See “ Specifying document and book arguments ” on page 26.
<i>DoDialog</i>	Indicates whether or not to produce the interactive launch dialog box. The default is false (no dialog, run process immediately using current settings). See “ Specifying Boolean arguments ” on page 26.
<i>DoPrompts</i>	Indicates whether to do any warning or informational prompts during or following the process. The default is false (no prompts or warnings). See “ Specifying Boolean arguments ” on page 26.
<i>DoReporting</i>	Indicates whether to produce the uniquification report that details ID changes and redirected cross-references, as applicable. The default is true (produce a report). See “ Specifying Boolean arguments ” on page 26.

Usage description

This function is designed to allow full automation of the ID assignment and uniquification process as described under “[ID “uniquification” and setting empty IDs](#)” on page 20. It has two primary options:

- **Use the standard interactive dialog box**, in which case the user selections become the parameters for the operation
- or-
- **Skip the dialog box**, in which case the process launches immediately using the parameters currently in memory.

Note the following:

- You can set all the available processing parameters with [SetParm](#). Before running `SetIDs` the first time, it is highly recommended that you explicitly set all parameters, as the defaults may be unknown and/or unreliable.
- Similar to launching the process via the XRef Wizard menu, no files are saved after the process completes.

Returns

`F_ApiCallClient()` returns one of the following values:

Value	Meaning
0	A communication error occurred. Consider calling Hello to verify that the XRef Wizard is active.
1	The process completed normally.
101	Unrecognized command. Make sure you spelled “SetIDs” correctly.
103	Incorrect number of arguments in the call string.
104	Invalid file argument.
109	The file argument represented a book file, but one or more book components were not open.
111	The process was cancelled by the user before completion.
120	General failure, cause unknown. After restoring your files, run the process again with prompts enabled to investigate the source of the error.

Syntax example

The following example will run the process on an entire book with no interactive dialog box, prompts, or reporting.

```
F_ApiCallClient("XRefWizard",
  "SetIDs---MyBook.book---False---False---False");
```

SetNamedDestinations

Runs the named destination assignment process, similar to the **Set Flags For PDF Named Destinations** command (see [“Setting flags for named destinations”](#) on page 23).

Syntax

```
F_ApiCallClient("XRefWizard",
  "SetNamedDestinations---File---DoPrompts");
```

where:

<i>File</i>	File on which to run the process, either a document or a book. If a book is specified, all components of the book must be currently open. See “Specifying document and book arguments” on page 26.
<i>DoPrompts</i>	Indicates whether to produce the initial confirmation prompt and the final completion prompt. The default is false (no prompts). See “Specifying Boolean arguments” on page 26.

Usage description

This function is designed to allow full automation of set named destination process as described under [“Setting flags for named destinations”](#) on page 23. Its operation is identical to manual usage through the XRef Wizard menu, except that you have the option to skip the interactive prompting.

Returns

`F_ApiCallClient()` returns one of the following values:

Value	Meaning
0	A communication error occurred. Consider calling Hello to verify that the XRef Wizard is active.
1	The process completed normally.
101	Unrecognized command. Make sure you spelled "SetNamedDestinations" correctly.
103	Incorrect number of arguments in the call string.
104	Invalid file argument.
109	The file argument represented a book file, but one or more book components were not open.
111	The process was cancelled by the user before completion.
120	General failure, cause unknown. After restoring your files, run the process again with prompts enabled to investigate the source of the error.

Syntax example

The following example will run the process on an entire book with no interactive prompts.

```
F_ApiCallClient("XRefWizard",
  "SetNamedDestinations---MyBook.book");
```

SetParm

Sets a functional parameter, as described under "[Syntax](#)" on page 30. Currently, all supported parameters are related to the ID assignment and unification process, in preparation for a [SetIDs](#) call.

Important! Before running [SetIDs](#) the first time, you should explicitly set these parameters as desired, as the defaults may not be known or necessarily reliable. Consider building a routine that sets them as a batch, then call that routine before each [SetIDs](#) call.

Syntax

```
F_ApiCallClient("XRefWizard", "SetParm---Parameter---Value");
```

...where *Parameter* and *value* may be as follows:

Parameter	Description and valid values
SetIDs_ActionScope	<p>Sets the type of operation(s) to perform during an ID assignment/uniquification run, one of:</p> <ul style="list-style-type: none"> • Uniquify - Uniquify existing IDs only • Set - Set unassigned IDs only • Both -Uniquify existing IDs and set unassigned IDs
SetIDs_ElementScope	<p>Indicates on which elements the process should operate:</p> <ul style="list-style-type: none"> • All - Run on all elements with a unique ID attribute • Specified - Run only on elements found in the SetIDs_ElementList list • NotSpecified - Run on any elements not found in the SetIDs_ElementList list
SetIDs_ElementList	<p>Provides a list of elements to consider when SetIDs_ElementScope=Specified or SetIDs_ElementScope=NotSpecified. It has no effect when SetIDs_ElementScope=All.</p> <p>To specify multiple elements, use a comma-separated string, for example:</p> <pre>F_ApiCallClient("XRefWizard", "SetParm---SetIDs_ElementList---p,li,title");</pre> <p>Note that:</p> <ul style="list-style-type: none"> • Element tags are absolutely case-sensitive • Each SetIDs_ElementList call replaces the previous list in memory.
SetIDs_IDType	<p>Specifies the type of IDs to assign:</p> <ul style="list-style-type: none"> • 8char - 8-character alphabetic IDs • Long - Long random IDs, subject to other applicable settings within the plugin general settings • ElemText - IDs based on element text
SetIDs_DoBookUpdate	<p>Specifies whether to perform a book update following the operation:</p> <ul style="list-style-type: none"> • True - Perform a book update • False - Do not perform a book update
SetIDs_MaxReportedActions	<p>Specifies the maximum number of actions that the uniquification report may contain, after which reporting is halted. This may be any integer greater than 0.</p>

Returns

`F_ApiCallClient()` returns one of the following values:

Value	Meaning
0	A communication error occurred. Consider calling Hello to verify that the XRef Wizard is active.
1	The parameter was successfully changed.
101	Unrecognized command. Make sure you spelled "SetParm" correctly.
103	Incorrect number of arguments in the call string.
107	Unrecognized parameter.
109	Bad parameter value.

SetParm syntax examples

```
F_ApiCallClient("XRefWizard",
  "SetParm---SetIDs_ActionScope---Uniquify");

F_ApiCallClient("XRefWizard",
  "SetParm---SetIDs_ElementList---Heading");

F_ApiCallClient("XRefWizard",
  "SetParm---SetIDs_DoBookUpdate---True");

F_ApiCallClient("XRefWizard",
  "SetParm---SetIDs_MaxReportedActions---15");
```