

IXgenTM 7-10

Classic IXgenTM 7

Power Indexing &
Marker Management
Tool for FrameMaker[®]

Users Guide

Windows



For FrameMaker Versions 7 through 15

160301 IXgen 7 & 7-10 (for FrameMaker 7 through 15)

Index and Marker Management tool for use with FrameMaker® documents. IXgen program files and documentation ©1994-2016 Frank Stearns Associates

License Agreement

IXgen is owned by Frank Stearns Associates. IXgen is sold in the form of single fixed licenses for FrameMaker on Windows. A fixed license means that IXgen can only run on the machine where it is installed, and be used by one person at one time.

IXgen, its component scripts or executable files, along with this document, is copyrighted material owned by Frank Stearns Associates.

You may not rent or lease this software, but you may transfer ownership and the accompanying materials on a permanent basis provided you retain no copies and the recipient agrees to the terms of this agreement. The new owner will need to apply to us for a new password.

Product Registration

If you purchased IXgen directly from Frank Stearns Associates your copy was registered at the time of ordering. However, be sure to send in your IXgen system key (copyable from the IXgen>License dialog box) so that we can compute a product password for you. See Table 2, "IXgen Set-up Notes," on page 11 for more information.

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Editing Consultation: Paul Herzberg

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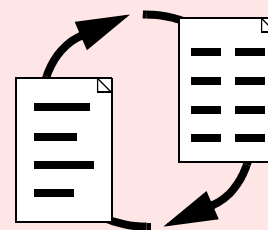
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Preface

(All page numbers and cross-references are active links when this document is viewed in an electronic format. Click the link to go the area of interest.)

Overview of this Guide

This table provides a high-level summation of the information in this guide:

Table 1 Summary of IXgen Documentation

General Topic	Brief Description	Page
IXgen Overview and Introduction	Provides a general introduction to IXgen, including license acquisition.	page 21
Installing IXgen (Quick)	Quick overview/refresher of installing IXgen	page 11
Installing IXgen (Detailed)	In-depth look at installation details; includes sample screen shots. This appendix is a near duplication of the “IXgen Central” page of http://www.fsatools.com	page 103
Installing IXgen by Hand	If your automated installation is not successful, installing IXgen by hand can help identify (and correct) any installation problems.	page 99
Installing IXgen with FM+SGML	While not an officially supported combination, many users are using IXgen with FM+SGML. Special considerations apply, however.	page 102
General Tool Notes	Provides overview and general information about the various IXgen tools.	page 19
Reference Information	Each IXgen tool is described in detail.	page 26

Table 1 Summary of IXgen Documentation (Continued)

General Topic	Brief Description	Page
"Cookbook" Items	A number of step-by-step procedures show how IXgen can perform a number of "real-world" indexing and marker generation tasks.	page 78
Problems and Solutions	Several common problems are listed, including one or more solutions for each problem	page 85

Conventions used in this Manual

System items, such as file or folder names, are indicated with a `typewriter` font.

IXgen tool names are shown in **bold font** and are hot linked in the PDF version of this document. Click the bolded tool name to go to the explanation section for that tool.

"Windows" refers to all 32-bit Windows, including but not limited to 95, 98, 2000, NT, ME, and XP.

PDF and Document Layout

The font styles and sizes used have been optimized for PDF. (On a 1024x768 display, PDF view clarity is usually best at 100%. 125% can be better on a 1280x1024 display. Your monitor and video system may provide better results at other settings.) The pages and running headers and footers are set up "book style" for two-sided printing and binding of this document. While most cross-references are "hot links" in PDF, we've also included many page number references, which will be useful if you print your own paper copy.

Assumptions and Set-up Notes

Table 2 lists general IXgen attributes. You are assumed to have a basic familiarity with Windows and with FrameMaker.

Table 2 IXgen Set-up Notes

Topic	Notes
Configuring IXgen	No user-controlled installation configuration is necessary for Windows IXgen. Such configuration is handled by the Windows installer.
General Licensing Notes	<p>IXgen requires a license. A “license” is an administrative concept, while passwords activate IXgen and are issued by us against the license you own (or borrow for demonstration purposes).</p> <p>You will need to enter a password obtained from us, usually via email to franks@fsatools.com. (Specific password acquisition instructions follow next.)</p> <p>Password installation instructions are in the “IXgen Central” page of the fsatools.com website, as well as in this manual also with each password we email to you.</p>
FrameMaker Upgrades	If you plan to upgrade to FrameMaker and have an IXgen license for an older version of FrameMaker, you will need a new IXgen distribution and password from us. Distributions can be downloaded from the “IXgen Central” portion of http://www.fsatools.com .
General System Requirements	PC running 32 or 64-bit Windows (2000, NT, ME, XP, Vista, Windows 7, 8, 10 and their derivatives), tuned for FrameMaker operation. Your system will need adequate memory and adequate virtual memory — the “ideal” amount will depend on which operating system you are using, how it is set up, and the nature of the documents you produce (graphics-intensive documents will often require more physical memory for reasonable performance). IXgen itself generally has a very small impact on system memory requirements.
Disk Usage	IXgen itself (including this document) requires approximately 5 Mbytes of disk space. Source FrameMaker documents processed by IXgen remain approximately the same size as the originals, plus any additional space required by IXgen-added markers.

Installing IXgen

Overview

The “IXgen Central” page of <http://www.fsatools.com> describes these complete steps:

1. Downloading
2. Installation
3. Licensing
4. Applying the IXgen password.

“IXgen Central” is the recommended documentation resource for detailed instructions, including example screen shots of the above steps. (Or, you can jump right in and try the *Installation Quick Start*, which follows in the next section.)

If you do not have a consistent or reliable internet connection, the web pages for the above steps are included in *Appendix B: IXgen Installation Pages from www.fsatools.com* starting on page 103. You will, however eventually need a connection for downloading IXgen components and communicating licensing information with us.

If you have difficulties installing IXgen, please review *Appendix A: Installing IXgen By Hand* starting on page 99. This appendix describes the nuts and bolts of an IXgen installation. Use this information to troubleshoot your installation. If you are still having problems, please contact us.

CAUTION: If you are using FrameMaker 10 or newer versions and your book or document contains unicode characters, do not use *any* IXgen functions in that book or document. For more information see *Damage to Unicode Characters in FrameMaker 10 (and newer)* starting on page 15.

Installation Quick Start

If you have installed IXgen before, or have installed a lot of applications over the years, these quick steps might be all you need. If you do need clarification, please go to *Appendix B: IXgen Installation Pages from www.fsatools.com* starting on page 103 for more details, including sample screen shots. (Or, you can review the “IXgen Central” page of <http://www.fsatools.com> for the same information.)

Otherwise, here are the quick steps:

1. Quit FrameMaker if it is currently running.
2. Download the appropriate IXgen distribution from the download tab of the “IXgen Central” page of <http://www.fsatools.com>. Save the download into a new folder. Saving to the Desktop or general temporary folder is not recommended.
3. Double-click on the distribution to self-extract. If the extraction won’t start, you can also try right-clicking and selecting “Run as Administrator”.
4. Among the extracted files, right-click on setup.exe and select “Run as Administrator”. Review the information screens presented as the installer progresses. Most users will be able to press Enter at each prompt.
5. Press Enter on the final screen to exit Setup.exe. (A complete exit of the installer is required. The installer window should no longer be active when you go to the next step.)

6. Right-click on framemaker.exe in your FrameMaker main folder and select “Run as Administrator.” “IXgen” should now appear in the FrameMaker main menu list.
7. Select IXgen>License. Copy the complete contents of the System Key field on to the system clip board (Control-C). Email us at franks@fsatools.com. Be sure to put IXGEN somewhere in the subject line of your email. In the body of the message include your name, organization, telephone, preferred email, and whether you are a contractor or regular employee. Paste (control-V) the system key into your message.
8. When you receive your password from us (typically less than eight business hours after you send your email to us), again start FrameMaker while “Running as Administrator.”
9. Select IXgen>License. Copy the password string from the email you received from us and paste it into the “Current Password” field. (Be sure to overwrite or remove the old contents of the Current Password field.)
10. Click “Update Password”. Before dismissing the dialog, check the “Password Status” line (second from the top). A valid password should be indicated.

If you have any questions, please review *Appendix B: IXgen Installation Pages* from www.fsatools.com starting on page 103. If you need additional help review *Problems and Solutions* starting on page 85 of this manual, or review the “Troubleshooting” page of <http://www.fsatools.com>. Please do contact us if you are unable to resolve the issue. If you need verify an IXgen installation or perform an installation by hand, review *Appendix A: Installing IXgen By Hand* starting on page 99.

Removing or Disabling IXgen

You can stop IXgen from loading by commenting out the API load command in the maker.ini file. Or, you can run `removeix.exe`.

To disable but not remove IXgen, follow these steps:

1. If currently running, stop FrameMaker.
2. Use Windows Explorer to browse where FrameMaker is installed. Using a plain text editor such as Notepad, open `maker.ini`.
3. Perform a search for this string: `IXgen=Standard,Marker Management`. (You will see a longer line; but the above is more than enough to find the proper line of text.
4. Insert a semicolon at the head of the line. Now this first portion of the line looks like this:

```
;IXgen=Standard,Marker Management
```

The next time FrameMaker starts, IXgen will not be loaded. To re-enable IXgen, follow the steps above but remove the semicolon from the API registration line.

To remove IXgen, follow these steps:

1. If currently running, stop FrameMaker.

2. Point Windows explorer at `<FM_install_folder>\ixgen\removeix.exe` (double-click on `removeix.exe`). If the script will not execute, try right-clicking on `removeix.exe` and “run as administrator. If you are unable to run the script, you can manually remove IXgen by reversing the steps presented in *Appendix A: Installing IXgen By Hand* starting on page 99
3. Some operating systems may leave the IXgen folders behind. Within the main FrameMaker installation directly, simply delete the `ixgen` folder and all its contents.

Using the demoixgn Demonstration File

The IXgen distribution includes `demoixgn.pdf`. Note that because `demoixgn` is self-guided, do not expect a scripted or “canned” product walk through. This means you can freely try an IXgen function on any of your own test files, then come back to `demoixgn` as you’d like. If you’re going to experiment on your own working files, make back-up copies first. As a practical matter, the demonstration files referenced in `demoixgn` refer to the samples provided with FrameMaker 7 and won’t match the sample file sets in other versions of FrameMaker. Guiding information is provided so that you can perform similar operations on your own sample files.

IXgen Interaction with Document Files

Marker Subsystem

IXgen *does not change* the operation of the marker subsystem in any way. IXgen is simply a new and improved *interface* to the marker subsystem. For this reason, you can freely open documents where IXgen has been an marker editing aid on other systems where IXgen is not installed, and vice versa.

Passthrough Markers

Sometimes marker text includes special command sequences that will be used by other applications outside of FrameMaker. (HTML or special help-system commands are two examples.) Depending on the syntax, some of these command sequences can be processed by IXgen, causing problems both for IXgen and later, the application that was to use these sequences.

Such markers are not used for indexing, but it can still be useful to edit these markers using the various IXgen tools — but you’ll want to stop any command interpretation that IXgen might attempt.

You can identify such marker types by name and list them with the `PassthroughMarkerTypes=` parameter in the `ixgen.ini` file (located in the `ixgen` folder of your FrameMaker installation folder). Multiple marker names can be added to this parameter, separated by commas. The comments in the `ixgen.ini` file for this parameter will show the proper syntax for this feature. (Generally, this is a specialized use of FrameMaker that won’t affect most IXgen users.)

Reference Page Use

While IXgen changes nothing operationally in the files it processes (other than marker content), a number of items are added to new reference pages within the processed files.

CAUTION: You may look at these reference pages if you wish, but please do not alter the content. If you do, IXgen will fail when you attempt to use IXgen. This might corrupt your document. You can, however, completely remove the IXgen references pages if you wish, though these pages will be recreated the next time you use IXgen on the file.

Each of these new reference pages includes one or more text frames to hold IXgen status information. If you are selecting a “frame above/below” in the Advanced Properties tab of the Paragraph designer, you will see one or more IXgen frames listed. Simply ignore the IXgen frames, and select from your regular frame list.

Shadow Book File

When working with books, IXgen creates a “parallel” or “shadow” file (your book name with the file extension “.ixc”). Default file selection information is stored in this file. If you move a book file and its components to a new folder and plan to use IXgen again, it’s simplest to delete this file. A new file will be created when you use the IXgen Select Files command from the book menu. However, you may find that some defaults are not as expected. After your first pass through IXgen with the files in the new location, your various IXgen preferences will be stored in the new .ixc file.

Text Insets

FrameMaker offers a method of importing text from another document and placing that text in the body of the current document. These “text insets” are useful when the same text is used in more than one place. Maintenance changes can be made in one place — the source document for the text inset — and thus your changes are reflected into *all* document using that text inset.

Source files for text insets can contain all regular FrameMaker document components, including markers. However, at the inset point the text is “read only” and cannot be edited. For this reason, IXgen does *not* collect markers found in text insets.

If you wish, use IXgen on the *source* document of the inset. If you have many source documents used for text insets, make a FrameMaker book to organizer your insets. Then, you will have a central and convenient tool for managing the source documents for your text insets, including using IXgen on those documents.

The Marker Window

Under certain conditions the work of IXgen can overwrite work done with the marker window. The reverse is also true. For more information see *Conflicts with the Marker Window* on page 26.

Damage to Unicode Characters in FrameMaker 10 (and newer)

Since its inception, IXgen has *not* supported Unicode (characters defined by two or more bytes). In past versions of FrameMaker, this caused no harm. IXgen (as hosted by FrameMaker) attempted

to process the extended character set, but most IXgen functions simply did not return expected results.

In FrameMaker 10 and newer versions, however, this has changed. Internal representations of Unicode characters used by IXgen DESTRUCTIVELY CONVERT the multi-byte Unicode character to a single byte character. Such multibyte characters are converted to a question mark (“?”) character when read by IXgen. The original multibyte representation is lost and cannot be recovered.

CAUTION: If your FM10 (or newer version) book or document contains unicode characters, do not use *any* IXgen functions in that book or document.

Generally, Western European languages that include diacritic marks, such as accents, umlauts, and so on, are still single-byte characters in most character sets, and are thus not affected.

IF YOU ARE UNSURE, ALWAYS BACK-UP YOUR WORK BEFORE USING IXGEN! By using IXgen you acknowledge the risk to Unicode characters.

IXgen System Interaction

FrameMaker Interaction

IXgen is an API client, which means that once IXgen is properly installed, IXgen becomes a part of FrameMaker. Thus, the look, feel, and operation of IXgen will be similar to any other FrameMaker function you use. Please review the remainder of this document for information on each IXgen function. (Tool descriptions start on page 26.)

Multiple IXgen Versions on One FrameMaker

While you can have the files sets for different IXgen versions on a single FrameMaker installation, only one IXgen will be active. This will be the *first* IXgen registered in the APICLIENTS section of `maker.ini` file. It is best, however (and strongly recommended), to remove the registration line of the IXgen version not in use, or place a semicolon at the head of that line to comment out that unused IXgen registration.

Operating System Interaction

Because IXgen becomes part of FrameMaker, nearly all operating system interactions, such as opening and closing files, calling up windowing system services, and so on, are done through FrameMaker. Windows users should be aware that the printer driver selection can have an effect on IXgen. Refer to the section *Windows Print System Interaction* below for a discussion.

Using the FrameMaker Console Window

IXgen writes status and error information directly to the FrameMaker console window. This is done to better track the activities of IXgen, which by some definitions could be considered “batch” in nature. IXgen is more “batch-like” than most activities inside FrameMaker.

While using IXgen for the first few times, review the console window periodically to see what types of information IXgen sends to this window. (Reports include the number of markers found

and processed, the number of markers generated, and so on. Some information is duplicated within the various IXgen dialog boxes, but the console window often contains more detail, depending on the function or type of message.)

The IXgen information recorded in the console window can be invaluable when backtracking the activities of an IXgen session.

Windows Print System Interaction

One area of concern for any Windows user with any application (not just FrameMaker and IXgen) is the sometimes “over-coupling” of the printer driver to the application. This means that an inappropriate printer driver, once connected to FrameMaker, can produce bizarre displays, even to the point of effectively crippling FrameMaker. Even with mitigators, such as Adobe Type Manager, this can still be a problem.

Perhaps realizing a less than ideal operating system design, in current versions of Windows the system will “help” you by reformatting the document to the fonts available in the printer driver currently connected. This can be done in such a way that you’re never completely warned, and your desired formatting is effectively ruined. We find this operating system design difficult to defend, but unfortunately, we have no control over the current situation.

Because IXgen becomes a part of FrameMaker when loaded, IXgen and its templates are susceptible to any printer driver or font problems you might have.

If you have any appearance problems with IXgen or FrameMaker, or if any IXgen function fails, check to be sure the correct printer driver is in use, *and that the driver is not corrupt*. We have found that under unknown circumstances, Windows printer drivers can become damaged and thus need to be reinstalled. This is best done by deleting the printer in question from the printer setup list, then reinstalling the printer driver. (Consult your Windows documentation or help files.)

The IXgen templates use fonts common to most systems. However, you may still have display problems or be unable to use some IXgen functions because the fonts used are not in your current printer driver. If this is the case, you can change the font portions of `demoixgn.fm` and the various IXgen templates. This is discussed next.

Changing the Fonts Used by IXgen

The IXgen templates use common fonts. However, Windows users can still have display problems or IXgen operations might fail because the printer driver you use does not support these fonts, or does not support a full range of sizes. Windows users may wish to use a display font better suited to their environment. Follow these steps to change fonts:

1. Templates used by IXgen for FrameMaker are in:
`<FM_install_folder>\ixgen\templates`. Open each file with FrameMaker.
2. Access the Character Designer (control-D). Make sure that no named character tag is showing (the Character Tag scroll box should be empty), and that all the fields are set to “as is”. Use `Commands>Set Window to As Is` to do this.
3. Select the desired font family that looks best on your display — leave the other fields set to “as is”.

4. Use **Commands>Global Update Options**. Set to “All Characters and Catalog Entries”, then click **UPDATE**.
5. Save and close the template document, then repeat the above steps for each file in the template folder.

You need only do this operation once; fonts do not need to be updated on a regular basis unless you have switched to a printer driver which does not support your current font selections.

You are welcome to change font usage in any IXgen template so that IXgen looks as you want it to look with your configuration. When working with the templates, be careful not to change attributes other than those in the Font portion of the Paragraph designer.

Adobe User Profiles

With FrameMaker 7.0, Adobe introduced the concept of a “user profile” supplemental `maker.ini` file. The location of this file varies dependent on the operating system used. (Refer to the comments at the beginning of the `maker.ini` file for locations.)

API client registration, such as that required to load IXgen, is supposedly a blend of registrations found in both the `maker.ini` file located here, and in the `maker.ini` file located where you have installed FrameMaker 7.

So far, this has not proven to be a reliable system, and thus you will find the IXgen API registered only in the main `maker.ini` file located in the folder where you installed FrameMaker.

If you wish to make use of the user profile system, delete the following line from the main `maker.ini` and move it to the appropriate `maker.ini` file in the User Profile section:

```
IXgen=Standard,Marker Management,ixgen\bin\ixgen.dll, all
```

Error Reporting

Errors During FrameMaker Startup

The first time you restart FrameMaker after installing IXgen, you may want to monitor the starting status of IXgen in the console window. Status text indicates the state of the FrameMaker start-up, and its connection to IXgen. You can assume a successful IXgen start-up if you that “IXgen” appears in the main menu bar of FrameMaker. Otherwise, be sure to review *Problems and Solutions* starting on page 85. Your problem might be listed there. You can also review the FAQ portion of <http://www.fsatools.com>, or call us at 1-435-275-8981 (this number does not accept text messages).

Errors During Use

IXgen may occasionally encounter some difficulty. One or more pop-ups will describe the problem and recommend a solution where possible. In addition, always check the console window for additional details on any errors encountered. Be sure to review *Problems and Solutions* starting on page 85. Your problem might be listed there.

If you experience any other type of difficulty, please contact us.

System or FrameMaker Errors

In recent years operating system stability has improved. However, crashes still occur. We urge you to make frequent saves and temporary back-up “snapshots” of your work as you go. This is a good recommendation especially when working in Windows, no matter the application.

When working with the IXgen tool **Gen Editable Marker List** across a book, a large number of markers can be collected. You may be investing much time editing those markers before applying them, so be sure to occasionally save the editable marker list as you work. This way, should a system or FrameMaker crash occur, you can continue from where you left off. (Normally, such saves are not typically required as the editable marker list is a temporary document. But as your editing time grows on this document, consider occasionally saving the work.)

When working with a large number of markers, you may also want to occasionally apply all work done with the **Gen Editable Marker List** tool back to the source files. Once applied, discard the current editable marker list then generate a fresh copy (use **Gen Editable Marker List** again) and continue.

CAUTION: Refer to the caution on page 33 regarding how a FrameMaker bug can cause problems with **Apply Edited Marker List**. To summarize that caution here, **do not** edit or change your documents when an **Gen Editable Marker List** is active. Use **Apply Edited Marker List** to save your marker edits before making any source-document edits — no matter how small.

Configuration of IXgen Tools

Configuration of IXgen tools is done “on demand”. That is, configuration items, such as which tags or files to process and which marker type to work with, appear as changeable items in most of the IXgen tool dialog boxes. IXgen is thus readily adjusted for each tool use.

In most cases you probably *won't* need to change configuration items once they've been set the first time through. IXgen assumes the last-used configuration as the current default.

Reference List — Default Marker Types

By default, IXgen processes Index markers, but you can process any of the types listed in Table 3.

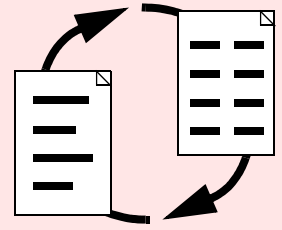
Table 3 List of Marker Types

Marker Type Name	Contents
Header/Footer \$1	Header/footer marker #1
Header/Footer \$2	Header/footer marker #2
Index	Index marker
Comment	Comment marker
Subject	Subject marker
Author	Author marker
Glossary	Glossary marker
Equation	Equation marker
Hypertext	Hypertext marker
X-Ref	X-ref (cross reference) marker
Conditional text	Conditional text marker
Edit...	Bring up the Edit Customer Marker Type dialog box for creating User-defined markers.

CAUTION: While IXgen will process the markers noted in the gray rows (HyperText, X-Ref, and Conditional Text), modifying these markers through IXgen is not recommended. If you modify these markers using IXgen (or manually through the marker window, for that matter), hypertext linking, cross-referencing, or conditional text settings may not work as expected, or the document may become unusable. Modification of these markers is best left to the FrameMaker functions that use them.

Some uses of hypertext markers can be considered exempt from this caution. For examples, review *Generating HyperText Pop-ups* on page 81 and *Generating HyperText Links to other Documents* on page 82.

IXgen will work with any custom markers you establish. Be sure to define any new marker type(s) required before using IXgen. Do so using the Edit... option in the Marker Type scroll box from the Special>Marker dialog box. IXgen will then be able to access and create any markers for the marker type(s) you define.



IXgen 7 Users Guide

IXgen Overview and Introduction

Why Index?

This question has been asked with increasing frequency in recent years, as people have become resigned to (or numbed by) the poor performance of flat search engines, both inside application help systems and on the world wide web. Poor performance there seems to cause lowered expectations for print (and by extension, PDF) indexes.

But given the density and volume of information we wade through daily from all sources, now, more than ever, we need human-designed locators into that information.

At the heart of any such system is the *thought* put into designing locators for the oceans of information we've created. Such thinking is often best done by people who know the subject matter (and how others might approach that subject when looking for information), and who know how to see the “big picture”, the “little pictures”, and all the threads running through each.

This is the work done by the indexer. A well-crafted index is a huge value-addition for any volume of information. Your audience can now quickly find the information they need; or perhaps even think of new ways to apply your information based on what they might see in your good index.

Enriched by using a good index, your audience has higher overall satisfaction with your information, does better work, and has good thoughts about you and your products. Contrast this to the resigned “oh, I could never find what I needed in that [book, website, online help]; so I'll not be going back there or making endorsements...”

The task of the indexer can be enormous; that's why mechanical aspects of index creation should intrude and distract as little as possible.

In the FrameMaker world, this is where IXgen comes in.

IXgen provides quick and easy methods to generate and maintain markers in FrameMaker, which means easy maintenance of indexes and other types of lists generated from markers.

Concordance vs. Index

Indexing, in its most pure form, is an art. Creating a good index takes practice, typically several iterations, and a broad knowledge of the subject matter.

Most machine-derived indexes (and many human-prepared indexes) are not really indexes but concordances. A concordance is nothing more than an unedited, alphabetical list of keywords found in a document. Generally, the keywords are derived from the content itself, thus leaving out any helpful locator verbiage that might not even be in the text. And a search engine isn't any better, being really nothing more than an "at the moment, for this keyword" concordance builder.

An index, on the other hand, provides not only a keyword lists, but also synonyms, phrase permutations, threading where appropriate, and cross-referencing within the index itself.

Redundant or essentially valueless occurrences of a keyword are not included in the index. (Contrast this with the fully automatic concordance generation in its various forms that we see today. Your audience wastes much time chasing references to a keyword where the reference is of no real value — the keyword just incidentally appeared somewhere in your information. No human judgement checked the validity of the resulting keyword "hits".)

A streamlined concordance can have some value, but as the information being indexed becomes more voluminous and complex, the value of the concordance steadily goes down. A true index is of far greater value.

IXgen's maintenance utilities are well-suited for index creation, from the simple to the complex. In fact, because IXgen makes the mechanics of marker maintenance so much easier, creating a true index (which often requires much hard "brain work") will be feasible where perhaps only a concordance was practical before.

IXgen's automatic marker generation features are best classified as "concordance enhancers". But while working in this mode we hope that the ease with which IXgen handles markers will inspire more true indexing from IXgen users. IXgen makes keyword gathering and permuting extremely easy; then, editing and polishing the entries with IXgen (either in context or in a sorted list) makes the editing process simple.

How IXgen Works

While IXgen was intended for index creation and maintenance, many IXgen tools are perfectly suited for work with other types of FrameMaker markers such as subject indexes, author indexes, user-defined lists, and so on. IXgen can even help with hypertext markers.

VERY IMPORTANT NOTE:

Please understand that IXgen does *not* change the structure of a FrameMaker document. Documents processed by IXgen are always completely compatible with other FrameMaker documents because IXgen uses the existing FrameMaker marker system. IXgen merely provides a convenient and powerful interface to the standard FrameMaker marker system. *Documents processed with IXgen can always be opened by FrameMaker, whether IXgen is present or not.*

Also understand that IXgen does not replace the normal marker housekeeping functions provided by FrameMaker. These functions include generating the final index document (or marker list), formatting those documents, and so on.

Said another way, IXgen provides new ways to create and edit markers; IXgen does *not* duplicate the marker collection and marker list document generation facilities already provided by FrameMaker.

If you are new to FrameMaker and how basic FrameMaker indexing works, we suggest reviewing the chapter on indexing provided in the FrameMaker manual. This will give you an overall idea of how markers and the marker collection process works in FrameMaker. You will also then better understand how IXgen can be of great aid in creating and working with marker text.

Using IXgen Tools

Introduction

Most IXgen tools are accessed through the main FrameMaker menu bar under “IXgen.” You can also access the “editable marker list” tools through the floating Editable List Toolbar.

As a demonstration, open a new or existing file with FrameMaker. Assuming IXgen is properly installed, “IXgen” should appear in the FrameMaker main menu bar.

Click and hold on IXgen in the main menu bar. The pull-down menu lists the IXgen tools. Some of the tools, including, for example, **Permute Markers** and **Split multiple index entries into separate markers**, are not available from the main menu bar (other than as an information item). Instead, these tools are options when the **Apply Edited Marker List** tool is activated.

Several tools work only on the document created by the **Gen Editable Marker List** operation. **Capitalization**, **Create Subentries**, **Elevate Unique Subentries**, **Flip Entries**, **Validate References**, **Show Marker Char Tags Applied** and **Show Marker Char Tags as Text Cmds** do *not* work directly with your source or IX document, but only on the temporary work document created by **Gen Editable Marker List**.

Using an IXgen tool is just like using any other FrameMaker function. Select the desired IXgen tool; make sure the initial dialog is set as desired (if a setup dialog appears), then click the appropriate actuation button given in the dialog.

Each IXgen tool is described in the remainder of this chapter. The IXgen functions are listed in *The IXgen Tool Set* starting on page 26.

Operational Scope of IXgen Tools

You can make IXgen affect a specific amount of text by using a text selection (highlighting). IXgen can:

- Operate globally on a book and the document files in it. You can select which documents in a book are to be processed and which are to be left alone. Generated

documents, such as TOC, LOF, LOT, IX, and so on, are typically excluded from IXgen processing.

- Operate on the entirety of a single document.
- Operate only on a selected area of text within a single file. Once a portion of text has been selected, choose the desired tool from the IXgen pull-down menu.

Within the working area, most IXgen tools let you to work on one or several different marker types at the same time, though typically you'll work on Index markers.

Some of the IXgen functions performed in the editable marker list work best with the presence or absence of a selection of rows of marker text. IXgen will remind you when less-than-ideal selection is in place (or not in place).

Using **Apply Edited Marker List** is described starting on page 37.

Using IXgen Tools with Book Files

Menu Changes

IXgen can process single documents, and IXgen can also perform its work on the files in a book. (You choose which members of the book will be processed.)

The IXgen pull-down menu changes based on which type of file is active when the IXgen menu is accessed. The “Select Files” and “Open Selected Files” menu items appear when a book is the active document. Using these new IXgen commands for books, you choose which documents in the book should be processed (or ignored) when an IXgen function is called.

Editable marker list functions are not active in the IXgen menu when a book file is the active document, but will reactivate when an editable marker list is the active document. The contents of the editable marker list will be the markers collected from member files of the book that was active when you started the **Gen Editable Marker List** process.

Generated File Relevance with IXgen Processing

In most cases, IXgen processing is not relevant to the table of contents, list of figures, list of tables, front or back matter documents, or the index (“IX”) document itself. You'll rarely find index markers in these documents.

In these cases, you'll reduce processing time by deselecting these and any other documents that don't have markers in them. (By default, IXgen excludes FrameMaker generated files but you can add them back in if you need to. You can also deselect documents in the “Select Files” dialog box.)

Once established, the list of selected documents remains unchanged until you decide to make new selections. The IXgen defaults for book processing are stored in a file that is the name of the book, but with an “.ixc” extension.

IXgen Tools that Rely on Book Processing

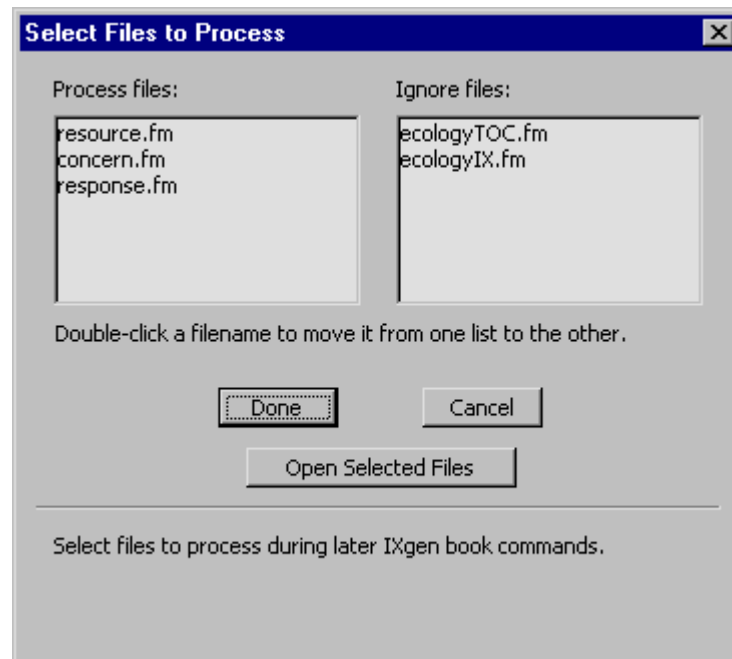
Book file selections are very important to some IXgen tools. For example, **Validate References** requires that all markers present in the book be collected so that a valid search for each reference can take place. Similarly, **Create Subentries** relies on the presence of all markers in the book so that entries can be properly judged for placement

under a common root. **Elevate Unique Subentries** might be misused if you believe one particular subentry was unique and could be elevated, when in fact another such root entry existed in the markers from a document in the book excluded from IXgen processing.

These specific tool comments will make more sense once you become familiar with these tools.

Sample Book File Selection For IXgen Processing

Here is a sample IXgen “Select Files” dialog box for the “Ecology” book included in the <FrameMaker7_install>\samples\overview\book folder. Note that the generated documents (toc and IX) have not been selected:



“Open Selected Files” opens the “process files” and places them minimized on the FrameMaker desktop.

This is the preferred method of working with IXgen tools through the book menu. (The “Open Selected Files” button is the same as the “Open Files” option on the book file version of the IXgen menu. It is provided here as a convenience.)

NOTE: If you have a large number of regular documents in your book that are not selected, and you want to quickly select them, go to the folder where the current book is stored. Delete the <name_of_book>.ixc file. This will force IXgen to use a default of selecting all regular documents listed in the book. (Generated documents are excluded in this default setting.) The .ixc file will be rewritten by IXgen.

Process Status

When an IXgen tool is selected and after its completion, results are given in the FrameMaker Console Window: Given the “semi-batch” nature of most IXgen tools, the console window is an excellent way to track your overall activities with IXgen. Perhaps

you've ignored or even closed the console window in the past, but we strongly recommend keeping the console window available when using IXgen. At a glance you'll be able to see a history of what you've done in this session.

Conflicts with the Marker Window

When using IXgen you typically won't bother using the FrameMaker marker window. However, from time to time you might use the marker window for a single marker edit.

CAUTION: *Do not* use the marker window if you've already generated an editable marker list with **Gen Editable Marker List** and have yet to apply the list using **Apply Edited Marker List**. Apply the current editable marker list before using the FrameMaker marker window.

You can freely use the marker window *before* using **Gen Editable Marker List**, and then *after* using **Apply Edited Marker List**.

The IXgen Tool Set

IXgen tools broadly fall into these categories:

- Editable marker list tools generate the editable marker list, provide processing when markers have been collected into the edible marker list, and then apply the list contents back to the source markers. These functions are only available within the editable marker list.
- In-line marker tools provide editing of markers from within the source document.
- Creation and deletion tools provide several ways to generate new markers, and delete duplicates.

The next several sections describe the IXgen tool kit in detail. Table 1 summarizes the tool functions. The illustrations starting on page 29 provide tool road maps.

Table 1 IXgen Function Summary

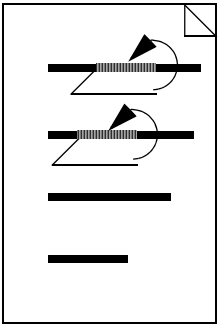
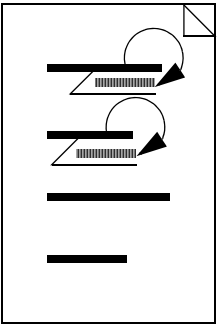
IXgen Function	Brief Description	Page
<i>Editable Marker List Tools</i>		
Gen Editable Marker List	Generate an editable list of markers	33
Apply Edited Marker List	Apply edited marker list back to source markers (includes the Split and Permute options)	37
Create Subentries	Generate second-level entries when two or more first-level entries share a common root word or phrase	43
Flip Entries	Reverse first and second level entries; optionally keep a copy of the original entry or make a reference to the original form	44
Speed Flip	Same as Flip Entries , but no set-up dialog box appears. Settings are taken immediately from Flip Entries	47
Capitalization	Control capitalization standards	58
Elevate Unique Subentries	Append single second-level entries to the root first-level entry	48
Validate References	Check that the entries referenced by “see”, “see also” and similar references actually exist	49
Show Marker Char Tags as Text Cmds	Convert applied formats to embedded format commands	56
Show Marker Char Tags Applied	Convert embedded font-change commands to character format tags and apply to the affected text	50
Copy Char Catalog to Template	Write current Editable Marker List Character Formats to the <code>edtblast.fm</code> template document.	57

Table 1 IXgen Function Summary (Continued)

IXgen Function	Brief Description	Page
<i>In-line Marker Editing</i>		
Expand Markers	Place marker text in main body text	61
Collapse Markers	Return expanded marker text to markers	63
<i>Create and Remove Markers</i>		
Markers from Keywords	Generate new markers by searching for keywords	65
Markers from Paragraph Tags	Generate new markers from selected paragraph tags	72
Markers from Character Tags	Generate new markers from selected character tags	74
Delete Redundant Markers	Remove back-to-back markers that are duplicates	77

Figure 1 and Figure 2 illustrate the IXgen tools listed in Table 1, immediately above. Each tool is described in later sections.

Figure 1 IXgen Tool Map, General Functions

File	Edit	Format	View	Special	Graphics	Table	IXgen	Window	Help
<div style="border: 1px dashed black; padding: 10px; margin: 10px;"> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Expand Markers...</p>  </div> <div style="text-align: center;"> <p>Collapse Markers...</p>  </div> </div> </div> <div style="border: 1px dashed black; padding: 10px; margin: 10px; text-align: center;"> <p>Tools grouped in dashed lines are typically used as complementary functions.</p> </div>							<p>Gen Editable Marker List... Apply Edited Marker List... Create Subentries... Speed Flip Flip Entries... Capitalization... Elevate Unique Subentries... Validate References... Show Marker Char Tags as Text Cmds Show Marker Char Tags Applied Copy Char Catalog to Template Display Editable List Toolbar (Split and Permute)</p> <hr/> <p>Expand Markers... Collapse Markers...</p> <hr/> <p>Markers from Keywords... Markers from Para Tags... Markers from Char Tags... Delete Redundant Markers...</p> <hr/> <p>About IXgen Release ... IXgen License....</p>		

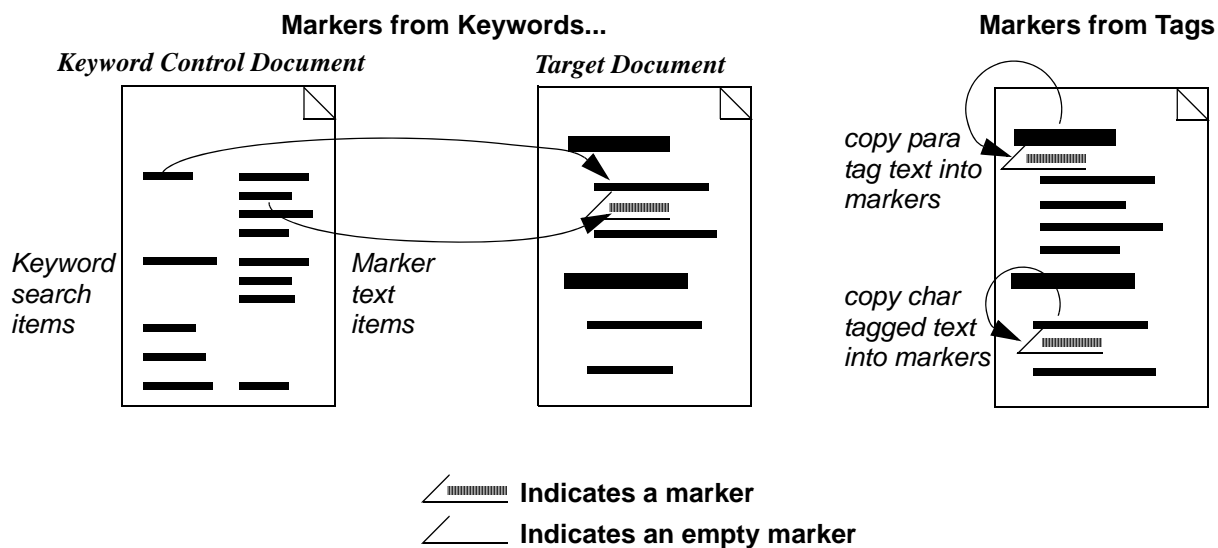
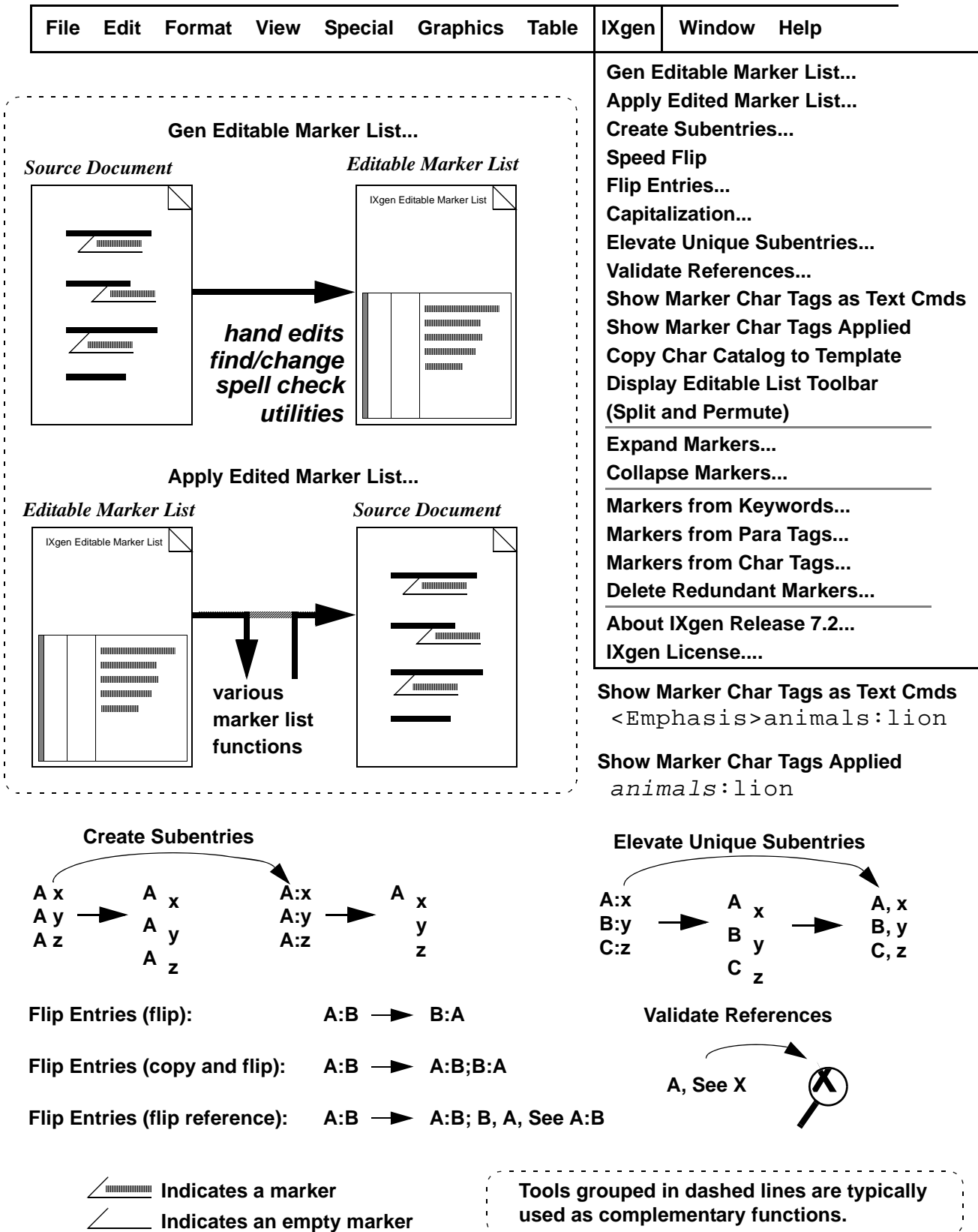


Figure 2 IXgen Tool Map, Editable Marker List Functions



- Gen Editable Marker List...
- Apply Edited Marker List...
- Create Subentries...
- Speed Flip
- Flip Entries...
- Capitalization...
- Elevate Unique Subentries...
- Validate References...
- Show Marker Char Tags as Text Cmds
- Show Marker Char Tags Applied
- Copy Char Catalog to Template
- Display Editable List Toolbar (Split and Permute)

- Expand Markers...
- Collapse Markers...

- Markers from Keywords...
- Markers from Para Tags...
- Markers from Char Tags...
- Delete Redundant Markers...

- About IXgen Release 7.2...
- IXgen License...

Show Marker Char Tags as Text Cmds
`<Emphasis>animals:lion`

Show Marker Char Tags Applied
`animals:lion`

Sequence of IXgen Tool Use

Table 2 shows “typical” usage sequences based on two scenarios: creating an index from scratch and editing/maintaining an index.

Of course, you are not locked into any particular usage sequence. Use the tools as needed in any logical order.

Table 2 Typical IXgen Tool Usage Division

IXgen tools for Index Creation...	IXgen tools Index Editing...
<p>Markers from Keywords, Markers from Paragraph Tags, or Markers from Character Tags create initial raw entries. (Use Delete Redundant Markers if one of the above tools is inadvertently run more than one time on the same source text.)</p> <p>Gen Editable Marker List is usually an editing tool, but can also supports marker additions within the editable marker list. The “;” (semicolon) syntax is used to delimit additional index entries within a single marker</p> <p>Flip Entries exchanges first and second level entries, and can optionally retain the original entry or create a “see” or “see also” type reference based on the exchanged entries.</p> <p>Apply Edited Marker List reflects any changes made (such as added markers), and accesses the Permute (rotate) marker text and Split multiple index entries into separate markers functions.</p>	<p>Gen Editable Marker List collects a list of the current markers. You can make regular textual edits in the marker text listed, including spell check and find/change.</p> <p>Apply Edited Marker List reflects any changes made, and accesses the Permute (rotate) marker text and Split multiple index entries into separate markers functions.</p> <p><i>Other editing functions include:</i></p> <p>Expand Markers to see (and edit) the markers in body text context where the marker appears. When finished (and before using other marker functions or updating, use Collapse Markers to return expanded marker text to the source markers.</p> <p>Delete Redundant Markers removes unwanted duplicate markers.</p> <p>Create Subentries supports better structure by building second-level entries based on common root words or phrases.</p> <p>Elevate Unique Subentries removes single second-level entries by appending them to the companion single first-level entry.</p> <p>Validate References checks “see” and “see also” and other types of references.</p> <p>Show Marker Char Tags as Text Cmds and Show Marker Char Tags Applied change the visual display of marker text formatting. Formatting can be seen or applied as embedded format commands, or as character tags.</p>

IXgen Tool Reference Pages

The next several sections describe the various IXgen tools using a standardized reference format.

This general format is overviewed next:

Explanation of IXgen Tool Descriptions

This section describes the tool documentation format

- Purpose:** *States the reason for the tool.*
- Method:** *Summarizes how the tool works.*
- Configuration:** *Provides an abstract of how you configure the tool.*
- Dialog Settings:** *Provides a sample screen shot of the tool set-up dialog, along with specific explanations of dialog controls.*
- Text Selection:** *Discusses how best to use a text selection with this particular tool (see *Operational Scope of IXgen Tools* on page 23 for a general discussion).*
- Tips:** *Gives practical suggestions and recommendations for tool use.*
- NOTE:** *Brings to your attention some special consideration about the tool.*
- CAUTION:** *Warns about some action or configuration that could harm your textual data. Always back up your files.*

Not all headings are used in all sections.

Additional headings appear as needed to provide supporting information about a tool.

Gen Editable Marker List

Generate an editable list of markers

Purpose: Generate a list of markers and place them into a regular FrameMaker document that can be edited and manipulated without using the marker window. Many markers can be edited at the same time. The editable marker list supports additional IXgen tools including **Create Subentries** (page 43), **Elevate Unique Subentries** (page 48), **Flip Entries** (page 44), **Validate References** (page 49), **Capitalization** (page 58), **Show Marker Char Tags Applied** (page 50) and **Show Marker Char Tags as Text Cmds** (page 56).

Method: You are initially presented with a scroll list from which to verify or reselect the marker types to be collected. The marker text is then collected into a table and placed in a new FrameMaker document. Spell checking, find and change, and all types of general edits can be accomplished. This generated editable marker list is typically a “throw-away” document used only during the current marker editing session. However, you can save the editable marker list to a name of your choosing, reopen it later, and then continue editing markers; or use the **Apply Edited Marker List** function to write the markers back to the source document(s). But be sure to review the “Caution” statement immediately below if you plan to save and later use a marker list.

NOTE: You can reach all of the editable marker list tools through the editable marker list toolbar. Choose IXgen>Display Editable List Toolbar.

CAUTION: When using **Gen Editable Marker List** and **Apply Edited Marker List**, do not simultaneously perform *any* source document edits. A bug in FrameMaker may cause internal marker ID numbers to change if you perform such operations. This in turn will cause an **Apply Edited Marker List** operation to fail. If this happens, the last bullet point in *Problem 12:* on page 91 offers a suggestion for possible recovery of your work

Always apply the current edited list before making any edits in the source document(s). Regenerate the editable marker list when you wish to resume marker list editing. You can save an editable marker list and come back to its editing later, but you must not make any other edits in the source document(s) for that list until the list has been applied.

If you are working on a large editable marker list, occasionally saving to disk or engaging the FrameMaker autosave function (FrameMaker>Preferences>General) is highly recommended. These action help preserve your work against unexpected system problems.

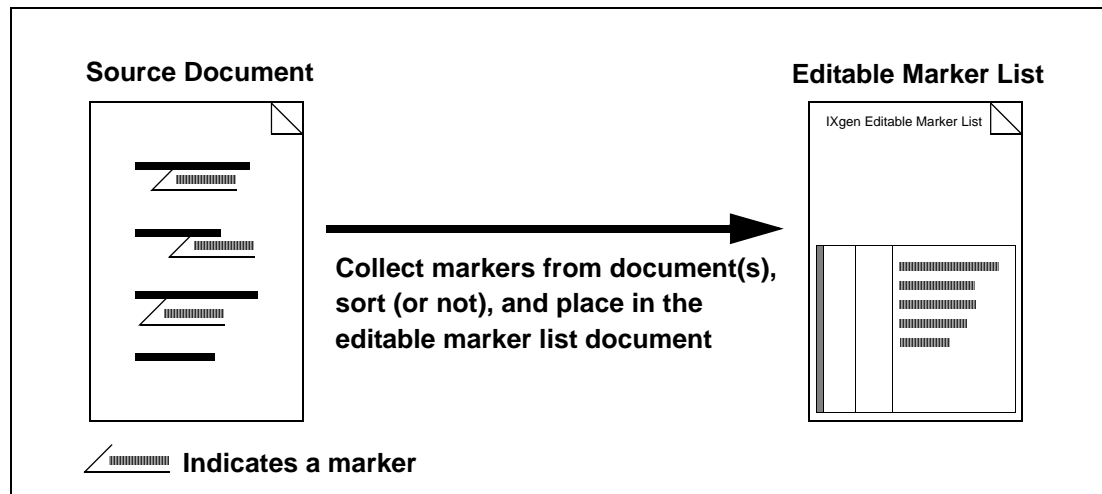


Figure 3 Generating an Editable Marker List

Dialog Settings: Select the type of markers to collect for the editable marker list. More than one marker type can be collected at one time.

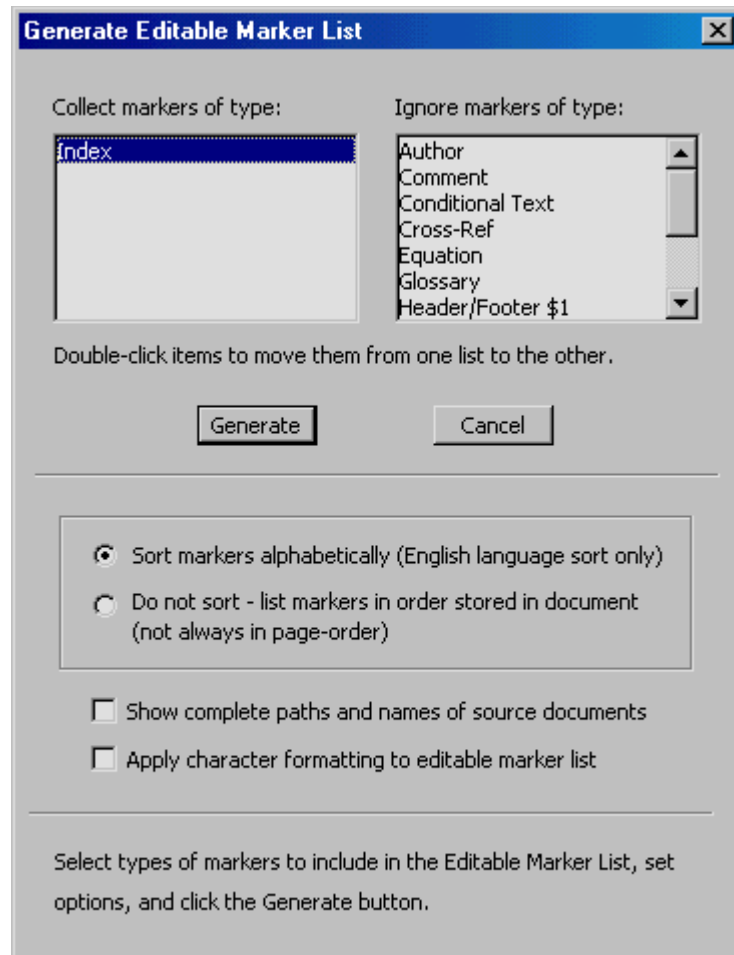
Select sort/no sort. “Sort” provides alphabetical context and is the recommended setting for most uses. “No sort” presents markers in the internal object list order, which typically approximates page order but exact page order might not always be the case.

“Show complete paths” provides full source document location information, but will usually cause a line wrap in the “source document” listing field of the dialog.

NOTE: When editable marker list sorting is active, IXgen follows any sort overrides that you have placed in the markers. Thus, an entry such as `elephants[zz]`, will be sorted well toward the end of the editable marker list rather than closer to the beginning, among any “E” entries.

CAUTION: When you wish to delete a marker, *do not* remove the entire row of the table that holds that marker. Instead, simply remove (clear) the text from the cell in the “Edit Marker Text In this Column”. IXgen will see the empty cell and know to delete the marker. However, if the entire row is missing, IXgen no longer has a reference to that marker.

If the Apply character formatting to editable marker list document option is checked, **Show Marker Char Tags Applied** (page 50) will automatically be invoked once the editable marker list is loaded.



Tips:

- Hypertext links are available in the “Navigate” column of the document created by **Gen Editable Marker List**. You can go directly to the source page of a given marker. Place the mouse cursor in the gray box (left-most column of the table) and Control-Alt-click. FrameMaker will jump to the source document and page for that marker. (The editable marker list remains on screen so that you can easily return to it. However, the editable marker list may be underneath the source document jumped to and not visible. Simply minimize the source document when finished with your review.)

CAUTION:

Remember, as noted in the “Caution” on page 33, do not make any edits in the source document that you might jump to. If you need to edit the source document, first use the **Apply Edited Marker List** function, then you can safely make the source document edit(s). When you wish to continue marker editing, re-run the **Gen Editable Marker List** function.

- IXgen will *not* support adding new markers by adding new table rows to the editable marker list. But you *can* append a new index entry to existing marker text by using the standard FrameMaker index entry delimiter, the “;” (semicolon). Remember, however, the 255 character limit for marker text that is imposed by FrameMaker.
- Because the editable marker list consists of a regular FrameMaker table located in the body of a regular FrameMaker document, you can use the spell checker and find/change to help with editing.
- When applying an edited marker list (described starting on the next page) you can **Split multiple index entries into separate markers** (page 38), **Permute (rotate) marker text** (page 39), and preserve character catalog changes in the editable marker list for future use by selecting **Copy Char Catalog to Template** (page 57).
- If you don’t like the appearance of the editable marker list, you can open the **Gen Editable Marker List** template document (<FM_install_folder>\ixgen\templates\edtblast.fm) as a regular FrameMaker document and make changes to it. You can make font and some layout changes. Just be sure that you *don’t* change paragraph or flow tag names. For more details review *Changing the Fonts Used by IXgen* starting on page 17.

Apply Edited Marker List

Apply edited marker list back to source markers (includes the Split and Permute options)

(Editable Marker List Function)

Purpose: Update the source markers with the markers listed in the editable marker list document created by **Gen Editable Marker List**.

Method: Marker text from the generated editable marker list replaces the marker text in the corresponding source markers. Thus, any changes made in the editable marker list are reflected back to the markers in the source document(s). Spell checking, find and change, and all types of general edits can be done to marker text while it is the editable marker list.

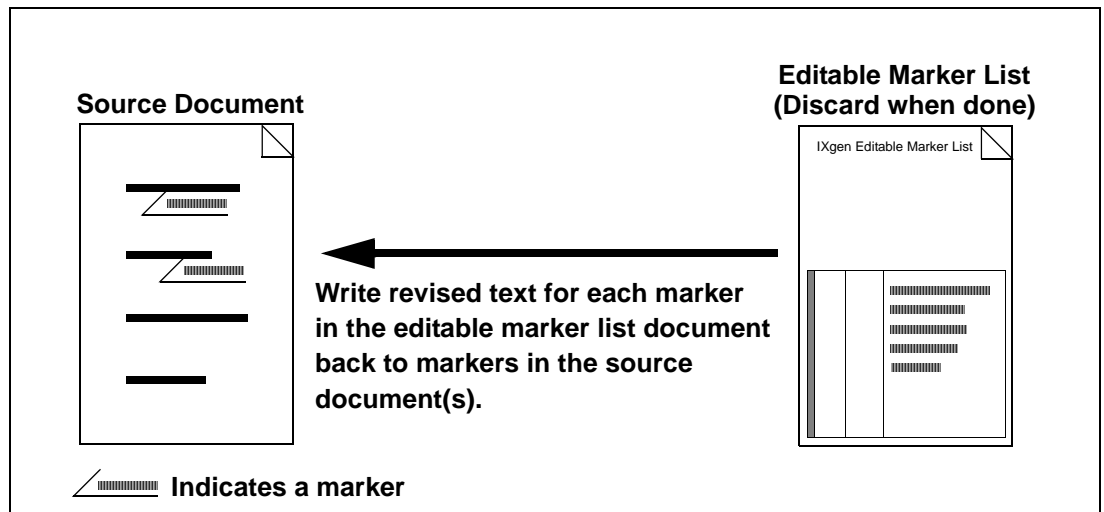
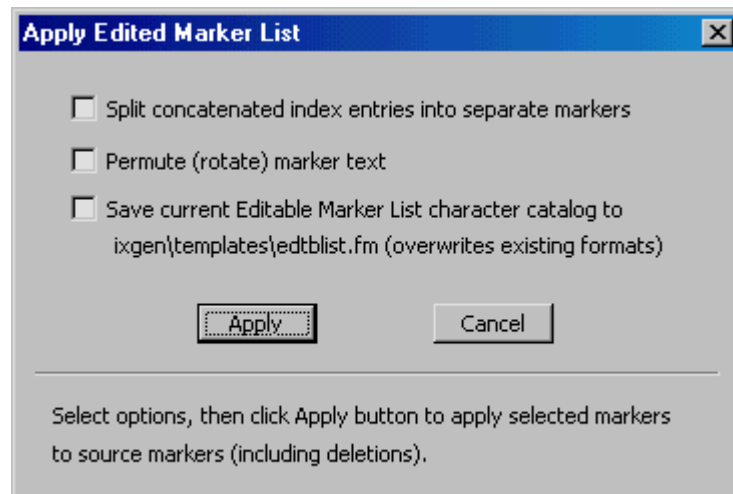


Figure 4 Applying an Edited Marker List

Configuration: When the editable marker list was created, the types of markers to assemble were selected using the dialog box that appeared when **Gen Editable Marker List** was invoked. Along with editing the marker contents, you could also change the marker type. Refer to *Converting from one Marker Type to Another* on page 79 for details on this procedure.

Dialog Settings: Select any one or all of “Permute”, “Split”, and “Save Current Editable Marker List to ixgen\templates\edtblast.fm”. These options are explained in the next sections.



Tips: After completing a cycle with **Gen Editable Marker List** and **Apply Edited Marker List**, you have only affected the markers in the source documents. You have *not* altered the text in any generated documents, such as an IX document. To follow through on any marker changes you make using IXgen, be sure to regenerate the FrameMaker book (or document, if you have a stand-alone index for a single document).

Text Selection: You can limit the **Apply Edited Marker List** action (including Split, Permute, and Capitalization, described below) to specific cells by selecting them in the editable marker list table. If a text selection is detected during the apply operation, only selected marker text is applied rather than the entire list.

The three optional apply functions, “Permute”, “Split”, and “Save Current Editable Marker List to ixgen\templates\edtblast.fm”, are explained next.

Using the Split Function

FrameMaker can support multiple index entries per marker text string and delimits them with a semicolon. Select **Split multiple index entries into separate markers** so that IXgen will create new markers as needed to store only one index entry in each marker.

Some people find the one entry/one marker approach easier to maintain; other people prefer to have related entries in one marker. However, this limits the utility of sorting the markers in the editable marker list — the “add on” entries will be sorted according the first entry in the marker and not be “seen” in their normal sort order.

Note that a marker entry has a 255 character limit (imposed by FrameMaker). The split function can be used to assure that each marker has the maximum possible space for long entries.

Using the Permute (Rotate) Marker Text Function

A generally useful indexing technique is a circular rotation of the words in a single-level entry. A new single-level entry is created with each rotation. For example, this phrase:

quick brown fox

could be rotated twice to produce two new additional single-level entries:

brown, fox quick

fox, quick brown

To more clearly see the pattern consider this abstract example:

aa bb cc dd ee ff	<i>permutes into these new entries:</i>	ff, aa bb cc dd ee ee ff, aa bb cc dd dd ee ff, aa bb cc cc dd ee ff, aa bb bb cc dd ee ff, aa
-------------------	---	--

Select **Permute (rotate) marker text** by clicking the associated check box in the **Apply Edited Marker List** dialog box.

NOTE: If not already selected, selecting **Permute (rotate) marker text** will also automatically select **Split multiple index entries into separate markers**. This precludes the accidental overrun of a marker should the new permuted marker length (with all the new permutations of the original entry added) exceed 255 characters. Conversely, if you deselect the split option, the permute option is also deselected.

Also note that this function is performed during **Apply Edited Marker List**. The source markers are thus affected. As a convenience, IXgen then updates the editable marker list to reflect any splitting or permutation that occurred. However, this updated list is *not* resorted alphabetically. To obtain a resorted editable marker list, discard the current list and regenerate using **Gen Editable Marker List**.

Avoiding Nonsense Rotations

To minimize nonsense rotations, IXgen offers permutation controls (page 40) and follows some basic rules:

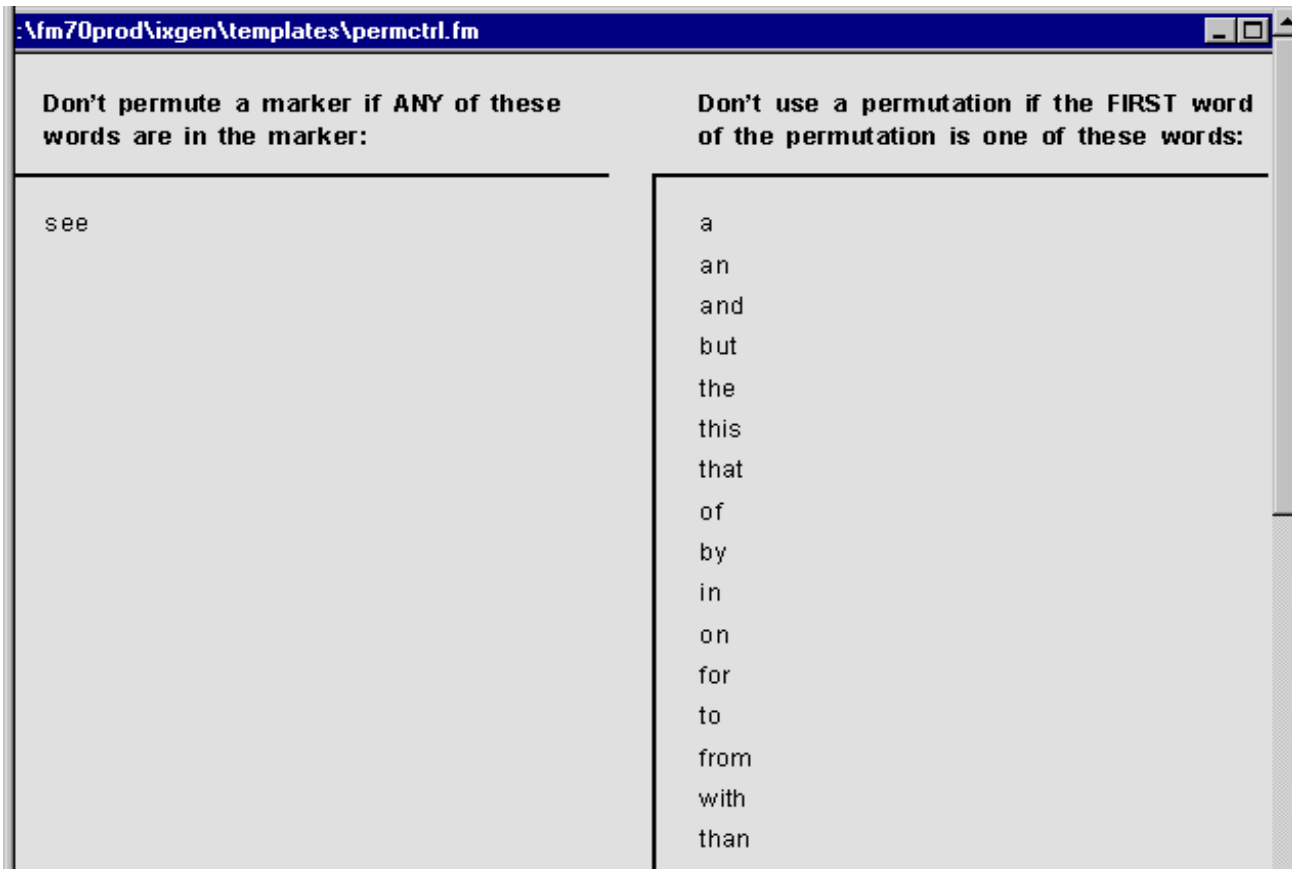
- Only single-level entries are rotated. Generally, nothing is gained by rotating lower levels where the rotated entries would appear together in a relatively small sublist.

Alternately, multiple variations of a first level, with identical subentry lists, would be cumbersome. If variants are still desirable for main entries with subentries, rotate the first level by hand. Assign one variant to “hold” the subentries and adjust the markers containing the subordinates as needed. (You can use Find/change on a editable marker list.) For the other variants, use “see also” to refer to the variant with the subordinate list. Include a “<\$npage>” in these referral entries. The **Flip Entries** tool (page 44) might also be helpful to you.

- If the special control “<\$nopage>” appears in a marker, the marker is excluded from rotation activity.
- Entries with commas are not rotated. When a comma is detected, the assumption is that a rotation has already taken place, either from a previous session with IXgen or from a manual rotation done by the index author. (If you still need a rotation on a entry that was not rotated because of a comma, do the rotation manually.)

The Permute (Rotate) Marker Control Lists

The IXgen template <FM_install_folder>\ixgen\templates\permctrl.fm has two control lists shown in two columns.



Using FrameMaker, you can open `permctrl.fm` and edit these lists to control how rotations will occur. (Usage notes are included in `permctrl.fm`; the following paragraphs repeat that information.)

NOTE: Only the one control file, named `permctrl.fm`, can be used, and the file must be in the <FM_install_folder>\ixgen\templates folder of your FrameMaker installation.

You can create alternative `permctrl.fm` files, but only one of these alternatives can be used at any one time. Store alternatives using different names. When ready, copy the selected control file into the template folder using the `permctrl.fm` name for the new file.

Entries in the left-hand column of `permctrl.fm` suppress all rotations if *any* entry in the list occurs *any* place in the candidate marker.

Entries in the right-hand column of `permctrl.fm` discard the rotation candidate if the *first* word of the proposed rotation is in the right-hand list. This control is aimed at preventing the indexing of prepositions, conjunctions, and so on. You can also add your words to this list.

When IXgen considers how to break apart a marker in preparation for rotation, marker text is viewed as a sequence of “atoms”. An atom is typically a word delimited by regular spaces. But an “atom” can also be a sequence of space-delimited words that appear as part of a font change in the index entry. Words in a font change are assumed to be special (a multi-word proper name, for example) and thus will not be divided during marker rotation.

“Atomization” returns to space-delimited words when the end of the entry (or marker) is reached (in preparation for the next marker) or if an explicit `<Default Para Font>` font command is encountered.

Once permutation is completed, you will want to examine the result of the latest **Gen Editable Marker List** invoked as part of the **Permute (rotate) marker text** function. Make any final needed changes or adjustments, then **Apply Edited Marker List** one last time. While permutations will not happen again because of the “no rotation on embedded comma” rule noted above in *Avoiding Nonsense Rotations*, deselect the split and permute options to save processing time.

Checking Rotations

While the rotation rules and controls minimize nonsense rotations, such unwanted rotations might still occur. You can visually scan the resulting editable marker list. All rotations for a given marker appear in juxtaposed table cells, so you can readily view related rotations. Delete the marker text for any useless rotations (but do *not* delete the entire row from the list table, just the text). Use **Apply Edited Marker List** again, but this time don’t select the Permute option. The corresponding markers in the source document(s) will be deleted.

A second approach is to immediately generate the index at the document or book level. Seeing the index in its final form can be helpful in spotting problem entries. You can then edit the existing editable marker list, or you can discard the current editable marker list, and use **Gen Editable Marker List** again to create fresh list. The latter approach is handy if you’re working from a freshly generated index. The sort-orders will closely match, making it much easier to locate the markers you want to delete based on what you saw in the IX document.

After checking and deleting marker text for useless markers in the editable marker list, reissue **Apply Edited Marker List** to update the markers in the source document(s).

Save Character Catalog

If during the current session with the editable marker list you’ve added or modified character tag formats, you can choose to save those character tag updates to the editable marker list template document. (This is the template on which each generation of the editable

marker list is based.) Updated character formats are then available for each future session with the editable marker list.

CAUTION: Any character format tags of the same name already existing in the editable marker list template will have their properties overwritten with the properties from the current editable marker list. If you wish to preserve current tag properties, make sure the “Save Character Catalog” option is not checked.

Create Subentries

Place entries under a common root entry

(Editable Marker List Function)

Purpose: Generate second-level entries when two or more first-level entries share a common root word or phrase. This will help the visual and logical organization of your index.

Method: Search single-level index entries for the occurrence of common root words and phrases. Each candidate must occur in two or more entries. When found, insert a colon (“:”) at the end of the shared root word or phrase, thus creating a two-level entry.

In more detail: the first-level entry strings of existing two-level entries are searched against a reverse-sorted list of single-level entry candidates (markers within your text selection in the editable marker list). If a substring match occurs, the unique text in the single-level entry can successfully become a second-level entry of the existing first-level entry text.

If no existing two-level entries have a match (or there are no existing two-level entries), a list of reverse-sorted single-level entries are checked for common root text.

Trailing commas left over in the first level entry are removed.

Washington State: bird	→	Washington State: bird
Washington State, flower		Washington State: flower
Washington State, song		Washington State: song
Washington State, capital		Washington State: capital

Dialog Settings: No settings. Click “Create” when ready to begin.

Text Selection: When using this tool, a text selection in the editable marker list to limit processing is suggested. Not all instances where a subentry *could* be created will be desirable; the style rules you use for creating subentries will dictate your use of **Create Subentries**.

Tips: As you review your editable marker list, you will probably see clusters of entries that could be placed under a common root entry. Generally, you’ll select those clusters one at a time and use **Create Subentries**. This group-by-group approach gives you good control over the streamlining of your index.

NOTE: For best results with **Create Subentries** when using a book file, be sure *all* files that contribute index markers to the book are selected prior to using **Gen Editable Marker List**.

Flip Entries

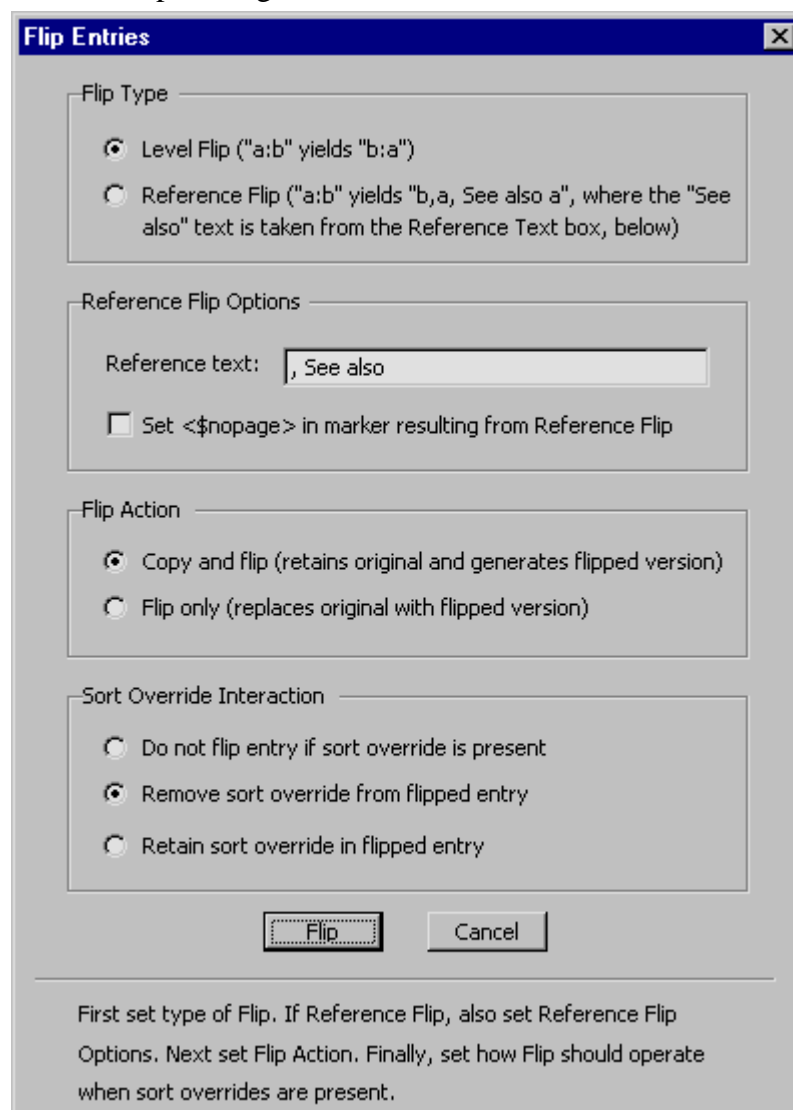
Exchange, copy, or make references based on entries with two levels

(Editable Marker List Function)

Purpose: Reverse first and second level entries; optionally keep a copy of the original entry or make a reference to the original form. A “vertical permutation” of two-level entries occurs.

Method: Based on the Flip Entries Dialog settings, entries with two levels can have the content of the two levels exchanged; a copy made and the copy flipped leaving the original entry in its original form; or a flipped entry can become a “see” or “see also” reference.

Dialog Settings: Refer to the sections immediately below for a description of each portion of the Flip Entries setup dialog box.



Flip Type

Select regular level flip or reference flip. Level flip exchanges the contents of the first and second level portions of the entry. Reference flip does this as well, but the flipped version includes the contents of the Reference Text box.

Flip Entries (flip): A:B → B:A

Flip Entries (copy and flip): A:B → A:B;B:A

Flip Entries (reference flip): A:B → A:B;<\$nopage>B, A, See A:B

NOTE: Using “Copy and Flip” when “Reference Flip” is selected is highly recommended. Otherwise, the reference might not have a valid target entry.

The first time you select “Reference Flip,” the “Copy and Flip” option is automatically selected. However, you can still deselect “Copy and Flip” if you wish. (This might be appropriate if you already have a matching destination entry in place.)

Reference Flip Options

Enter the textual reference form use when Reference Flip is selected. Typically, such entries should also include the “<\$nopage>” control, but you can omit the embedding of this control by unchecking the <\$nopage> check box.

Note that the first separator in the flipped version (the comma and space between the initial “B” and “A” components in the flip reference abstract example above) cannot be changed through the Flip Entries dialog box. However, this separator can be changed in the `ixgen.ini` file. Open `ixgen.ini` with a plain text editor (such as notepad) and change the text value of the `FlipFirstSeparator` parameter to the separator you need. (If you choose a reserved character, such as a semicolon, be sure to escape the character with a backslash (“\”) character.)

Tips: You can verify any references you create with Reference Flip using **Validate References** (page 49).

When making a reference, typically you will reference a first-level entry that has two or more subentries. If no such list exists, perhaps the current entry should be included as a subentry elsewhere.

Flip Action

“Flip only” means that the flip operation will exchange the contents of the first and second level components of the entry. The original form of the entry no longer exists.

“Copy and Flip” makes a copy of the entry and exchanges the contents of the first and second level components in the copy. The original form of the entry is preserved as a separate entry.

“Copy and Flip” is recommended for most applications.

Sort Override Interaction

Sort overrides, using the square bracket syntax, move an entry to a user-determined location in the index. An entry such as “AAAA:BBBB[z]” means that the string “AAAA:BBBB” will appear under the “Z” entries in the index.

Often a sort override on the flipped entry (BBBB:AAAA) will no longer have any specific use because the flipped version, BBBB, will appear in the same place as the unflipped version (assuming that the same sort override remains on both entries).

For most applications, we recommend selecting “Remove Sort Override from Flipped Entry”.

Perhaps you have a specialized entry with a particular sort override, where a flip operation would reduce or negate the usefulness of a flipped entry. In these instances we suggest setting “Do not flip if a sort override is present”.

Finally, if you wish to retain the sort override, it will travel with the flipped entry. But again keep in mind that if using flip only, the entry, though flipped, will go to the index sort location dictated by the sort override.

If you do retain the override, note that while simple in concept, sort overrides in FrameMaker can get very complex and exhibit complex behaviors. This is particularly true of multiple index entries per marker and sort overrides found in multi-level entries.

“Nonsense” flips can be generated, such as making a “see” or “see also” reference flip where a sort override is carried through to the flipped version. In this instance, the referral would probably be pointing to the entry immediately above or below itself.

Handling the 255 Character Marker Length Limit

When building markers with Copy and Flip and particularly Flip Reference, it is possible that the marker length will exceed 255 characters. In this case, IXgen creates new markers to hold the flipped entries.

NOTE: **Flip Entries** only works on two-level entries. **Flip Entries** does *not* work with single level entries, or on entries with three or more levels.

Speed Flip

Execute the Flip Entries function immediately

(Editable Marker List Function)

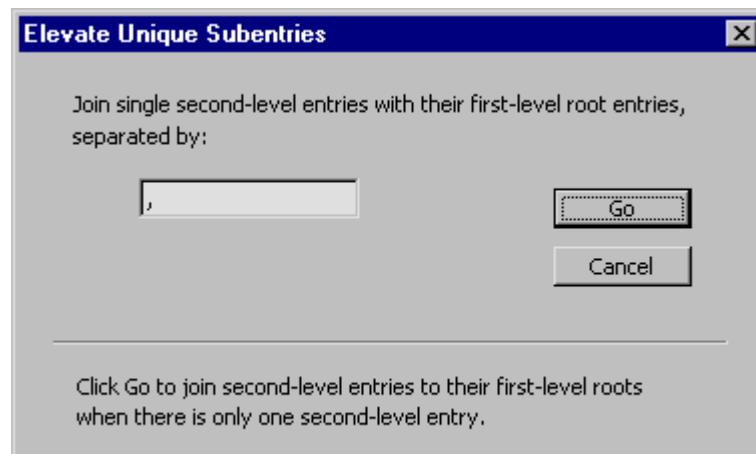
- Purpose:** Enter a **Flip Entries** operation immediately. The **Flip Entries** setup dialog box does not appear.
- Method:** Use the most recent settings from the **Flip Entries** dialog box and execute the **Flip Entries** command.
- Configuration:** None required, not even a confirming start-up dialog box.
- Dialog Settings:** Values are taken from the last-used **Flip Entries** setup dialog box. No settings can be changed with **Speed Flip** so no dialog box appears.
- Text Selection:** As with **Flip Entries**, a text selection in the Editable Marker List is recommended when using **Speed Flip**.
- NOTE:** **Speed Flip** has a unique behavior. If no text selection is present, the editable marker list table row where the insert point is located is treated as if it were selected. Only the marker in that table row is processed. This assumption, combined with immediate entry into flip functionality, makes for very rapid and controlled utilization of **Flip Entries**. If you want more than one row flipped, select the additional rows before using **Speed Flip**.
- CAUTION:** Carefully check the dialog settings and results by using the **Flip Entries** command at least once before using **Speed Flip**. If you have not configured the dialog as you want, **Speed Flip** can help you *quickly* make the same configuration mistake over and over again. We suggest trying your flip operation a few times from **Flip Entries** before using **Speed Flip**.
- When using **Speed Flip**, carefully examine the results from time to time to be sure you are achieving the desired results.

Elevate Unique Subentries

Append single second-level entries to the root entry

(Editable Marker List Function)

- Purpose:** Append single second-level entries to the root first-level entry
- Method:** Check for entries with two levels. If there is one and only one entry with this root and second level entry, then append the second level entry to the root, using the user-specified separator character or string.
- Dialog Settings:** Select the character or string you'd like to appear between the root portion of the entry the second-level component that will be appended.



NOTE: If you are checking an index for unique subentries, be sure that **all** the markers that comprise the index were collected.

For example, before using **Gen Editable Marker List** on a stand-alone document, remove any text selections. If running **Gen Editable Marker List** from a book, be sure that all documents that contribute markers to the book index have been selected.

If not all markers are collected, a given entry which appears to be unique may in fact not be unique. You might decide to elevate the second-level entry. Then, in the final index, you would have an inconsistent mix of single-level entries and unique subentries. Should this happen, **Create Subentries** (page 43) can unify the various combinations of single and multi-level entries that share the same root word or phrase.

Text Selection: A text selection with this tool is not recommended, *unless* if you have some entries that you wish to keep as a stand-alone two-level entries, even though there is only one second-level component.

Validate References

Check that references made inside the index are valid

(Editable Marker List Function)

Purpose: Check that the entries referenced by “see”, “see also” and similar references actually exist.

Method: Scan the editable marker list, looking for the type(s) of referrals listed in the **Validate References** template (`<FM_install_folder>\ixgen\templates\valrefctrl.fm`). When a listed referral is found, isolate the referenced text string, then look to see if that the string exists as a first-level entry elsewhere in the collection of markers. To pass the validation test, the referenced text must match the complete first-level entry text of some other entry, and must match fully the text string being searched.

Matches are case-insensitive, and character formats are ignored. Substring matches are precluded.

Configuration: List the reference strings to be checked in the **Validate References** template, located in:
`<FM_install_folder>\ixgen\templates\valrefctrl.fm`

NOTE: If you are checking a book index, be sure that when the editable marker list was collected, **all** source documents contributing markers to the book index were included.

Text Selection: Not recommended. The entire collection of markers would not be searched.

Dialog Settings: None. Click “Go” when ready.

Tips: If several reference failures are reported and you generated the editable marker list from a book file, be sure that all the appropriate body documents were selected from the book file when you ran **Gen Editable Marker List**.

Fixing broken references requires inserting a matching entry, typically using the `<$nopage>` command. Or, fixing an entry might be as simple as correcting the spelling or wording of either the referral text or the target text.

Show Marker Char Tags Applied

Convert embedded font-change commands to character format tags and apply to the affected text

(Editable Marker List Function)

- Purpose:** Show marker text character formatting in a visual form.
- Method:** Scan marker text for embedded text-based format commands in the form of <tagname>. When found, extract the tag name from the marker text and find the end point of the formatting. The end point of the formatting is defined as:
- the end of the entry level (colon break)
 - entry delimiter (semicolon or end of marker)
 - presence of another font change command
 - presence of the <Default Para Font> command
- Perform a look-up of that tag name in the character catalog of the current editable marker list. If not found, check the character catalog of the IX document associated with a book (assuming this editable marker list session was initiated from a book) or the source file if this editable marker list session was initiated from a single FrameMaker document.
- If the character tag was found outside the editable marker list in the IX or source document character catalogs, add the tag and its properties to the current editable marker list character catalog.
- If the tag is not found, add the tag name to the editable marker list character catalog and copy the generic font properties from the `UncataloguedCharTagTemplate` entry.
- Configuration:** Not required.
- Dialog Settings:** None. Action is immediate. However, invocation of the **Show Marker Char Tags Applied** action can be preselected in the setup dialog box for **Gen Editable Marker List** (page 33).
- Tips:** Review the next seven sections of this document for an in-depth discussion of how character formatting in the editable marker list works.

Character Formatting in Markers

FrameMaker applies character formatting to index entries using this command syntax in marker text:

```
<tagname>marker text<Default Para Font> more marker text
```

Bold and italic formatting emphasizes certain aspects of your index. But you can use other formatting styles suited to your needs, such as different font sizes, colors, and so on. Set up these variants as needed using character tags.

In a large group of markers, such as is often found in the editable marker list, seeing such plain text format command strings can be difficult.

IXgen can read the embedded character format commands and apply the character formats for you. This can make marker character formatting readily visible on screen. Later, when you apply the editable marker list, IXgen converts these applied character formats back to the embedded text commands expected by FrameMaker during its generate cycles.

You can tell IXgen to display marker text formatting as applied in one of two ways:

- Check the “Apply character formatting to editable marker list” item in the **Gen Editable Marker List** setup dialog box. This will automatically convert embedded format commands to formatted text as the markers are loaded into the new editable marker list.
- Select the **Show Marker Char Tags Applied** command from the IXgen menu when an editable marker list is the active document.

Embedded format commands are then applied as character tags. Here are some examples:.

Standard Marker Text	Editable Marker List Formatted Display
<Emphasis>animals:lion	<i>animals:lion</i>
<Emphasis>animals:habitat	<i>animals:habitat</i>
documentation, <emphasis>see <Bold>technical writing	documentation, <i>see</i> technical writing

While still in basic marker format (that is, level indicators such as the colon are still visible), formatting can now be seen. However, for editing purposes while using the editable marker list, you can enhance the display of marker character formatting. This is discussed below in *Display Fonts vs. Production Fonts*.

NOTE: Don’t confuse the character formatting that can be done to marker text with the general document formatting done at the character and paragraph level. You cannot, for example, change the appearance of IX document page numbers from format commands within the markers, nor can you change the default *paragraph* font formatting using a marker format command.

You can think of embedded character format commands as having the ability to make *exception* formatting to the marker text, but such marker format commands cannot readily change the underlying formatting of the generated document.

Underlying index formatting is controlled in the reference pages of the generated document, and in the character and paragraph catalogs of that document. For more information about formatting, refer to the “Formatting

Lists and Indexes” section of the “Tables of Contents and Indexes” chapter of the FrameMaker User Guide.

Formatting Process and Sources of Character Formats

When IXgen builds the editable marker list, IXgen scans a number of sources for the specific character format properties associated with each marker format command. Figure 5 shows how the formatting process works, along with the sources and hierarchies of character tag formats

Editable Marker List

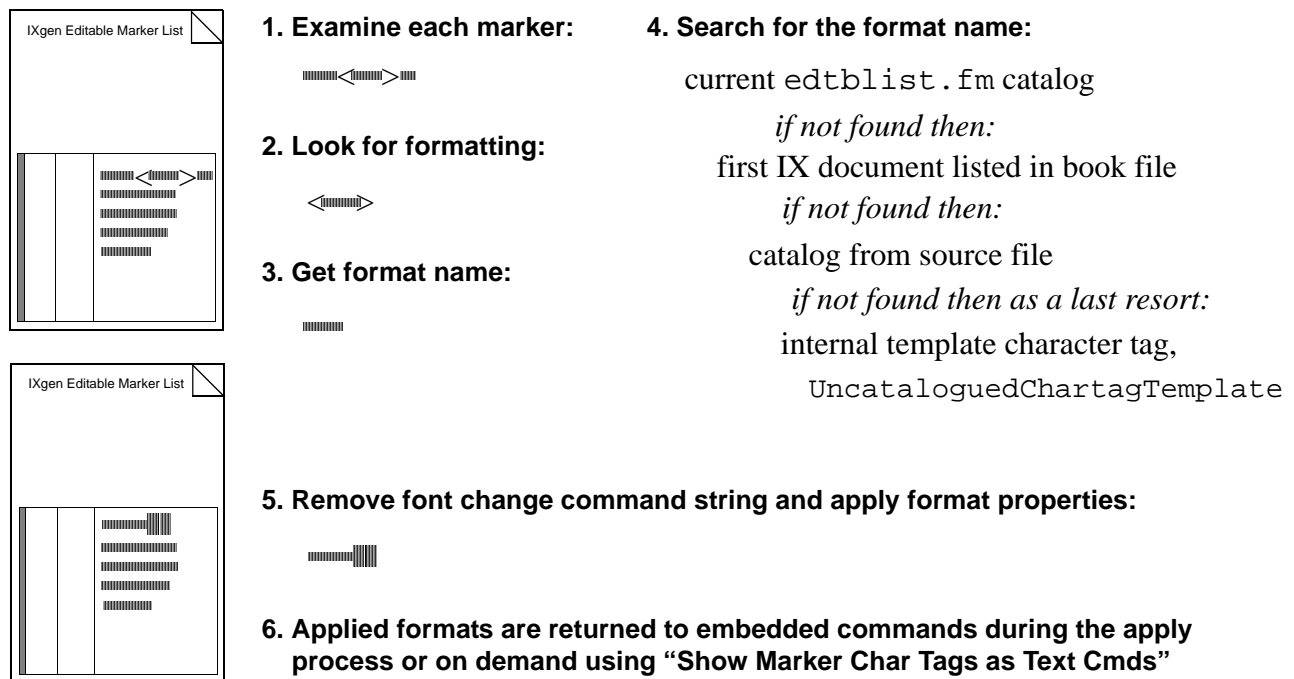


Figure 5 Editable Marker List Character Tag Processing

As indicated, the first place sourced for character formats is the current editable marker list document, which is copied from the template file, edtblist.fm (located in <FM_install_folder>\ixgen\templates).

For best use of the editable marker list formatting feature, keep the character formats you use in marker formatting up-to-date in the edtblist.fm template document. You can do this in different ways:

- Using the character designer, you can manually edit the formats in edtblist.fm template document prior to using **Gen Editable Marker List**.
- while working in an editable marker list, you can write updated character formats back to the edtblist.fm template by using **Copy Char Catalog to Template**.
- you can check the “Save current Editable Marker List character catalog to Edtblist.fm template” option in the **Apply Edited Marker List** setup dialog box.
- you can manually copy formats from other documents, such as the IX document.

More about UncataloguedCharTagTemplate

If the character format name specified in an embedded command cannot be found in any of the places noted in Figure 5 on page 52, IXgen generates a new character tag using the embedded command name. Initial character format properties for the new tag are copied from the `UncataloguedCharTagTemplate` template tag. By default, these properties are red and double underline, which will make all such tags plainly visible in the editable marker list document.

If you wish, you can change the properties for this tag in the `edtblast.fm` template document (located in `<FM_install_folder>\ixgen\templates`).

Display Fonts vs. Production Fonts

An established character tag used in marker character formatting will have the *same* tag name in these places:

- IX document catalog
- the tag name in the format command embedded in the marker
- the editable marker list created for the current editing session

The particular properties for a given character tag can be set up in the IX document (your production document) very differently from the editable marker list (template or session document).

During marker editing in the editable marker list, this capability can be invaluable. You can make various formats visually “jump out” of the editable marker list by exaggerating or enhancing various display attributes, but you need not carry these exaggerations over to the production IX document. In that document, use the formatting dictated by your production requirements.

For example, in an editable marker list consisting of just a few `Emphasis` tags scattered among a large number of markers, the italic formatting can be easily overlooked. (The `Emphasis` tag is typically used to italicize.) You could enhance the `Emphasis` tag in the editable marker list by making the emphasis tag red. For a bold tag in the editable marker list, you could make the characters several points larger than the default text size.

In the current editable marker list, make any desired changes using the character designer and apply your changes. Now you can much more readily see your formatting. And, because the editable marker list template character catalog is not fed back to the IX document, you need not worry about losing your production settings for various character tags.

Figure 6 shows these formatting ideas applied to two sample markers.

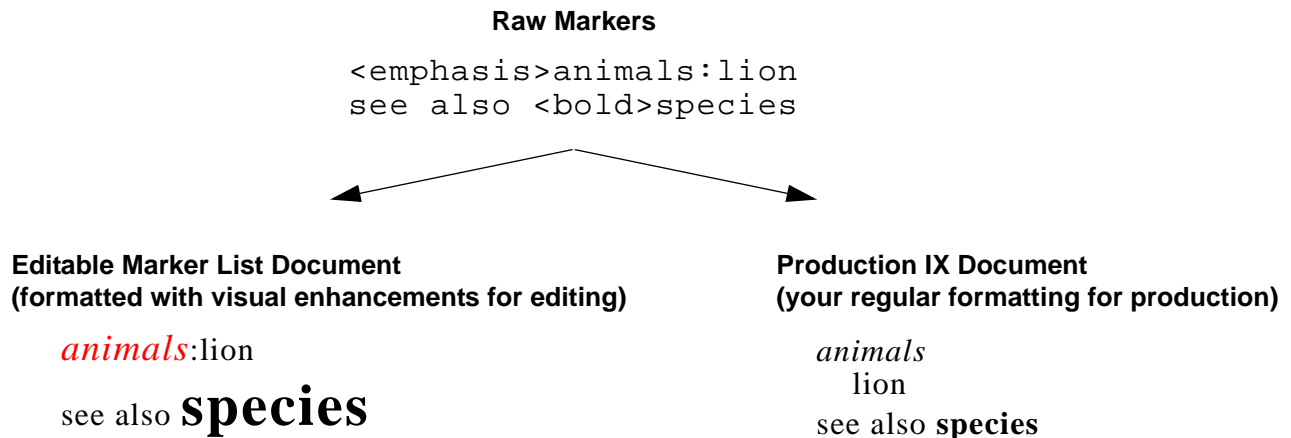
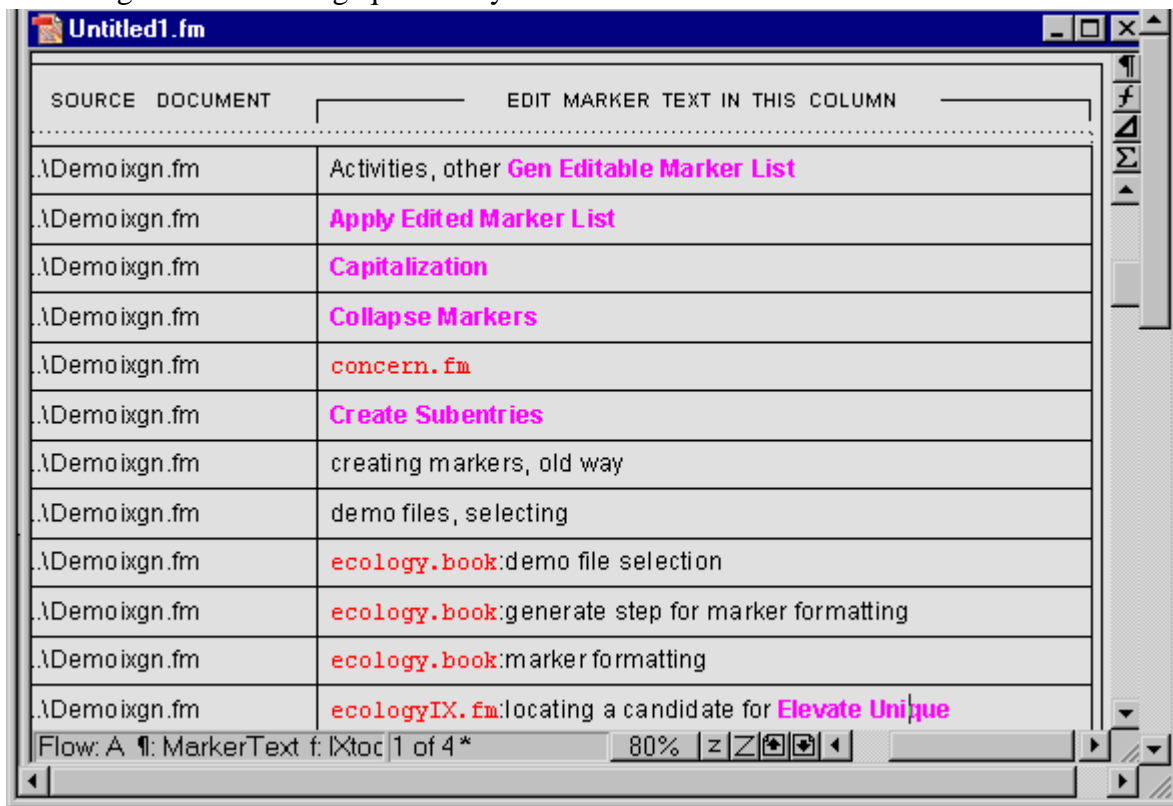


Figure 6 Editable marker list display fonts separate from production fonts

In our own `demoixgn.pdf` file (the IXgen demonstration guide included with your IXgen distribution), we used several character formats in the FrameMaker index of that document. As you can see, magenta and a custom red were used to show those character applications within the editable marker list. Of course, such colors would be a poor design choice in the production version of the index document, but here, while editing, they make seeing the formatting quite easy.



If you wish to keep any format exaggerations you've made for future sessions with the editable marker list, save the changes using **Copy Char Catalog to Template**, or check the

“Save current Editable Marker List character catalog to Edtblist.fm template” option in the **Apply Edited Marker List** setup dialog box when you apply the editable marker list.

If You’ve Created New Char Formats in the Marker List

The IXgen editable marker list formatting feature will probably inspire the creation of new character tags as you edit your markers in the editable marker list. This is perfectly fine. During the apply operation, IXgen will convert the name of the new tag(s) to the proper embedded character format commands and place them in the markers as they are written back to the source documents.

However, *do not* forget to add the same-named character tag (along with the appropriate format properties) to your IX document — the FrameMaker-generated index document you publish. If this is not done, the tag will not appear formatted in your production IX document because FrameMaker cannot find the character tag name in the IX document character catalog.

If you wish, use `File>import>formats` to transfer the editable marker list character catalog over to the IX document. However, do this *only* if the font properties you use in the editable marker list will be appropriate for your published IX document. As noted in the section immediately above, *Display Fonts vs. Production Fonts*, any given character tag can have two different sets of character format properties for the two different purposes: editing or publishing.

If the format particulars will not be appropriate for the production IX document, create the character catalog entries by hand, or immediately adjust the font properties for the new character tags you just copied to the IX document.

Capitalization Issues

Character tag names are case sensitive. The character tag `Emphasis` is not the same as the tags `emphasis` or `EMPHASIS`. These are all separate tags in the character tag catalog. Be aware of this as you work with character formatting.

The IXgen **Capitalization** tool properly handles embedded format commands. Regardless of the capitalization standard selected, any text found inside angle brackets is assumed to be a character tag name and is *not* changed.

IXgen Main Menu Format Check Marks

In the main IXgen pull down menu, the current format display state of the editable marker list is indicated by a check mark placed next to the last-used format state command, **Show Marker Char Tags as Text Cmds** or **Show Marker Char Tags Applied**.

As your editing session with an editable marker list progresses, you could see a mixture of applied formatting and embedded character commands. This can happen if you start out with the list as “**Show Marker Char Tags as Text Cmds**”, but then selectively add formatting. Or, perhaps after selecting **Show Marker Char Tags Applied** you’ve entered embedded commands by hand. Or perhaps either show command has been used on a selected portion of the editable marker list and not the entire list.

The new or modified formats will not be forced to the current state indicated by check mark in the IXgen menu. You can unify the display whenever you wish by selecting the desired formatting command again, even if that command is already checked.

Show Marker Char Tags as Text Cmds

Convert applied formats to embedded format commands

(Editable Marker List Function)

- Purpose:** Convert applied character formats to the standard text-based embedded character format command syntax used by FrameMaker: <tagname>.
- Method:** Search for any applied formatting in the marker text. Get the tag name, enclose the tag name in angle brackets, and embed that text into the marker text at the start of the formatting. Remove the applied formatting. Where appropriate to comply with FrameMaker's processing rules, insert "<Default Para Font>" at the end of the affected text. Insertion of <Default Para Font> is not required just before colons, semicolons, or at the end of the marker text.
- Configuration:** No configuration required.
- Dialog Settings:** Action is immediate. No setup dialog box appears.
- NOTE:** As part of using **Apply Edited Marker List**, this function is called automatically. (You need not select the command yourself.) This assures that all character formatting has been converted to the embedded character format command syntax used by FrameMaker.

Copy Char Catalog to Template

Write current Editable List Char Formats to Edtblast.fm

(Editable Marker List Function)

- Purpose:** Preserve character format changes and additions made to the current editable marker list document by copying them into the template document used by **Gen Editable Marker List**. The template document is:
<FM_install_folder>\ixgen\templates\edtblast.fm
- Method:** Each character format in the current editable marker list is copied to the `edtblast.fm` template file. If the character format is not present, it is added. If the format is present, the properties are updated (overwritten) with the current values from the current editable marker list. The IX document — your production index document — is *not* affected.
- Configuration:** None required. The copy action is immediate.
- Dialog Settings:** None.

Using the Copy Character Formats Function

As you work on the editable marker list and add character formats to support marker formatting (and optimize character format display properties to help with editing), you will most likely want to save this character tag development. By storing the character format updates in `edtblast.fm`, those refined character tags will be available the next time you generate an editable marker list.

Select **Copy Char Catalog to Template**, or IXgen can automatically copy the formats for you during the **Apply Edited Marker List** operation (page 41). Check “Save Current Editable Marker List to `ixgen\templates\edtblast.fm`” in the apply dialog.

- CAUTION:** Any same-named character tags already in the `edtblast.fm` template will have their properties updated (overwritten) with the character tag properties from same-named tags in the current editable marker list document. If you don't want this to happen, do not use this function or check this box. Instead, you can prepare the `edtblast.fm` template ahead of time using the character designer. For general information on marker formatting refer to *Show Marker Char Tags Applied* starting on page 50.

Capitalization

Control capitalization standards

(Editable Marker List Function)

Purpose: Apply uniform capitalization standards to the markers in a marker list created by **Gen Editable Marker List** (page 33).

Method: You establish the capitalization standards for each level. IXgen then changes the case as dictated by those standards.

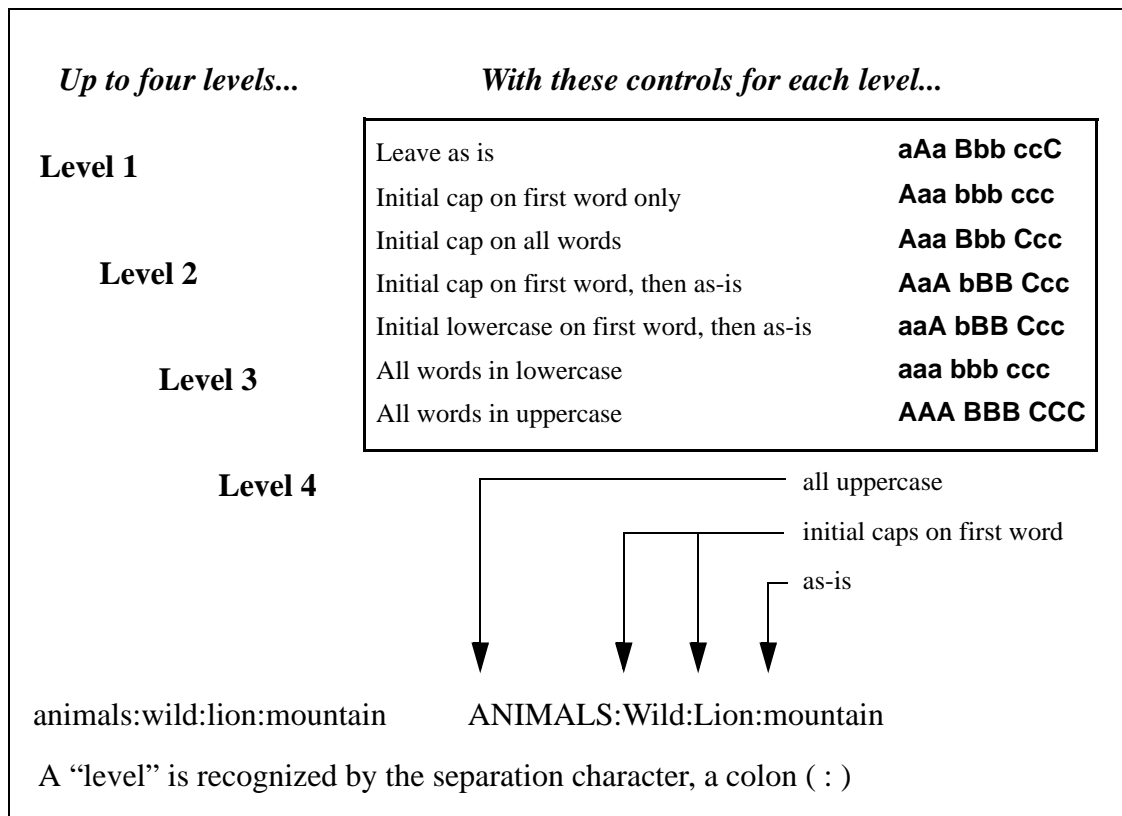
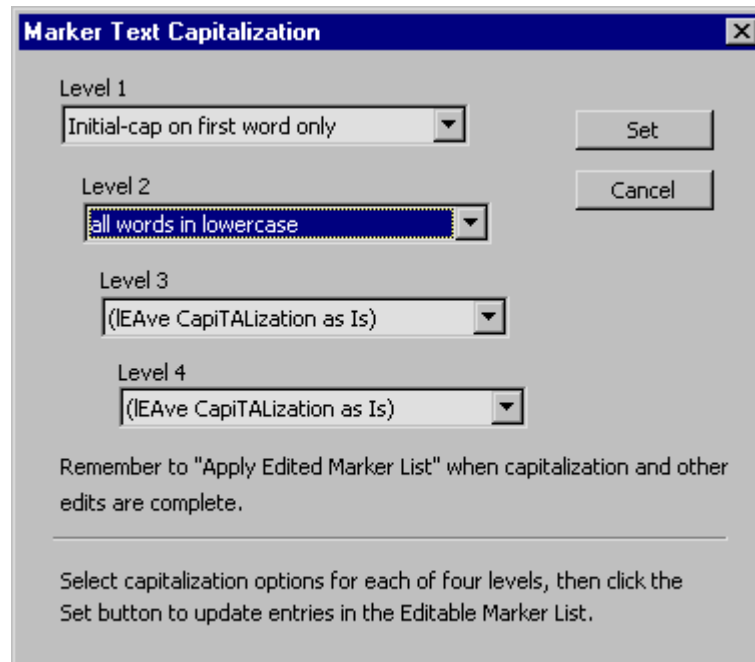


Figure 7 Capitalization

Configuration: The illustration above shows how the various control settings affect capitalization. Make the desired selections from the dialog box. A different capitalization standard can be set for each level, up to four levels. Be sure to use **Apply Edited Marker List** when satisfied with the results of Capitalization.

Dialog Settings: Use the diagrams immediately above as a guide in setting the desired capitalization standards for each level. Each scroll box for each of the four levels provides several different capitalization standards. The description of

each listed capitalization standard itself is a sample of the capitalization that will take place.



Text Selection: If you have ranges of markers where you don't want changes in capitalization, you can select just those regions where you want capitalization changes to take place.

Tips:

- Typically, you'll want to do most of your other IXgen-related marker list processing (**Permute Markers**, **Flip Entries**, **Create Subentries**, **Elevate Unique Subentries**) *before* setting a capitalization standard. Unless you are setting all levels to all lower case, selecting **Capitalization** early on will mean extra work as the other IXgen tools move around words that may have varying capitalization.
- Often, you will have exceptions to capitalization rules. The **Capitalization** tool will set the majority of the entries the way you want them, then you can make exception capitalization while the marker text is still available for editing in the editable marker list. You can do this manually, or by selecting an area of text to process in the source document (refer to *Operational Scope of IXgen Tools* starting on page 23). Alternately, you can either select only a portion of text in the editable marker list itself before using **Capitalization**, or you can select only a portion of the editable marker list prior to selection the **Apply Edited Marker List** function.
- Using the SET button in the Capitalization dialog box only changes the capitalization in the editable marker list. The capitalization changes are not committed until **Apply Edited Marker List** is used..

NOTE: **Capitalization** properly handles embedded format commands. Regardless of the capitalization standard selected, any text found inside angle brackets (< or >) is assumed to be a character tag name and is *not* changed. However, if the angle brackets are escaped (\< or \>), the text between such escaped angle brackets will be affected.

Expand Markers

Place marker text in main body text

Purpose: Make marker text visible in the current text flow so that markers can be seen (and edited) in context. This function is useful for language translators, or when certain keywords or phrases are to be changed in a document. When editing is completed, use **Collapse Markers** (page 63) to return the marker text to actual markers.

Method: Text from markers of the specified marker type is moved into the main text flow starting at the point where the marker was found. The marker text is assigned a special character tag called *IXgenMarker*. If the character tag *IXgenMarker* is not already present in the source document, the tag is created by IXgen and inserted into the character catalog. (The IXgen default properties for *IXgenMarker* are bold and double-underline.)

The text for the existing marker is changed to placeholder text: “!IXGEN_DONT_EDIT_THIS!” This indicates that IXgen has expanded the marker. Do not edit this new marker text. When you later **Collapse Markers**, this special marker text is replaced by the collapsed marker text (including any edits made to it).

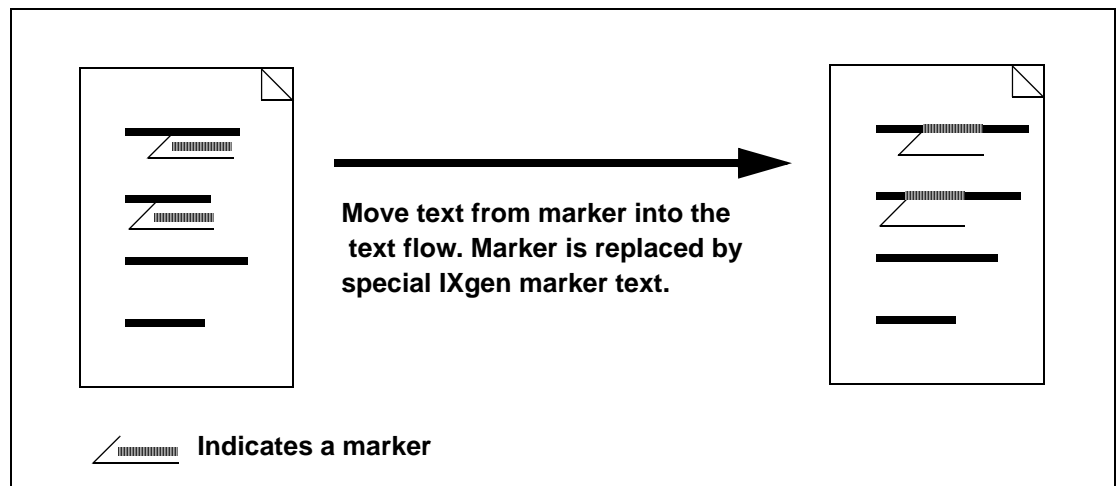


Figure 8 Expanding Markers

Configuration: Select the marker type to expand when **Expand Markers** is invoked.

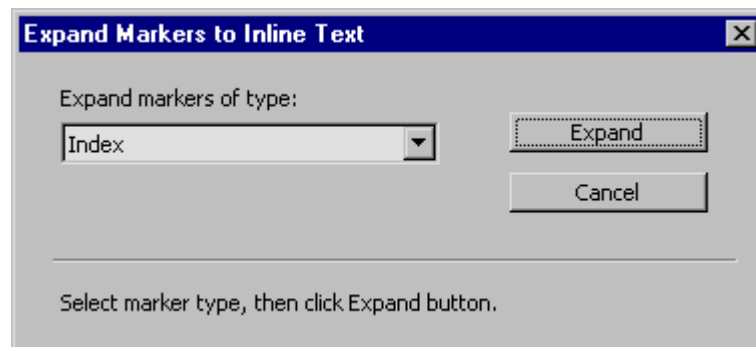
CAUTION: If you have cross-references linked to paragraphs that also have expanded markers in them, do *not* update these documents until you **Collapse Markers** (page 63). If you have extensive editing to do that will require leaving markers expanded across several FrameMaker sessions (or openings and closings of the documents being edited), be sure to suppress automatic updating. Use Edit>Update References. Select “Suppress Automatic

Reference Updating” from the Command button in the dialog box. Check each item so that no category of automatic updating occurs. Once you have finished editing markers and have collapsed them, you can restore automatic updating.

Because **Expand Markers** adds marker text to the paragraph in which a marker is expanded, cross-references that use the body text from such paragraphs will include the marker text.

If by chance you do an update while markers were in an expanded state, use **Collapse Markers**. Perform the update again. This should clear marker text from cross references.

Dialog Settings: Select the marker type to expand, then click “Expand”.



Tips:

- You can change the font attributes of the IXgenMarker character tag if you wish. (Use the character designer.)
- Do not place FrameMaker objects, such as variables or anchored frames, into expanded marker text. Otherwise, the collapsed marker text will divide into multiple markers where the object(s) appears.
- Do not use some other IXgen tool, such as **Gen Editable Marker List** or **Apply Edited Marker List**, while markers are expanded. Complete current operations then **Collapse Markers**. At that point use other IXgen tools or make other edits to your documents.
- Do not attempt to update the file or book while *any* markers are expanded.

Collapse Markers

Return expanded marker text to markers

Purpose: **Collapse Markers** returns the marker text strings inserted into the text flow by **Expand Markers** (page 61) back into their original markers, plus any changes in the marker text.

Method: IXgen scans all flows for characters tagged with the *IXgenMarker* character tag. Each segment of text tagged with *IXgenMarker* is removed from the text flow. The text is inserted into the marker located at the leading edge of where the tagged text was found.

If no suitable marker precedes *IXgenMarker*-tagged text, then **Collapse Markers** views the tagged text as “orphaned marker text.” Orphan marker text results when you apply the *IXgenMarker* character tag to text that did not originally come from a marker. By applying *IXgenMarker* character tag to new body text you can create what will become new markers during the collapse operation.

Using the dialog box, select whether orphaned marker text is skipped over (not recommended, unless you explicitly don’t want to save orphan marker text), or collapsed into a newly created marker. Also select the marker type to create.

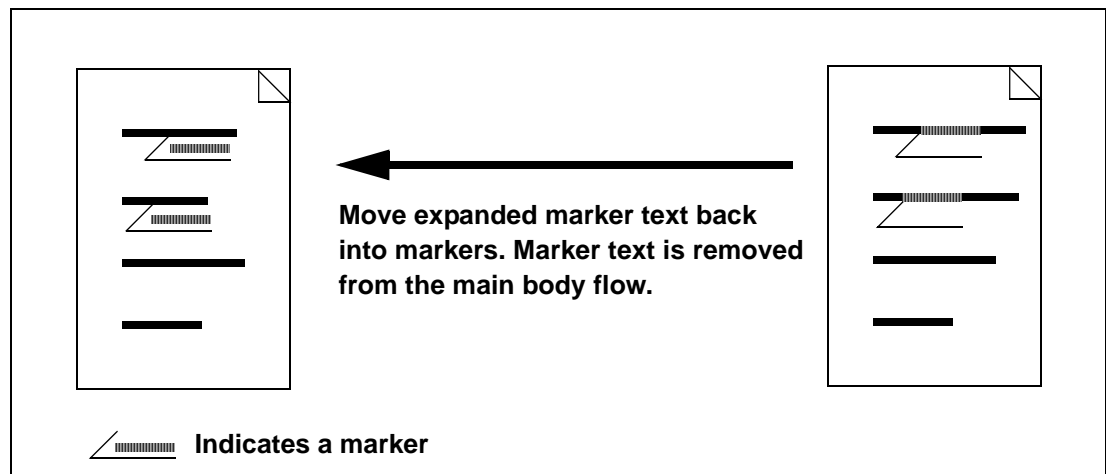
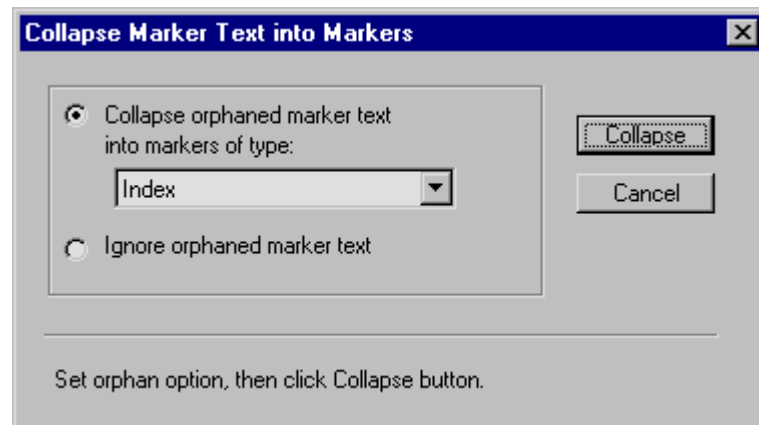


Figure 9 Collapsing Markers

Configuration: Select the marker type to create if orphan marker text is found.

Dialog Settings: Select the marker type for the collapsed markers. Typically, this is the marker type originally expanded. Set “Ignore orphaned marker text” to skip over text that may have been tagged with the “*IXgenMarker*” character tag,

but was not originally from a marker. We don't recommend using this option unless you're sure you want to delete such text.



Tips: If **Expand Markers** was used, be sure to use **Collapse Markers** before attempting to generate a document derived from markers, such as an index.

Follow these steps to directly add marker text from body text:

1. Set the text insertion point in the source document to the point where you want to place the marker
2. Single-click on the IXgenMarker character tag in the FrameMaker font catalog
3. Enter the desired marker text
4. Select the paragraph containing the new text
5. Use **Collapse Markers** with the "Collapse orphaned marker text" option selected to create a new marker. Select which marker type should be assigned to the new marker.

The above example shows how to do a single marker in a localized area of the document. You can repeat steps 1, 2, and 3 several times throughout a document. Use step 5 (**Collapse Markers**) when finished and all expanded marker text segments need to be returned to their source markers.

Markers from Keywords

Generate new markers by searching for keywords

Purpose: Match keywords (or text strings) given in a keyword list. At the starting point in the body text where a match is made, a new marker is inserted with the keyword text (or text interactively selectable) as the marker text.

Method: Using the template
`<FM_install_folder>ixgen\templates\keyctrl.fm` (or a new keyword document based on `keyctrl.fm`), you establish a list of search words or phrases. You also establish a companion list of marker text alternatives to choose from when a keyword match is made. If you elect not to provide alternative companion marker text, the keyword itself is used as the marker text.

When using **Markers from Keywords** on a single document, you can interactively decide whether to create markers at matching keywords, and also select the marker text to use for the new marker.

You can add new marker text as you go and have the new text automatically stored in the keyword document. If you are operating on a book, the command operates in batch mode only, creating markers at all matching

keywords without any confirmation from you. The first marker text choice listed in your keyword document is used for the new marker.

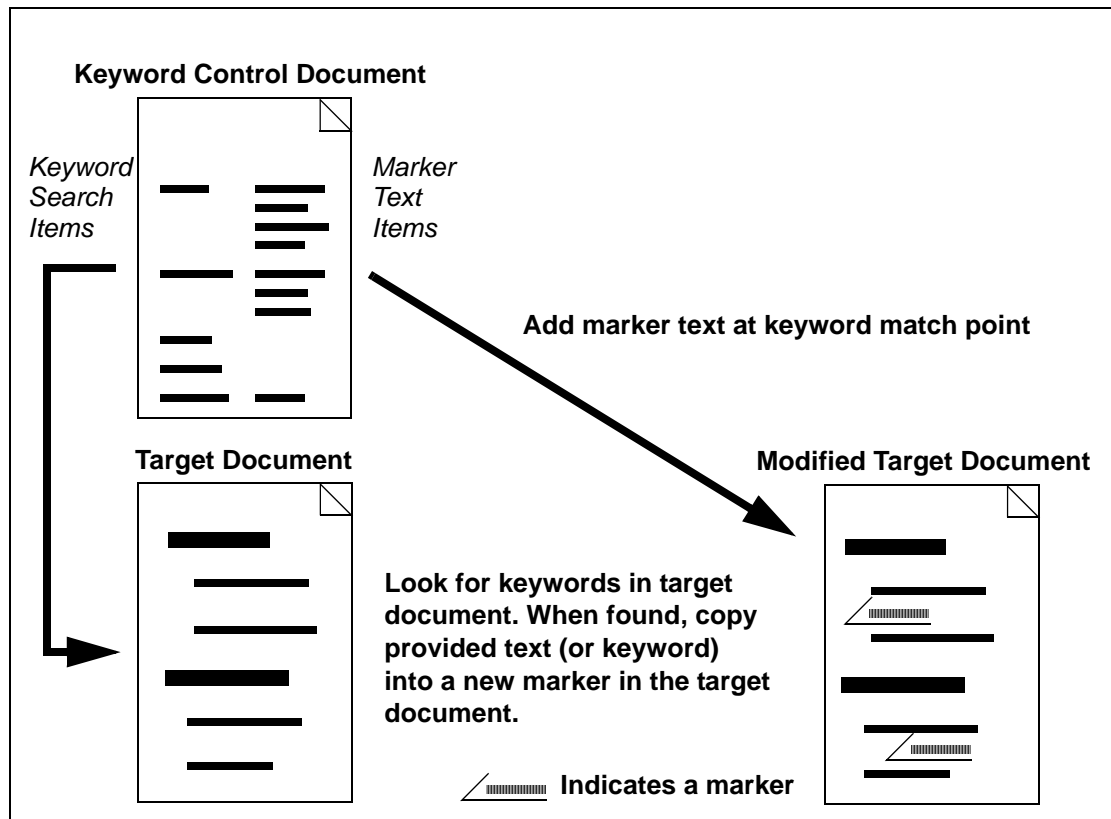


Figure 10 Generating Markers from Keywords

Here are the recommended steps to create a keyword control file from the template control file provided with IXgen:

1. Use the FrameMaker File>New command. Specify `<FM_install_folder>\ixgen\templates\keyctrl.fm` as the template to use.
2. The keyword control file contains a two-column table. In the left-hand column enter the keywords that IXgen will attempt to match in the target document. **Place only one keyword in each table cell.** (Add as many rows as you need.) In the right-hand column, enter up to ten¹ marker text alternates for each keyword. The alternates **must be in separate paragraphs and must be in the same cell.** Do not create separate cells for each alternate. If you want the exact keyword text to be entered as the index entry, make no entry in the right-hand column for that particular keyword.

1. You can increase this value to extend the depth of the alternate marker text stack. Use Notepad or other plain text editor to edit `<FM_install_folder>\ixgen\ixgen.ini`. See the notes there regarding `MFKMaxHistory`.

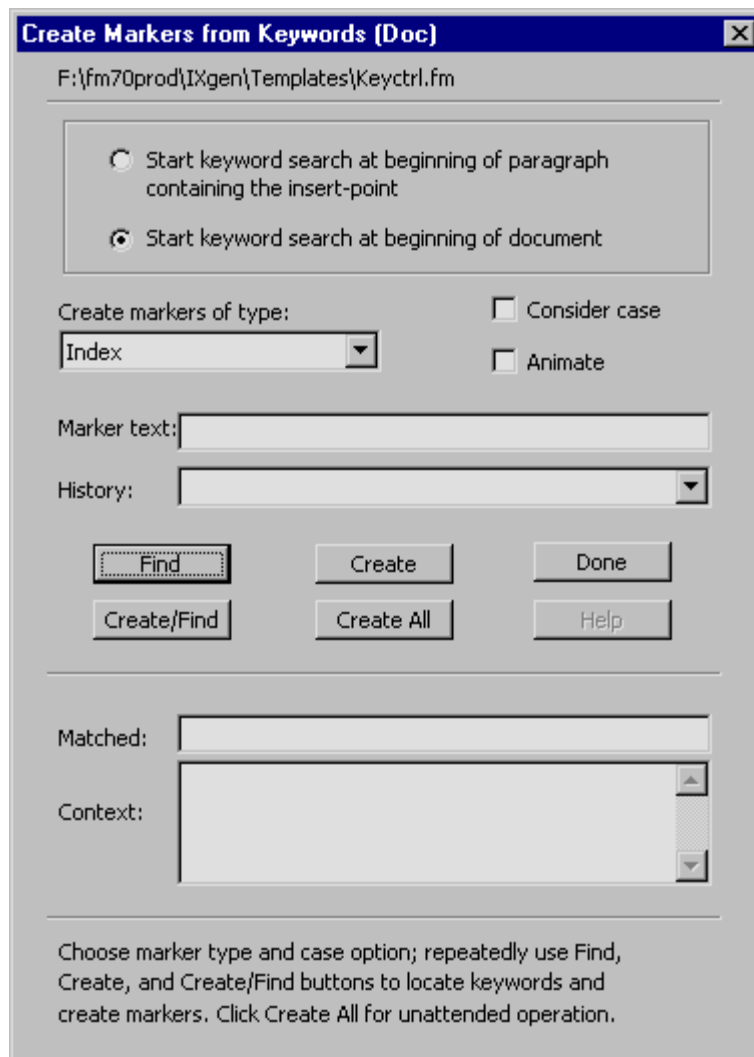
If you wish to establish an index entry with more than one level, use standard FrameMaker syntax when building the entry. For example, if you have the keyword phrase “mountain lion” one possible marker text entry might be “Animals:wild:mountain lion”.

CAUTION: Do *not* straddle any cells in the keyword table.

3. When done, save your new keyword control document to a name of your choice. (Save as a regular FrameMaker document. Do not save as plain text or MIF.)
4. When ready with a selected book or file, select **Markers from Keywords**. Use the file browser to select the keyword document you just built, or any other keyword document you might have already built.

NOTE: If the marker text contains any of the special characters used for marker control (< > ; : []), these characters will be placed into the new marker. If this is what you want (for example, you included a control function in the new marker text, such as a font change or sort override), this is fine. If you want literal values of these characters, then you must escape the characters using the backslash in the marker text (\< \> \; \: \[\]).

Dialog Settings: Each dialog box parameter is explained below.



Keyword File Location Advisory

As a convenience and confirmation that you're using the desired keyword list, the full path to the current keyword file is indicated near the top of the dialog.

Keyword Search Start Point

You can start your search at the beginning of the document, or pick up searching in the paragraph where the insert point is currently located. Use "Beginning of document" when indexing a document for the first time. Use "...containing the insert point..." if you are stopping and starting **Markers from Keywords**.

NOTE: If you have selected a region of text in the source document, the Keyword Search Start Point options are not active. The keyword search will go through the entire selected region.

Create Markers of Type

Select the type of markers to be created. Normally this is index, but you can use other types as well. During the generate process FrameMaker can build your index from one or more marker types. With this in mind, you can select a marker type other than index (such as author or subject) so that you can list only keyword generated markers, if you wish. The ability to isolate keyword-generated markers means that you can easily see how to refine your keyword list, or even delete just the keyword-generated markers if you don't like the initial results.

Consider Case

The keyword search can be case sensitive or insensitive. Usually you'll want case insensitive matching.

Animate

This option only works on single documents, not books. When selected, the document on screen is refreshed to show each successive keyword find. This does slow down the process, and much of the document window will be obscured by the keyword dialog box, but this option gives you a coarse sense of where you are in the document as the keyword search progresses.

Marker Text

When a keyword match occurs, this text field shows the last-used marker text for this keyword. If this is the first find of this keyword, the first line of the marker text for this keyword from your keyword file is displayed. If you wish, you can modify the marker text immediately, without going back to your keyword document. IXgen will add the modification to the marker text list for that keyword; or, you can use the History scroll box to select alternate marker text for this keyword.

NOTE: The keyword control file selected when invoking **Markers from Keywords** is updated "live" with any changes you make to the alternate marker text selections. If you wish to preserve the original keyword control file, make a backup *before* using **Markers from Keywords**.

History

Markers from Keywords supports using more than one marker text string for any given keyword match. Each time a keyword is found, you can access this list to select a marker text variant which best suits the current keyword location and context. The last-selected marker text string becomes the default string for the next keyword find, and remains the default until another string is selected.

Action Buttons

FIND locates the first (or next) occurrence of a keyword in your document. FIND does **not** insert the marker. Use CREATE or CREATE/FIND to insert the marker at the keyword location.

CREATE inserts the marker text displayed in the Marker Text box.

CREATE/FIND inserts the marker text displayed in the Marker Text box and immediately resumes the FIND process.

CREATE ALL switches to batch mode and searches for all keywords in the remainder of the document. Interactive capabilities, such as selecting a marker text variant for a given keyword match, are no longer available. Once started, the process cannot be interrupted.

Matched

This field shows which keyword has been matched.

Context

This field shows a few lines of text surrounding the match. This helps you determine if you want to make a variant of the marker text for this match, or whether you want to place a marker at all. Click FIND to continue searching and not place a marker. Click CREATE or CREATE/FIND to place the marker.

Tips: You can use an existing index to create a keyword list. This is useful if you already have an index for an existing document, but have created new documents with similar content and now need to index them. This process is described in *Making a Keyword List from An Existing Index* on page 80.

Configuration:

- Once **Markers from Keywords** is called from the IXgen menu, select your new keyword file when prompted.
- Select the type of marker to be created when a matching keyword is found.
- **Markers from Keywords** can be used to automatically apply a character tag to any matched text in the body text. Notes in the `keyctrl.fm` template document explain how to activate this feature. (This can be useful for making active hypertext links out of keyword matches.)

Markers from Keywords has two operational modes: batch and interactive.

1. In interactive mode the keyword search operation suspends whenever a match is found. You can then select which one of the alternates from your list is appropriate to use as the marker text at that location. You can also create an entirely new alternate entry before creating the marker.

IXgen keeps the ten most recent alternates in the control list. That is, if you modify two of the ten alternates, IXgen will retain the modifications and discard two of the least-used alternates. Or, if your initial list had only three alternates and during the searching you add two alternates, these would be added to the keyword control file currently being used. (As noted in the footnote on page 66, you can change how many alternates can be stored by IXgen.)

NOTE: The keyword control file selected when invoking **Markers from Keywords** is updated “live” with any changes you make to the alternate marker text selections. If you wish to preserve the original keyword control file, make a backup before using **Markers from Keywords**.

2. Batch mode means that IXgen will automatically go through the target file(s) and insert marker text when a keyword is found. If the matched keyword has multiple alternatives listed, the *first* alternative is used as the marker text. If no alternatives are listed, the keyword itself is used as the marker text.

NOTE: Batch mode is the only mode available when processing books. Batch or interactive mode can be used when working on an individual file.

Tips:

If running in batch mode on a single document and you want the process to run faster, minimize the document just before selecting **Markers from Keywords**.

Markers from Paragraph Tags

Generate new markers from selected paragraph tags

Purpose: **Markers from Paragraph Tags** provides an excellent way to introduce a starting base of markers into a new document. The text from selected paragraph tags is copied into new markers. Selected paragraph tag types are usually chapter and subsequent headings, but you can select any tag type you wish.

Method: The document is scanned for the selected paragraph tag(s). When found, the paratext from the paragraph is copied into a new marker of the selected type. The marker is placed at the head of the paragraph.

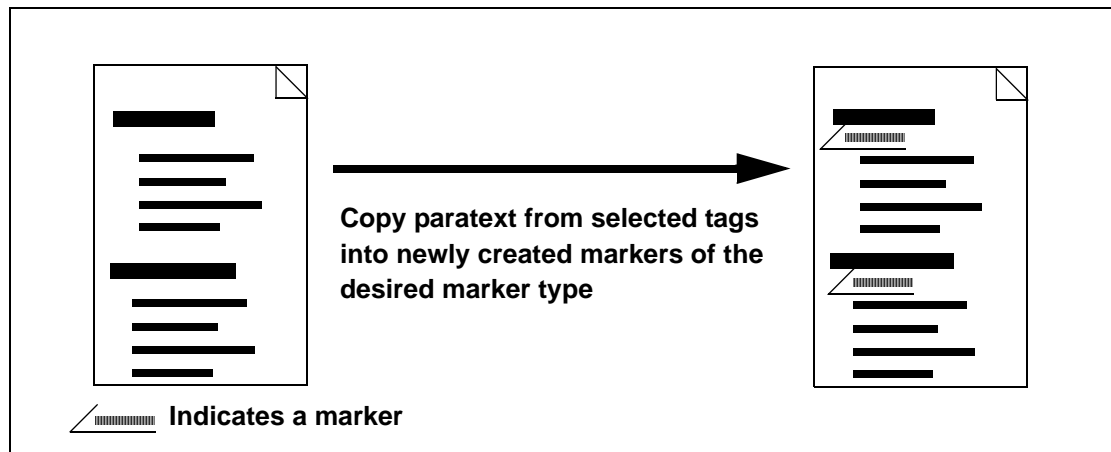
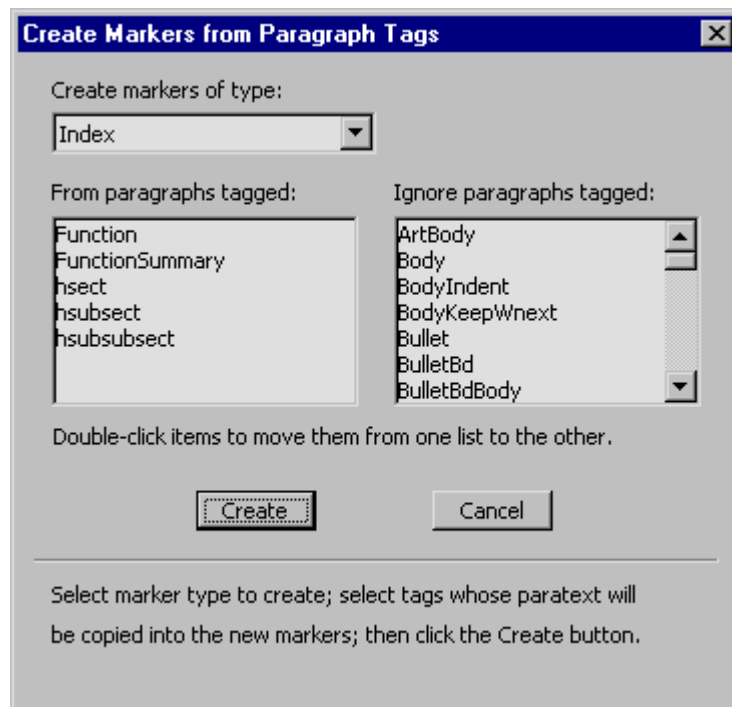


Figure 11 Generating Markers from Paragraph Tags

Dialog Settings: Select the type of marker to create; double-click in the scroll lists to select one or more tags whose text will be inserted in new marker at the start of tagged paragraph.



Tips: In some instances, the raw text captured from first or second level heads will not make an ideal index marker. You will want to use other IXgen tools, such as **Permute (rotate) marker text** or **Create Subentries**, to enrich the markers created with **Markers from Paragraph Tags**. You can use **Gen Editable Marker List** or **Expand Markers** to give a better view for fine-tuning the markers you've created. In particular, once a **Gen Editable Marker List** has been generated, try permuting the markers. Refer to *Using the Permute (Rotate) Marker Text Function* starting on page 39.

NOTE: If the source paragraph text to be placed in the new marker contains any of the special characters used for marker control (< > ; : []), these characters will be placed into the new marker, and likely will not be interpreted as you intend. You will probably want literal values of these characters. To do this, you must escape the characters using the backslash in the marker text (\< \> \; \: \[\]).

Generally, it is unlikely that paragraph text used for index entries will contain such characters, but if does, we suggest using a different marker type. This way, you can collect just those markers in a **Gen Editable Marker List** operation, and then perform a find/change operation to include the “\” escape command with any of these special characters.

Markers from Character Tags

Generate new markers from selected character tags

Purpose: **Markers from Character Tags** generates new markers based on text formatted by an applied character format. In this way, you can automatically index each occurrence of any special term or phrase which has been emphasized by a specific character tag.

Method: The document is scanned for text where the selected character tags have been applied. When found, the character tagged text is copied into a new marker of the selected type. The new marker is placed at the start of the tagged text.

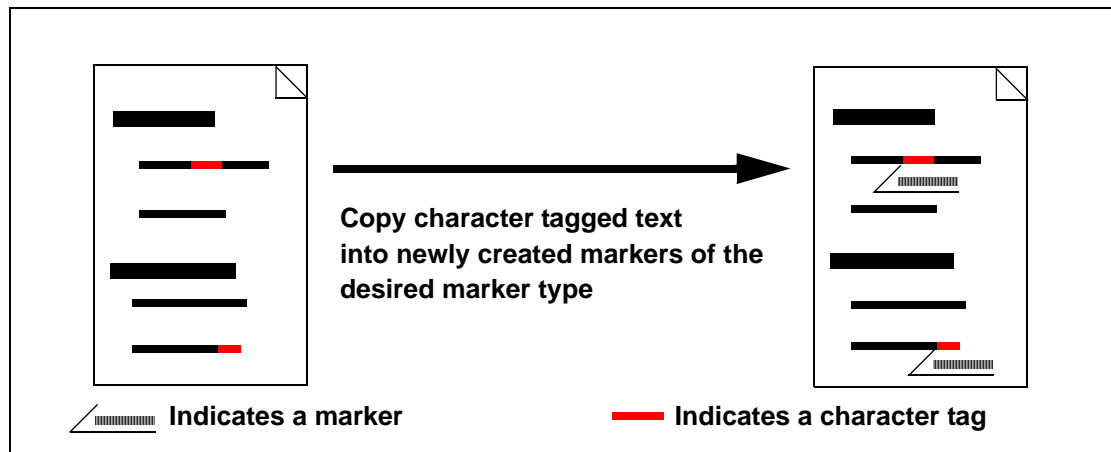
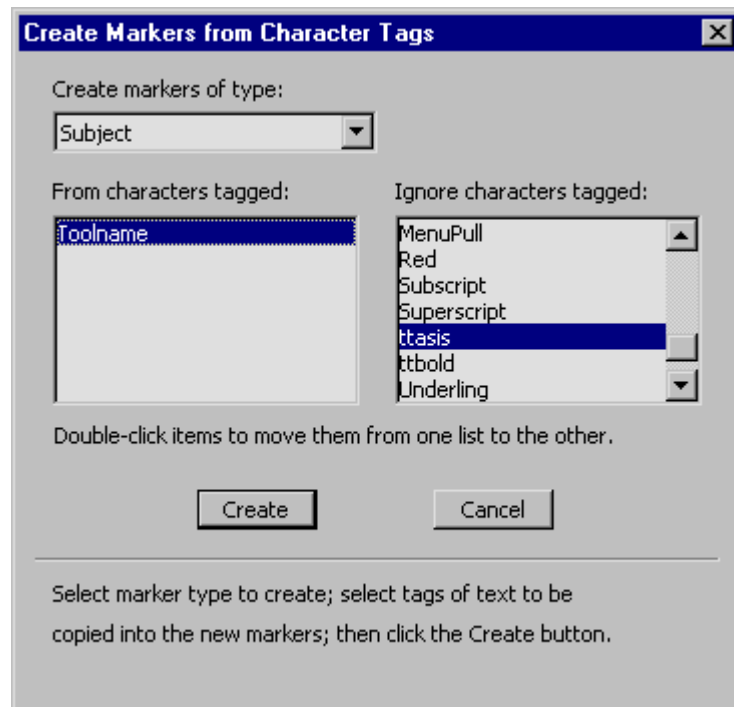


Figure 12 Generating Markers from Character Tags

Dialog Settings: Select the type of marker to be created when a matching tagged character text is found. Double-click the lists to select the name(s) of the character tag(s) to locate.



Text Selection: You may find a number of unwanted markers generated from character tagged text. For example, you may only wish to index a special term the first time it appears, or where an index entry would be meaningful, but not at every incidental occurrence of text with the applied format.

When using **Markers from Character Tags**, use a text selection to limit the area processed. You can also use **Gen Editable Marker List** or **Expand Markers** to view and delete unwanted markers.

Tips: Dedicating a marker type just to markers created from character tags can be very helpful in monitoring how many markers are created, and then maintaining those markers.

NOTE: If the source character tag text to be placed in the new marker contains any of the special characters used for marker control (< > ; : []), these characters will be placed into the new marker, and likely will not be interpreted as you intend. You will probably want literal values of these characters. To do this, you must escape the characters using the backslash in the marker text (\< \> \; \: \[\]).

Generally, it is unlikely that character-tagged text used for index entries will contain such characters, but if it does, we suggest using a different marker type (as suggested in the “tip” just above). This way, you can collect just

those markers in a **Gen Editable Marker List** operation, and then perform a find/change operation to escape any of these special characters.

Delete Redundant Markers

Remove back-to-back markers that are duplicates

Purpose: Duplicate markers that are back-to-back serve no purpose and can be safely eliminated. While this will save some modest amount of document overhead, the main purpose is to streamline future marker maintenance. (Duplicate markers can occur if IXgen tools such as **Markers from Paragraph Tags** or **Markers from Character Tags** are used repeatedly on the same document. **Markers from Keywords** can also cause duplicate markers if the same keyword list is used more than once on the same document.)

Method: When a marker is located, **Delete Redundant Markers** checks to see if another marker *immediately* follows, with no intervening text. If the next marker is an *exact duplicate* in all ways — marker type, marker text, marker text formatting, even case — the redundant marker is removed. If additional redundant markers also immediately follow, they too are removed.

NOTE: Duplicate markers separated by *any* intervening text are **not** considered redundant and are **not** removed. Such markers have real utility in identifying a second occurrence of an item that should be indexed wherever it occurs, or requires its own entry. This is particularly important if the intervening text includes one or more page breaks.

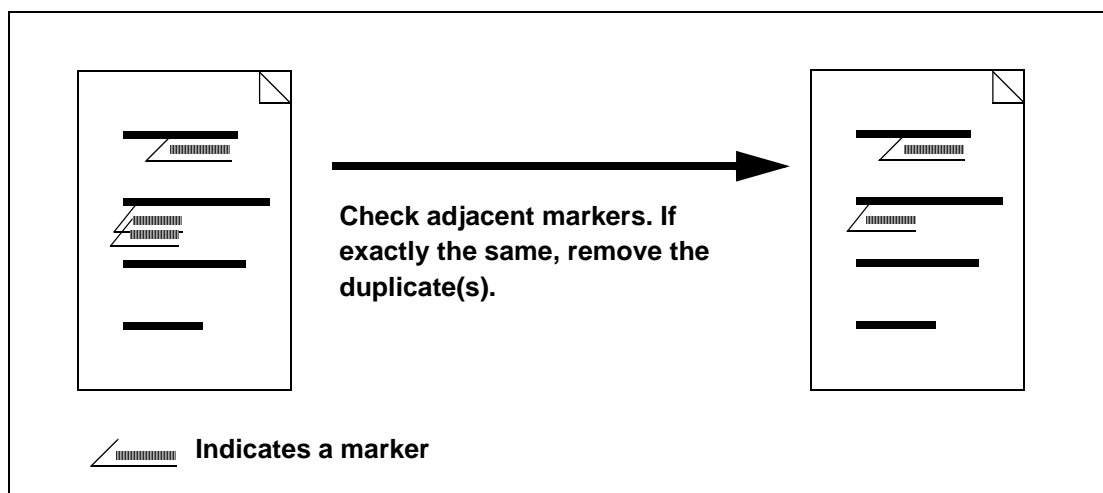


Figure 13 Deleting Redundant Markers

Configuration: None required.

Suggested IXgen Uses (Cookbook)

This section provides a “cookbook” for many common indexing tasks that can be done with IXgen. If you have any doubt as to the function of an IXgen tool noted here, review the section describing that tool. (If reading this document in PDF form, each term is an active link and you can jump to the tool description.)

Making an Index from Scratch

These steps are suggested for making an index from scratch:

1. Use **Markers from Paragraph Tags** to generate a starting index. Typically, first, second, and sometimes third-level heads are used to create a base index. You can also supply a keyword list and use **Markers from Keywords** to generate a starting list. If you have special names or terms emphasized by a character tag, you can also use **Markers from Character Tags**.
2. Use **Gen Editable Marker List** to generate an alphabetic list of markers the markers created.
3. Use **Apply Edited Marker List** and select the **Permute Markers** option in the apply dialog box to expand the base set of markers created in step 1. Discard the editable marker list document without saving; it was just applied and the markers are now back in the source document(s).
4. Use **Gen Editable Marker List** again to generate an alphabetic list of markers so that you can get a feel for what has been created from using **Permute Markers**.
5. Manipulate the markers as desired within the list created by **Gen Editable Marker List**. You can use find and change along with spell checking the entries.
6. The **Gen Editable Marker List** function also supports several additional editing features: Use **Create Subentries** to check for entries that could made more readable by establishing a single main heading and several subheadings. In several cases a swap of the first and second level entries may be useful. Try **Flip Entries**. Once comfortable with the **Flip Entries** settings, use **Speed Flip** to immediately perform flip operations. If you have any reference entries, use **Validate References** to check them. Use **Elevate Unique Subentries** to clean up any first-level entries that have only one subentry.
7. Use **Apply Edited Marker List** to reflect changes made in prior steps back to the source markers. Again, discard the document once the markers have been applied.
8. Generate/update the FrameMaker book to get a fresh IX document showing all your marker edits. Review the index; repeat any of the steps above to get the kind of index you want. Be sure to repeat Generate/update as the last task of your index creation.

Maintaining an Index While Maintaining the Main Text

Maintaining an index in parallel with main text maintenance can have several facets, depending on edits you plan for the main text body. Where appropriate, main body text changes should also be reflected in the companion markers, . Such changes could be made with find and change, the spelling checker, or even by hand as you review a document.

Use **Expand Markers** *before* starting your maintenance edits on the main body text. This way, any updates you might make using find and change, such as changing a product or function name, will automatically affect the text of the expanded markers.

While reviewing text for other content or style changes, you will also be able to immediately see any markers that might need to be changed.

When editing is finished, be sure to use **Collapse Markers** to return marker text that was in the main body to the source markers.

Working with Small Pieces of an Index

You sometimes only wish to work with a small chunk of text for marker management purposes. For example, say you added 3-5 pages of new material to an existing document. Rather than IXgen manipulating all pages of the file or book (and thus all markers), you can select the area IXgen is to work with. Selecting an area “scopes” IXgen functions to just that selected area (refer to *Operational Scope of IXgen Tools on page 23*).

In many instances you’ll need to work on a cluster of markers bunched together at the beginning of, say, a first or second level heading line. Getting to each marker using the FrameMaker marker window can be tedious.

IXgen can make marker access much simpler. Simply select the area of text (or line of text) where the markers reside. Then use **Gen Editable Marker List** or **Expand Markers** to see and edit all the markers clustered together in that one area.

Converting from one Marker Type to Another

IXgen can convert from one marker type to another:

1. Generate an editable marker list using **Gen Editable Marker List**.
2. Within the editable marker list, use Find/Change to search for the text of the marker type name and replace with the text of the new name.

You can use any marker name you choose, either those currently defined, or new types that you define. To see the available marker types (and their *exact* names), use FrameMaker>Special>Marker to bring up the Marker dialog box. Select a listed marker type from the Marker Type scroll box, or define a new marker type by selecting Edit... from the Marker Type scroll box. Be sure the marker type is defined before attempting the marker type conversion.

(The intent is not to select a marker type from the FrameMaker Marker dialog, but rather use it as a viewer of current marker types, and as a way to define a new marker type, if desired.)

In the Change field, be sure to specify the new marker type *exactly* as it appears for that marker type.

NOTE: Marker names are case sensitive. *Emphasis* is *not* the same as *emphasis*. These indicate two different marker types.

3. When the marker types have been changed as desired, apply the edited marker list using **Apply Edited Marker List**.

Remember, you can do this globally to all the selected documents in a book file, globally to a single document, or locally to a selected area within a document.

And remember: once you change a marker type, the new type might not be listed in a particular generate activity that you'll do with FrameMaker. This might be your intent; otherwise, you'll probably want to add the marker type to the setup list for a given marker collection.

Making a Keyword List from An Existing Index

Once an index is created, that index can be a useful keyword source when indexing content-related documents that you create at a later date, or that are currently lacking an index. Using an existing index as a keyword source can be especially valuable if your target document has special phrases or terms not typically found in headings (and thus would not be picked up by **Markers from Paragraph Tags**).

1. Open a NEW document using the IXgen template document `keyctrl.fm` as the template file.
2. Collect a raw keyword list from existing indexed material. This can be done in two ways:

Method 1: Generate a special index document that has no page numbers. After an initial generate operation, change the `<$pagenum>` controls on the generated document reference page to `<$nopage>` and generate again. Select some or all of the entries and convert them to a single column table, one original paragraph per new table cell (use "Convert to table" in the Table menu). Add one empty column to the right so that you have a two-column table. Copy and paste the table into the NEW document created in step 1, replacing the current table in the NEW document.

Alternate Method 2: Use **Gen Editable Marker List** on the source document or book and generate a marker list. Copy and paste the column with the marker text into the document created in step 1, replacing the current table in the NEW document. Add one empty column to the right so that you have a two-column table.

3. Edit the new keyword table as needed; place alternate marker text in the right-hand column as desired. If no text appears in a right-hand column, the keyword is used as the marker text. If appropriate, rearrange and add keywords to catch items that may not have a direct match in the text to be indexed.

If you have an index entry more than one level deep, use the lowest level as the keyword and build the marker text from the complete entry. For example, here’s how to convert two multiple-level index entries into keywords and marker text:

Animals wild mountain lions zebras	<i>Keyword</i>	<i>Marker text</i>
	mountain lion	Animals:wild:mountain lions
	zebra	Animals:wild:zebra

CAUTION: Do *not* straddle any cells in the keyword table.

4. Save the NEW document to any name you’d like.
5. Open the target book or document. Select **Markers from Keywords**. Select the keyword file you just saved, and run **Markers from Keywords** as you normally would.

By building a keyword file from an existing index for similar material, future indexes created from such a keyword file will create an index more uniform with your existing indexes. When editing the keyword list, don’t forget to include items unique to the new document. Of course, you can create and use as many keyword files as needed to represent various kinds of documents.

Deleting all the Markers of a Given Type

From time to time you may find it easier to simply delete markers and start over rather than modify them. This can be the case if you’re doing a “make-from” to create a new document from an existing document. Perhaps you’re documenting a new product and using a current product document set as a starting point. Some or all of the markers may be invalid for the new product.

Clearing out the old markers using either the FrameMaker find/change function or the marker window can be quite tedious. Instead, create a **Gen Editable Marker List**. Delete some or all of the text entries from the column labeled “Edit Marker Text in this Column”.

CAUTION: Do NOT delete rows or cells from the table, merely the text in the marker text cell. (Leave the empty cell in place.)

You can do wholesale deletions from the editable marker list by selecting the table cells holding the marker text to be deleted, then selecting Edit>Cut>Leave cells empty. You can delete ALL markers by selecting the entire marker text column in the table before the cut operation. Delete cell contents only! Do not remove columns or rows from the table.)

When the desired marker text cells are empty, use **Apply Edited Marker List** to “apply” the deletions to the source document(s).

Generating HyperText Pop-ups

Suppose you have a list of special terms for a document that is to go on-line as a FrameMaker locked (view only) document. Whenever one of these special terms appears

in the document, you want your users to click on the term and get a pop-up definition. IXgen could automatically insert these pop-ups for you. Here's how.

1. Edit a new document using `keyctrl.fm` as a template document. In the box titled "Enabling Character Tagging on Matched Keyword Text" select a small portion of text. Press F8. Start typing "HyperText" until the character format "HyperText" is selected. Press enter. This will apply the hypertext format to some of the text, which will signal character tagging of the matched keywords.
2. In the table starting in the lower portion of the first page, add rows as needed to accommodate the keywords you plan to use. In each left-column cell, enter a keyword. In the companion right-column cell, enter the word "alert" followed by a space followed by the text that will define the term. Remember that FrameMaker imposes a 255 character limit on the length of a marker. Save and exit the keyword document.
3. Go to the source book or document, select **Markers from Keywords** from the IXgen menu. Enter the name of the keyword document you just built; select "hypertext" as the marker type to generate. Click FIND/CREATE as desired, or, if you wish, click "CREATE ALL".
4. Lock the modified source document by pressing ESC F l k (uppercase "F" with no spaces). Save the document.

Assuming you've used the default character tag provided ("HyperText"), any matched keywords should be blue and underlined. Click on one of these to bring up a pop-up ALERT box which will contain the definition you supplied in the keyword list document.

Generating HyperText Links to other Documents

Suppose you have a list of special phrases for a document that is to go on-line. Whenever one of these special phrases appears in the document, you want your users to be able to click and go to some other document. IXgen can automatically insert these hypertext linkages for you. Here's how.

1. Edit a new document using the IXgen template file `keyctrl` as a template document. In the box titled "Enabling Character Tagging on Matched Keyword Text" select a small portion of text. Press F8. Start typing "HyperText" until the character format "HyperText" is selected. Press enter. This will apply the hypertext format to some of the text, which will signal character tagging of the matched keywords.
2. In the table starting in the lower portion of the first page, add rows as needed to accommodate the keyword phrases you plan to link. In each left-column cell, enter a keyword phrase. In the companion right-column cell, enter the word "openlink" (or "gotolink") followed by a space followed by the document name, search information, or page number. Refer to the hypertext marker syntax definitions in the FrameMaker manual as needed.

3. Go to the source book or document, select **Markers from Keywords** in the IXgen menu. Enter the name of the keyword file you just built; select “hypertext” as the marker type to generate. Click FIND/CREATE as desired, or, if you wish, click “CREATE ALL”.
4. Lock the document by pressing ESC F l k (uppercase “F” with no spaces). Save the document.

Assuming you’ve used the default character tag provided (“HyperText”), any matched keywords should be blue and underlined. Click on one of these to jump to the specified document and location in that document. If this does not work properly, be sure that you’ve used the proper syntax in defining the jump, and that the destination document exists. You can use **Gen Editable Marker List** to collect hypertext markers. (Make sure that only hypertext markers are selected as the type of marker to find.) Verify and if needed fix the hypertext marker text. (IXgen can help you place the marker and its content; but IXgen can’t check hypertext command syntax for you.)

How the Index for this Manual was Created

The index for this document is a good working example of how IXgen can be used to create an index. This index took minimal time to create and polish. While a small document with a simple index, the steps noted here could run into several days using the conventional marker window approach. Here are the steps we used:

1. This document was a “make from” one of our other product manuals. First, we cleared existing index markers using **Gen Editable Marker List**. All markers were deleted from the source documents by selecting the “edit marker text” column of the editable marker list, then selecting Edit>Cut>leave cells empty. The marker deletions were then “applied” using **Apply Edited Marker List**.
2. **Markers from Paragraph Tags** generated a starting list of new markers from the first and second heads, along with a few other tag types.
3. **Gen Editable Marker List** was used again to see the new set of markers just created. Some adjustments were made; some new entries were added to existing markers using FrameMaker’s semicolon separator for index entries. **Apply Edited Marker List** applied the changes to the source markers. **Permute Markers** was selected during the apply operation.
4. From the FrameMaker book we did another generate/update to see the new index document created by FrameMaker. We saw some additional changes to make. **Gen Editable Marker List** was again used to get the editable marker list, as this is a very easy way to get to marker text, even for the simplest updates.
5. In reviewing the index entries, we performed a number of level permutes using **Flip Entries** set to “copy and flip”. This would give readers another way to find a topic of interest.

6. Toward the end of the final editing process, we made one more pass with **Gen Editable Marker List**. This time we finalized **Capitalization**. We also ran **Validate References** to check the references made in the index.
7. We decided to index table and figure titles. **Markers from Paragraph Tags** was used again to collect the titles, but this time we used subject markers for tables and author markers for figures. This was done so that we'd be able to separate these markers from index markers, if we needed to. **Gen Editable Marker List** collected the markers inserted by **Markers from Paragraph Tags**. Suffixing the strings "(table)" and "(figure)" was then easily done while these markers were in the editable list form. **Apply Edited Marker List** updated the markers once again. In the book set up file for the index, subject and author markers were added to the list of marker types to collect for the index. A final generate/update was made from the book level.
8. When this manual was updated for IXgen 7, a number of new sections were added, and numerous maintenance edits were made. The index was extensively enhanced making use of several new IXgen tools.
 - **Create Subentries** created main entries and subentries at a number of different entry clusters, making the entries more readable.
 - **Elevate Unique Subentries** found those lone entry/subentry markers and made them a single line in the index (where appropriate; we kept a few for emphasis and readability).
 - **Flip Entries** made additional locators.
 - **Show Marker Char Tags as Text Cmds** and **Show Marker Char Tags Applied** helped visualize the character formatting used in the index. We added a number of formatting additions, as formatting can help with overall readability of the index.
 - **Validate References** found a few typographical errors in the reference text made inside the index. Once identified, the errors were easy to correct.

The ability to work on a small area of selected text was used extensively. One collection of all the markers via **Gen Editable Marker List** was done and the markers were reviewed in the context of a sorted list. A number of minor corrections and updates were done. A few rearrangements of first and second level entries was quickly done before the final **Apply Edited Marker List**.

Problems and Solutions

Many common problems are identified in this section. If you need additional help, please email franks@fsatools.com or call 1-435-275-8981.

Before you email or call, please be prepared to tell us about your situation:

- system (operating system, revision level, memory installed, virtual memory settings);
- exact version of FrameMaker (use Help>About FrameMaker then click the More button; look for a detailed version number);
- nature of the problem (what you were doing and how you got there, and the error or problem that occurred — be sure to check the items noted in Table 3, “Installation Problem Summary,” starting on page 86 or Table 4, “Operational Problem Summary,” starting on page 89).

If you are having an operational issue with IXgen, we’ll also need to know:

- whether the problem just started or has always been present, whether the problem appears on other, similar files. If the problem just started, think back to *any* recent changes to your system — new hardware, software, network changes, and so on.
- If the problem is an intermittent crash or a feature that stopped working, have you tried not only rebooting but actually turning off your system for at least five minutes? Sometimes memory does not fully clear from a reboot; only an extended power-off period of several minutes will clear memory.

We’ll get back to you as soon as possible (usually one business day), but certainly within the time limits noted in our warranty (page 97).

We are pleased with the outstanding performance of IXgen during its 17 years of release, and we want to keep that reputation in place. If you run into a problem, we want to get a resolution for you as soon as possible

Installation Errors

The errors described in this section might occur during installation.

Table 3 Installation Problem Summary

No.	Description	Page
1	The link for the IXgen download on the <code>fsatools.com</code> website appears inactive	86
2	Nothing happens when clicking the self-extracting zip file	86
3	Files can't be copied, executed, opened, or moved	87
4	IXgen seems to have installed, but the system key field in IXgen>License dialog box shows "Error 67".	87
5	IXgen seems to have installed, but the system key field in the IXgen>License dialog box shows "Error 14".	87
6	IXgen seems to have installed, but the system key field in the IXgen>License dialog box is empty or shows "not available".	88
7	IXgen seems to have installed, but the password field in the IXgen>License will not accept the password sent to us.	88
8	Some other error number occurs not listed above.	88

Problem 1: The link for the IXgen download on the `fsatools.com` website appears inactive.

Solution: This is likely a security setting with your web browser. Please check your settings, or try the download on another computer.

Problem 2: Nothing happens when clicking the self-extracting zip file

Solution: Your system security will not accept zip extractions. You will need to change the appropriate security setting, or have your I.T. support person change this for you. You could also extract the distribution in a scratch folder on a different machine, then copy that folder and its freshly unzipped contents to the system where you wish to install and use IXgen. Once the files are on that system, you can install IXgen as described in *Installing IXgen* starting on page 11.

For IXgen 7-10 users, try the zip version of the distribution rather than the self-extracting (.exe) version. Be sure to manually extract the zip before continuing with your IXgen installation. Do not attempt to run the installation from within the zip folder.

- ❑ The file might be corrupt. Delete it, and try another download. (Wait a few moments between downloads.)

Problem 3: Files can't be copied, executed, opened, or moved

- Solution:**
- ❑ Your system security will not accept file system changes. You will need to change the appropriate security setting, or have your I.T. support person change this for you
 - ❑ If you are using Windows 7 or Vista, be sure to minimize or disable UAC.

Problem 4: IXgen seems to be installed, but the system key field in IXgen>License dialog box shows "Error 67", "unavailable" or is blank.

- Solution:**
- ❑ While doing licensing functions with IXgen, be sure to right-click on framemaker.exe (in the FrameMaker installation folder) and select "Run as Administrator." If you are using Windows 7 or Vista, be sure to minimize or disable UAC. One licensing has concluded, you can start FrameMaker as you usually do.
 - ❑ Be sure to install IXgen using the login you will use with IXgen and FrameMaker on a regular basis. *Do not* install IXgen using some other account.

Problem 5: IXgen seems to be installed, but the status field in the IXgen>License dialog box shows "Error 14" after the password was input and "Update Password" was pressed..

Solution: This usually means that the current IXgen password is either missing dashes in the character groupings, or zeros were input as uppercase Os.

Never transcribe (keyboard) a password that you send you, always copy the password from the email and paste it into the password field.

To fix this problem so that a clean ixgenkey.999 file can be regenerated, place the following string in the "Current Password" box in the IXgen licensing dialog box (select IXGEN>LICENSE):

AAAA-2222-CCCC

Select "update password".

While this password will *still be invalid*, the internals of the system key and password receiver have been cleared and reformatted. The above actions will put a new system key in the ixgenkey.999 file. Please send that revised system key to us. You can copy the system key directly from the license dialog box and paste it into and email to us (franks@fsatools.com)

Problem 6: IXgen seems to be installed, but the system key field in the IXgen>License dialog box is empty or shows “not available”.

Solution: This is the same as “*Problem 4*: on page 87. Try the solutions listed there.

Problem 7: IXgen seems to have installed, but the password field in the IXgen>License will not accept the password sent to us.

Solution: It’s likely that some or all of the files or folders in the ixgen folder that appears in the home folder of the FrameMaker installation do not have the proper access permissions or settings. If you’re not sure how to do this, please contact your I.T. department.

Problem 8: An error has occurred that is beyond the scope of this manual.

Solution: Please contact us at franks@fsatools.com, or 1-435-275-8981.

Operational Errors

The errors described in this section might occur as you use IXgen.

Table 4 Operational Problem Summary

No.	Description	Page
9	An editable marker list is created, but no markers are listed	89
10	Gen Editable Marker List is missing some markers.	90
11	Too many Gen Editable Marker List files are open, and none of the files are named!	90
12	Some or all of the changes made in a Gen Editable Marker List document did not get transferred back to the source document(s)	91
13	!IXGEN_DON'T_EDIT_THIS! appears in the index document.	92
14	Marker text suddenly appears in cross references	92
15	Various template documents are too large for the display	92
16	All the files in the book are open and minimized, but an IXgen operation, such as Markers from Keywords , asks again for files to be opened	93
17	Generate Editable Marker List or other IXgen function fails	94
18	Several IXgen tools are missing from the pull-down menu!	95
19	Marker text formatting does not appear to be evenly applied in the editable marker list.	95
20	IXgen does not appear in the FrameMaker menu bar.	96
21	Special characters have been replaced by question marks	96

Problem 9: An editable marker list is created, but no markers are listed

Solution:

- ❑ Check that you didn't inadvertently make a very small selection in the source document. Remember, when working within a single file, IXgen will only process the selected area, if a text selection is present. Refer to *Operational Scope of IXgen Tools on page 23*. You can also adjust the `MinCharsInTextSelection` parameter in the `<FM_install_folder>\ixgen\ixgen.ini` file. (Refer to the notes in `ixgen.ini` about this parameter.)
- ❑ Be sure the insert point is present in the desired source document.
- ❑ Be sure you selected a marker type that is actually in the source document.

Problem 10: **Gen Editable Marker List** is missing some markers.

Solution:

- ❑ Is a text selection present in the source document? Marker collection will be limited to the selected area, if a text selection is present (refer to *Operational Scope of IXgen Tools* starting on page 23 for more details). You can also adjust the `MinCharsInTextSelection` parameter in the `<FM_install_folder>\ixgen\ixgen.ini` file. (Refer to the notes in `ixgen.ini` about this parameter.)
- ❑ If generating a **Gen Editable Marker List** from the book file, be sure that all the desired files have been selected and are minimized (review the book file topics starting on page 24).
- ❑ Be sure you selected *all* the different type of markers that were used for index entries in the source document.
- ❑ Remember, **Gen Editable Marker List** is normally used with sorting active. Did you use the semicolon syntax so that you can have multiple index *entries* per marker? If so, perhaps the entry that seems to be missing is actually part of another marker located elsewhere in the list due to the marker sorting. Try using the Edit>Find/Change command to look for the missing entry. When you apply the edited marker list, consider using **Split multiple index entries into separate markers**.

Problem 11: Too many Gen Editable Marker List document windows are open, and none of the documents are named!

Solution: Every time you use **Gen Editable Marker List**, a document is created and a document window opened. For most situations, this is a transient, “throw-away” document that never needs to be saved once **Apply Edited Marker List** has been used. You use the document as a collection point for your marker text. You edit that text, then apply the changes back to the source markers using **Apply Edited Marker List**.

At this point, the Gen Editable Marker List document no longer has any value and should be discarded. (Quit or close the file, and answer “NO” when prompted to save the file. Or, Control-Alt-click the DISCARD button as soon as you’re through.) Because of this typical short-term usage, IXgen does not automatically assign a file name.

If you saved the document so that you could come back later and finish editing the markers, or saved the document to protect work done so far, delete the file once marker editing has concluded and the changes have been applied to the source document(s) using **Apply Edited Marker List**.

Remember, once the edited marker text is applied back to the source markers using **Apply Edited Marker List**, the information is safe in the source markers. Keeping the editable marker list file beyond this point serves no purpose.

Problem 12: Some or all of the changes made in a Gen Editable Marker List document did not get transferred back to the source document(s)

Solution:

- ❑ Application of the text can be limited to the text selected in the editable marker list document when **Apply Edited Marker List** is used. Make sure you didn't have a small text selection in effect when **Apply Edited Marker List** was used. Click once to set an insert point in the editable marker list document to remove any text selections, then try **Apply Edited Marker List** again. You can also adjust the `MinCharsInTextSelection` parameter in the `<FM_install_folder>\ixgen\ixgen.ini` file. (Refer to the notes in `ixgen.ini` about this parameter.)

- ❑ How are you viewing the results of an **Apply Edited Marker List** operation? If you're looking at a FrameMaker generated list, such as an "IX" file, did you regenerate the file(s)? If you're looking at the document created by a second run of **Gen Editable Marker List**, did you select the correct marker type to collect?

- ❑ Because IXgen makes marker generation so simple, it is possible to inadvertently create marker entries of an unintended type, such as Glossary instead of Index. Make sure you are editing and reviewing the correct marker type.

- ❑ At some point you made edits in the source document(s) after creating an editable marker list but before applying the list. Due to a bug in FrameMaker, source file edits can cause internal marker ID numbers to renumber such that IXgen can no longer properly identify source markers. When this happens, the apply will not be completed.

Assuming the direct changes were not substantial, you can save the current editable marker list to a new file name and then generate another editable marker list. This new list will have the old marker text you started with, but internal marker ID values will be up-to-date.

Set your display so that you can see the marker text column of both lists side-by-side. Verify that the marker entries are in synchronization, either as a complete list or in blocks of markers. Copy (control-C) from the marker list you edited as many of the marker text cells as you can. (Copy the cells only, not entire rows.) Select a corresponding block of marker text cells in the just-generated editable marker list. Paste (control-v) to overwrite the marker text cells in the new list. Repeat this process for each corresponding block of markers that you see.

When you have completed transferring the markers, Use **Apply Edited Marker List** on the list just created. The markers should now apply properly and reflect your editing work.

Problem 13: IXGEN_DON'T_EDIT_THIS!" appears in the index document.

Solution: At some point you used **Expand Markers** but never used **Collapse Markers** to return expanded marker text to the original markers. Or, you did use **Collapse Markers**, but at some point prior to the collapse operation the character tag used by IXgen to identify expanded markers, IXgenMarker, had been removed from some or all expanded marker text.

❑ Use **Collapse Markers** to be sure all markers are properly collapsed. Regenerate the FrameMaker index. If some or all the warning text still appears, try the next solution:

❑ Use **Gen Editable Marker List** to collect all current markers. Search for the text !IXGEN_DON'T_EDIT_THIS! in the editable list. Use the Navigate column to jump back to the source page. See if you can locate what appears to be marker text still in the body text. Cut the text and return to the editable marker list. Paste the cut text into the marker text column such that the !IXGEN_DON'T_EDIT_THIS! text is replaced. Repeat for each instance of !IXGEN_DON'T_EDIT_THIS!. Use the **Apply Edited Marker List** function, then regenerate the index.

If no apparent marker text is seen in the source document(s) return to the editable marker list document and delete the !IXGEN_DON'T_EDIT_THIS! from the marker text cell. Leave the cell empty. Use **Apply Edited Marker List**, then regenerate the index.

NOTE: Because untagged, elevated marker text may be difficult to see, also try spell-checking the page. The spell check will likely catch a nonsense "word" formed at the point where regular body text and elevated marker text meet.

Problem 14: Marker text suddenly appears in cross references

Solution: You performed an update, either locally to a single document or from the book, while markers were in an expanded state (**Expand Markers** had been used). Use **Collapse Markers** on all affected source documents, then update again. This should clear marker text from cross references. For more information, refer to the cautionary note starting on page 33.

Problem 15: Various Template documents are too large for the display.

Solution: The IXgen template files are designed for full-page displays. If you are running a lap-top or partial-page display, this may be inconvenient. You are welcome to modify the template files to best fit your work environment. Go to:

<FM_install_folder>\ixgen\templates
 The IXgen template files are:

IXgen Template Files (ixgen\templates)
Bkctrl.fm
Edtblist.fm
Keyctrl.fm
Permctrl.fm
Report.fm
Valrefctrl.fm
Valreport.fm

Make back-up copies of these files before continuing. Use the Format>Page Layout>Page Size dialog to make page size changes from within FrameMaker.

Problem 16: All the files in the book are open and minimized, but an IXgen operation, such as **Markers from Keywords**, asks again for files to be opened.

Solution: This is a very rare problem, caused by as yet unidentified problems in FrameMaker itself. This symptom can indicate one or more corrupt FrameMaker files in the book, including the book file itself. Internally, an improper or unexpected break in the flow has most likely occurred. This corruption is difficult to trace, but has been associated with FrameMaker documents that have been heavily edited over time, have been upgraded from earlier versions, or were converted to FrameMaker from a word-processing format.

To remedy the problem first isolate the offending file(s). Do this by closing any currently open or minimized files. Leave the book file open. Then, in the book file, use the IXgen>Select Files option to select and open the first half of the files listed in the book. Try the IXgen function that originally caused the redundant open message. If the extra prompt to open files no longer occurs, then the corrupt file is in the other group.

Again, close all files but the book file. This time, open half of the files in the remaining half (a quarter of the files). Again try the IXgen function that caused the redundant open message. Repeat this halving of the file groups until you find the file causing the redundant open message. Note the file. Continue with the remaining files to be sure that another file is not also corrupt.

To also verify that the corruption is not elsewhere, again close all files except the book file. In the IXgen Select Files dialog, select all files *except* the file(s) identified as corrupt. File opening should now occur without the redundant message.

You can attempt to repair the corrupt files using one of these methods: (a) save the file to MIF and reopen. (b) rebuild the file by opening a new, custom file (do not use a template). Copy and paste the body text flow contents from the corrupt file into this new file. Next, use File>Import>Formats to bring across all formats from the corrupt file to the new file. These actions rebuild internal structures and usually correct the corruption. Importing formats from the corrupt document does not seem to be a problem, but you can use another similar document from your file set to supply formats if you wish.

If the problem persists, the problem is in the book file. You will need to discard the current book and file and create a new book file from scratch. (Rename the old book file rather than deleting it. This way, you can refer to various configuration items, if necessary.)

Problem 17: Generate Editable Marker List or other IXgen function fails

Solution: This usually indicates an underlying system problem. In almost all cases this turns out to be that the IXgen template in use for a particular IXgen tool has fonts not recognized in the printer driver you currently have attached.

Try opening
<FM_install_folder>\ixgen\templates\edtblast.fm. If you see errors on opening, such as font substitutions, let the file open.

Take a quick look at the document. If the text seems readable, all is well and you can save the document.

Solution: If you see a file open error, open and save each file as noted in the table below:

IXgen Template Files (ixgen\templates)
Bkctrl.fm
Edtblist.fm
Keyctrl.fm
Permctrl.fm
Report.fm
Valrefctrl.fm
Valreport.fm

If you want to change fonts in the template files, or want more information about changing fonts, review *Additional Notes about IXgen for Windows* starting on page 5 and *Changing Fonts Used by IXgen* starting on page 17.

Problem 18: Several IXgen tools are missing from the pull-down menu!

Solution: You are looking at the book-file version of the IXgen menu. This version does not include several functions that can only be used on a document created by the **Gen Editable Marker List** function, including **Permute Markers, Create Subentries, Elevate Unique Subentries, Validate References, Split multiple index entries into separate markers, Show Marker Char Tags Applied, Show Marker Char Tags as Text Cmds, and Capitalization.**

Select **Gen Editable Marker List**, then select the IXgen pull-down menu from the document just created by **Gen Editable Marker List**. The additional IXgen tools will be seen now and can be used.

Problem 19: Marker text formatting does not appear to be evenly applied in the editable marker list. The current format state check marked in the IXgen menu does not match some of the formatted entries.

Solution: You possibly had a text selection in effect when using either **Show Marker Char Tags Applied** or **Show Marker Char Tags as Text Cmds**. The action of those commands would have been limited to the selected

text. (Review *Operational Scope of IXgen Tools on page 23.*) Or, you may have either applied a format by hand or typed in a text-based font command.

Do a single click to clear all text selections in the current editable marker list document. Then, based on which form you want to see, select either **Show Marker Char Tags Applied** or **Show Marker Char Tags as Text Cmds** again. (You can reselect one of the **Show Marker** tools, even if the check mark is already positioned at that command.)

Problem 20: IXgen does not appear on the main FrameMaker menu bar

Solution: You perhaps downloaded IXgen and placed the files where you thought they should go, but you did not run the `setup.exe` installer, or you ran the installer while logged in as administrator but now are running FrameMaker as regular user.

Rerun `setup.exe`. If this does not work, follow along with the steps given in *Appendix A: Installing IXgen By Hand* on page 99, and see if you can determine where the installation failed.

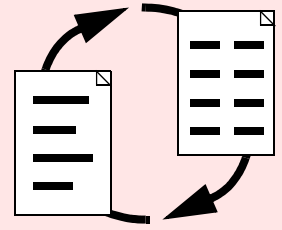
Problem 21: Special characters have been replaced by question marks

Solution: You have used an IXgen function on some or all of a FrameMaker 10 document that included Unicode characters. IXgen does not support Unicode characters, and a new method of Unicode representation within FrameMaker 10 causes IXgen to damage those characters by converting them to question mark characters.

At this time, the only solution is to retype the special character (or restore the damaged text from a back-up), and then not use IXgen on those portions of your FM10 document.

For more information review *Damage to Unicode Characters in FrameMaker 10 (and newer)* starting on page 15.

This problem only applies to FrameMaker 10 documents and books.



Five Year Warranty

This product will perform the functions described in this manual. However, should you have a demonstrable problem with the product we will investigate the problem with you. We might ask for copies of the file(s) that caused the problem, along with a brief statement from you describing the problem. Within 5 working days of receipt of your files we will verify the problem. We will then, at our discretion, do one of the following: (a) immediately issue you a new release of the product (no charge); (b) refund your purchase price (you must return the materials); (c) resolve the problem within 60 calendar days and issue you a revised version at NO CHARGE.

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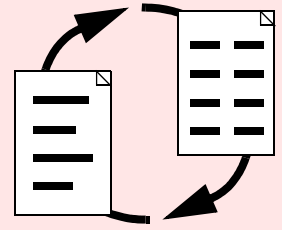
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THE TERM OF THIS WARRANTY IS FIVE YEARS FROM DATE OF PURCHASE.



Appendix A: Installing IXgen By Hand

Introduction

Installing IXgen should be a simple task using the `setup.exe` install script provided with your IXgen distribution. However, occasionally something might go awry and installing IXgen by hand will be the quickest way to gain product access; or, you'll want to check for yourself how IXgen was installed.

Using IXgen with the structured FrameMaker interface is overviewed in *IXgen with Structured FrameMaker* starting on page 102.

CAUTION: If you are using FrameMaker 10 or later and your book or document(s) contain(s) unicode characters (characters represented by two or more bytes), do *not* use *any* IXgen functions in that book or document. For more information see *Damage to Unicode Characters in FrameMaker 10 (and newer)* starting on page 15.

Installing by Hand

Briefly, installing IXgen by hand involves modifying the `maker.ini` file, creating a few new folders in your FrameMaker installation, and moving IXgen files to those new folders.

Here are the manual installation steps in detail.

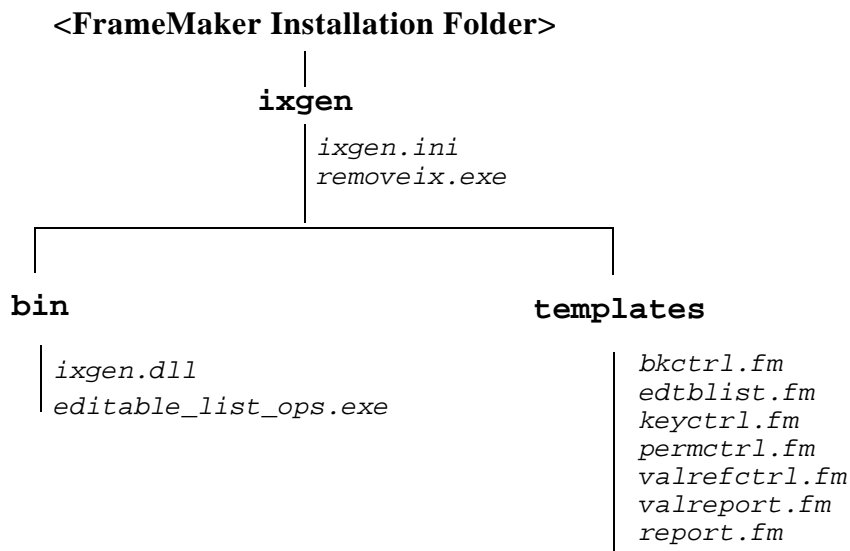
1. If you haven't done so already, create a scratch folder on your system where you can place the IXgen distribution files. If FrameMaker is currently running, close FrameMaker, Do not simply minimize FrameMaker, quit the application.
2. Go to <http://www.fsatools.com> and click on "Downloads" or "IXgen Central". Download the appropriate IXgen distribution into a empty, scratch folder.

3. Double-click on the downloaded file to activate the self-extracting ZIP file. You now have the opportunity to run `setup.exe` again if you wish. But answer “N” if you know you wish to proceed with this manual installation.
4. In the order listed, create these new folders for IXgen. Use Windows Explorer or a command line interface to create these new folders. Be sure to use the names in typewriter font *exactly* as shown:

Go to this folder..	and create this new folder
<code><FM_install_folder></code>	<code>ixgen</code>
<code><FM_install_folder>\ixgen</code>	<code>bin</code>
<code><FM_install_folder>\ixgen</code>	<code>templates</code>

NOTE: Replace “`<FM_install_folder>`” with the location of your FrameMaker installation.

Move the distribution files to the appropriate folders as shown in this folder map:



5. Place `ixgen7doc.pdf` and `demoixgn.pdf` wherever you would like. If you have multiple versions of FrameMaker installed, make sure you’re creating folders and copying the IXgen files in the correct FrameMaker installation directory!
6. Edit the `<FM_install_folder>\maker.ini` file so that IXgen is registered as an API client with FrameMaker. Do this by adding the line of text noted just after the next paragraph. Wordpad, Notepad, or any other text editor (or word processor that can save a file unformatted as plain ASCII text) can be used.

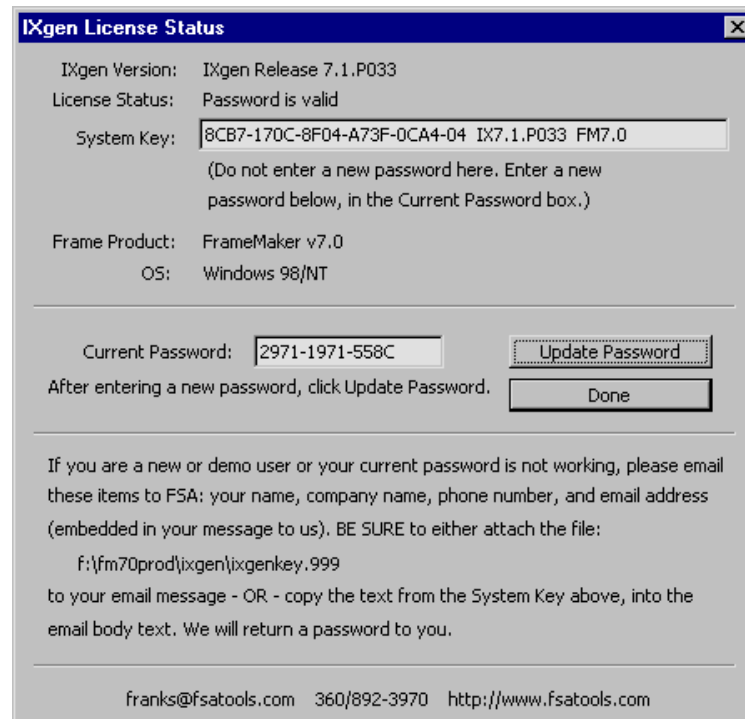
Once `maker.ini` is loaded in the editor, search for the `[APICLIENTS]` section. Create a new line at the end of the existing block of API clients listed. (Typically, the last entry starts with “`filters\ImportUtility.dll`” but this may not always be the case.) In the new, empty line, enter this registration line exactly as shown here:

```
IXgen=Standard,Marker Management,ixgen\bin\ixgen.dll, all
```

If your display shows the above line split over two lines, do not place a line break. Enter the text on one line.

- Restart FrameMaker. If IXgen has loaded properly, you will see “IXgen” in the menu bar for FrameMaker.

Select IXgen>License. Here you will see the status of your IXgen license. If unlicensed, email us the key information as requested in the lower half of the dialog box. We will return a password to you.



If any of the requested information is missing from the body of your message, your request may be delayed or missed entirely. (This information is not used for marketing purposes, nor is the information shared with others.)

When you obtain your IXgen password, again select IXgen>License. Enter the new password in the “Current Password” text box. Click “Update Password”. You need not stop and restart FrameMaker to enter a new password.

- If you have added or changed fonts or are using an exotic printer, we suggest using FrameMaker to open each IXgen template file. These are `*.fm` files in the `<FM_install_folder>\ixgen\templates` folder. Allow FrameMaker to

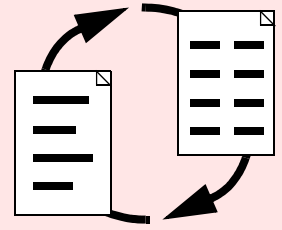
make font substitutions (if any), then resave each template document. Be sure to use the original file name. Change nothing else in these documents at this time.

IXgen with Structured FrameMaker

IXgen is not “officially” supported for use with Structured FrameMaker, but we do have a number of people successfully using this combination. And we will honor our product warranty if you can successfully use IXgen with structured FrameMaker.

NOTE: IXgen can only work directly with markers. Any marker-related structure is not used, created, nor modified. Only markers themselves are manipulated by IXgen. In addition, structured markers will not be visible to IXgen.

Structured and non-structured versions of FrameMaker share a common executable. This means that only a single IXgen installation is required.



Appendix B: IXgen Installation Pages from www.fsatools.com

Introduction

The recommended documentation source for downloading, install, and licensing IXgen is the “IXgen Central” page of <http://www.fsatools.com>.

If you are working in a secured environment, or for the moment do not have access to the internet, refer to the pages in this appendix for detailed IXgen installation information. They are reproductions from the “IXgen Central” portion of the <http://www.fsatools.com> website.

At some point, however, you will need internet access to (a) download the required distributions and (b) communicate your registration information to us and (c) receive the IXgen password that will be emailed back to you.

These are the basic steps to get IXgen up and running:

1. Downloading
2. Installing
3. Licensing
4. Inputting the IXgen password.

Each step is described below.

Step 1. Downloads

1. Select your downloads from the list below. Don't forget the IXgen Users Guide. Remember: the demo version of IXgen is the FULL VERSION. Our demos are fully functional; no need to worry about a re-installation after purchase or a special version of IXgen for demo purposes. (The duration of the IXgen

password determines the status of your IXgen installation.)

Use whatever method is appropriate for your browser to download and save items. For example, Firefox and other browsers provide a save menu if you right-click on the link. (And, also, in Firefox, you might need to use the “Save Link As” option.) It’s generally best to save your IXgen downloads to a new, empty folder created specifically for IXgen. Avoid using the desktop or other general download locations.

NOTE: IXgen is not offered for the Mac.

(Internet access will be required for these downloads. Go to the “IXgen Central” portion of <http://www.fsatools.com>.)

- **IXgen Users Guide** Covers IXgen 7 (for FrameMaker versions 7, 8 and 9) as well as IXgen 7-10 (for FrameMaker versions 10 and newer). File IXGEN7DOC.PDF will appear in your download folder.

Then, download the following IXgen version(s) that matches the FrameMaker version(s) you’re using. You can have multiple IXgen and FrameMaker versions installed on the same system. (The Windows version, including whether 32 or 64 bit, does not matter for this group of IXgen offerings.)

- **IXgen 7-10 (Windows)** Use with FrameMaker versions 10, 11, 12, and newer. File IX710win.EXE will appear in your download folder. (This is a self-extracting ZIP file.)
- **IXgen 7-10 Plain Zip** Same as immediately above, but this is a zip file that you will manually extract. Use this version if your security settings will not permit execution of a self-extracting zip.
- **IXgen 7 (Windows)** Use with FrameMaker versions 7, 8 and 9. File IX72WN32.EXE will appear in your download folder.
- **IXgen 5.5 (Windows)** Legacy version for FrameMaker versions 5.5 and 6.0. Support is limited for this version, but we will still license this version if you are using these very old versions of FrameMaker. File IX72FM55.EXE will appear in your download folder

Step 2: Installing IXgen

The IXgen installation is very compact and has far less impact on your system than most applications and plug-ins. Follow these simple steps to install IXgen.

Step 2: Installing IXgen

1. If currently running, shut down FrameMaker.
2. Bring up Windows Explorer and navigate to the dedicated folder where your IXgen downloads are stored.
3. Right-click on the IXgen distribution .exe file that you downloaded. Select “Run as Administrator.” This will start the self-extracting zip. If your security settings do not allow running a self-extracting zip, download and manually extract ix710win.zip. Don’t attempt to run the IXgen installation from inside a zip folder. Always select “extract all” from Windows Explorer before attempting to install IXgen.
4. Once the extraction has completed, right-click on setup.exe and select “Run as Administrator.” Review the information presented by the installer; mostly this text is for your general information. If you have more than one version of FrameMaker installed, select which version should receive IXgen when prompted. Otherwise, most users will be able to simply press Enter at each prompt and continue through the installation using the defaults provided.

That’s it for the installation process. But don’t restart FrameMaker just yet. Review the Licensing section first.

Example Installation Screens

	<p>The opening screen advises of the somewhat different appearance of this installer, and why we chose this approach.</p> <p>Press enter to continue.</p>
--	---

```

setup
HELLO!

Thank you for using IXgen. Sorry for the 'ugly duckling' appearance
of this installer, as you were perhaps expecting a typical Windows
installer.

However, we've found that most installers are intrusive. With ours,
you need only press the ENTER key a few times then stop and restart
FrameMaker 7. No portions of your workspace will be disturbed.
We hope you'll find this more convenient.

PRESS ENTER OR RETURN TO CONTINUE INSTALLING IXGEN...

-----

Searching registry for FrameMaker 7 installation information...
IXgen will be installed with the FrameMaker installation at
F:\Adobe\fn72

-----

IMPORTANT!: please be sure to quit FrameMaker before continuing.

Waiting for you to make sure FrameMaker is not running.
Press RETURN or ENTER when ready, or Q + ENTER to quit:

```

The installer searches for a current installation of FrameMaker. If no FrameMaker installations are present, setup will halt. If more than one FrameMaker is detected, you'll be given a selection list and asked to decide which FrameMaker on this system should receive IXgen during this installation.

Press enter to continue.

```

setup
Done creating directories.

-----
USER PROFILE ADVISORY:
With FrameMaker 7 Adobe added a user profile system so that individual
users on one computer could personalize their use of FrameMaker.

This new system has bugs, however, and is not supported with this current
version of the IXgen 7 installer. IXgen will be registered in the
[APICLIENTS] section of the main maker.ini file located in
F:\Adobe\fn72. FrameMaker users on this computer using
that installation will see IXgen.

If you wish to try the user profile system, allow this IXgen installation
to complete, which will modify maker.ini. Then move the following line
from the [APICLIENTS] section of maker.ini:

    IXgen=Standard,Marker Management,ixgen\bin\ixgen.dll, all

to the [APICLIENTS] section of the appropriate user-profile version of
maker.ini. For user profile locations, refer to the opening comments
in the main maker.ini file.

Press ENTER to continue (Q + ENTER or 0 + ENTER to quit)

```

The User Profile facility added sometime back is discussed. No IXgen users that we know of have made use of this facility. And, when introduced, bugs were present. If you do wish to use this facility, follow the directions in this screen to move the API Client registration line to the maker.ini file in the desired profile. Do this after the IXgen installation has completed.

Press enter to continue.

```

setup
Place files in F:\Adobe\fn72\ixgen\templates...
  copying bkctrl.fn          1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying report.fn         1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying edtblist.fn       1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying pernctrl.fn       1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying keyctrl.fn        1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying valrefctrl.fn     1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\templates...
  copying valreport.fn      1 file(s) copied.
Place files in F:\Adobe\fn72\ixgen\bin...
  copying ixgen.dll         1 file(s) copied.
  copying editable_list_ops.exe 1 file(s) copied.
  copying ixgen.ini
Found existing F:\Adobe\fn72\ixgen\ixgen.ini

A backup of ixgen.ini, F:\Adobe\fn72\ixgen\ixgenini.sav, already exists.
If you want to preserve this file, use explorer or a DOS
window and rename it. When ready, return here and press enter.

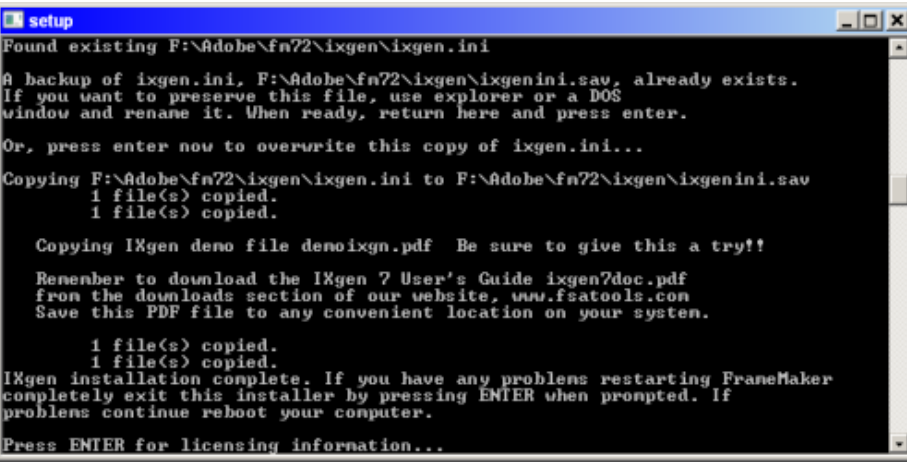
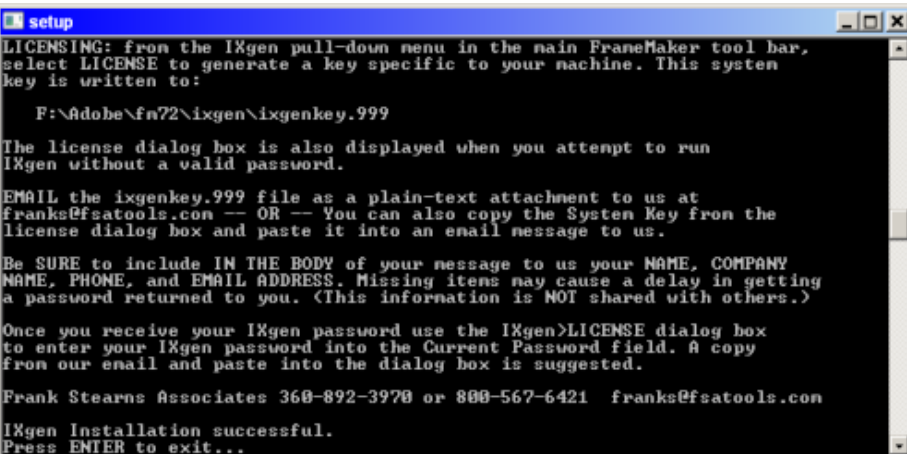
Or, press enter now to overwrite this copy of ixgen.ini...

```

The installer is now copying files from the download folder and into their new home within the IXgen installation folders that reside in the main FrameMaker folder. In this particular installation, a previous run of the installer was detected by the presence of a backup copy of ixgen.ini. This backup copy will be overwritten unless you wish to save it (extremely rare that you'd want or need to do so).

Press enter to continue.

Step 3: Licensing IXgen

 <pre>setup Found existing F:\Adobe\fn72\ixgen\ixgen.ini A backup of ixgen.ini, F:\Adobe\fn72\ixgen\ixgenini.sav, already exists. If you want to preserve this file, use explorer or a DOS window and rename it. When ready, return here and press enter. Or, press enter now to overwrite this copy of ixgen.ini... Copying F:\Adobe\fn72\ixgen\ixgen.ini to F:\Adobe\fn72\ixgen\ixgenini.sav 1 file(s) copied. 1 file(s) copied. Copying IXgen demo file demoixgn.pdf Be sure to give this a try!! Remember to download the IXgen 7 User's Guide ixgen7doc.pdf from the downloads section of our website, www.fsatools.com Save this PDF file to any convenient location on your system. 1 file(s) copied. 1 file(s) copied. IXgen installation complete. If you have any problems restarting FrameMaker completely exit this installer by pressing ENTER when prompted. If problems continue reboot your computer. Press ENTER for licensing information...</pre>	<p>The last few files are copied. You are reminded to download the IXgen Users Guide if you haven't already done so. Also, take a look at the ixgndemo.pdf (yes, this is the correct name). This provides a guided demonstration of various IXgen features.</p> <p>The IXgen installation has completed without errors.</p> <p>Press enter to continue.</p>
 <pre>setup LICENSING: from the IXgen pull-down menu in the main FrameMaker tool bar, select LICENSE to generate a key specific to your machine. This system key is written to: F:\Adobe\fn72\ixgen\ixgenkey.999 The license dialog box is also displayed when you attempt to run IXgen without a valid password. EMAIL the ixgenkey.999 file as a plain-text attachment to us at franks@fsatools.com -- OR -- You can also copy the System Key from the license dialog box and paste it into an email message to us. Be SURE to include IN THE BODY of your message to us your NAME, COMPANY NAME, PHONE, and EMAIL ADDRESS. Missing items may cause a delay in getting a password returned to you. (This information is NOT shared with others.) Once you receive your IXgen password use the IXgen>LICENSE dialog box to enter your IXgen password into the Current Password field. A copy from our email and paste into the dialog box is suggested. Frank Stearns Associates 360-892-3970 or 800-567-6421 franks@fsatools.com IXgen Installation successful. Press ENTER to exit...</pre>	<p>General licensing information is included here, but the presentation of this information is limited by this format.</p> <p>It's best to follow along in the "Licensing" section of the IXgen Central page of this website.</p> <p>Be sure to press enter to exit the installer. If you don't, some "housekeeping" needed for the IXgen installation might not be properly completed.</p>

Step 3: Licensing IXgen

Once you've installed IXgen, you're now ready to receive a password from us that will activate your IXgen license.

To get your IXgen password, please email us (franks@fsatools.com). Please put "IXgen" in the subject line. In the body of the message, include these items:

- Your name
- Company name, if applicable
- Your email address, if different from what might appear in the reply-to field of your email to us (you'd be surprised how often that happens)
- Your telephone number (rarely, if ever, used)
- Your general status: full-time company employee or contractor. And if a contractor, indicate whether you're using your own system or the company's

(NONE of this information is shared with or sold to others. See our Privacy Policy for more information.)

MOST IMPORTANTLY, WE NEED THE IXGEN SYSTEM KEY FROM YOUR IXGEN INSTALLATION.

Here's how to get the IXgen System Key:

1. Using Windows Explorer, browse to where FrameMaker is installed (if you have more than one FrameMaker installed, go to the installation that you selected to host IXgen during the installation process).
2. Right-click on framemaker.exe and select "Run as Administrator. (Remember, you exited FrameMaker to do the IXgen installation, and now it's time to restart FrameMaker.)
3. Once FrameMaker has started, you should now see "IXgen" as a new item in the main menu bar. Select "License..." from the IXgen drop-down menu. Don't see "IXgen" in the main menu bar? Check here...
4. Near the top of the IXgen License dialog box, you'll see a text box field titled "System Key". Drag through the entire string in the box to select it, then copy (control-C) and paste it (control-V) into the email that you started above. Send that off to us and we'll return a password. Installing the password is covered next.

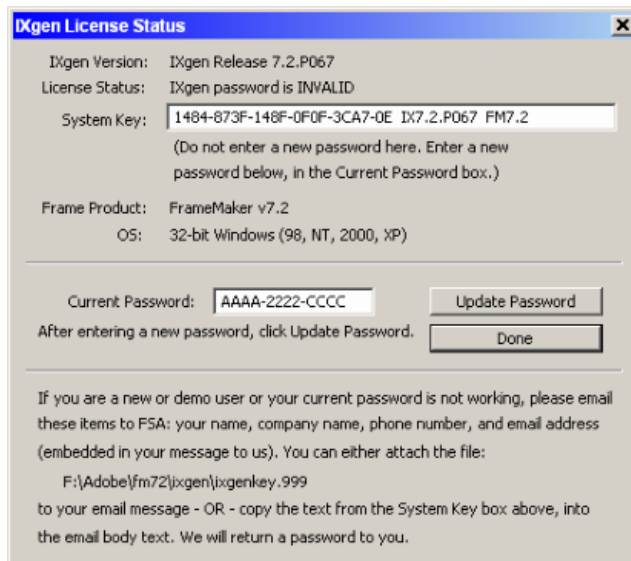
Do you see "Error 67", "Unavailable" or a blank system key field? You probably didn't start FrameMaker by "Running as Administrator". This is very important, please try again.

Example IXgen Licensing Screens

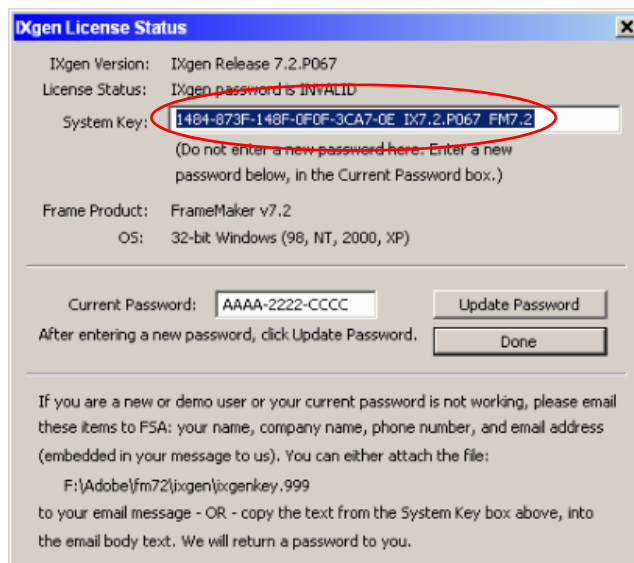
Here are a few sample screen captures of what you will usually see when accessing the IXgen>License Dialog box. Your screens will vary slightly, based on information specific to your machine and the version of IXgen you have installed. (We assume you've restarted FrameMaker, running as "Administrator".)

Here is a typical initial IXgen>License dialog box:

Step 3: Licensing IXgen



Next, select the text string in the “System Key” field, as shown in the next image. (To make the selection, click and hold at one end and drag to the opposite end. Be sure you have all the contents of the field selected. Then press Control-C to copy the string on the clipboard.)



Next, bring up your favorite email program and send us your name, email address (if different from the “reply-to” field of your email message), and your status as either a regular employee or contractor. Finally use control-V to paste the IXgen system key string into that message to us. We will return a password email.

Step 4: Installing the IXgen Password

Within a very short time of receiving your IXgen password request (typically 4 business hours or less, but not more than 8 business hours), we will send you a password email. Haven't received it? Double check your spam folder. Still not there? Feel free to resend your password request or give us a voice call at 1-435-275-8981 (we're in Mountain Time of the USA). We understand that sometimes people need to get IXgen running immediately, and will do our best to accommodate that need.

The typical IXgen password email will list the contact information you sent us. (Please do send us corrections for any errors you see in that information.)

Following that, you'll see the line "PASSWORD", and immediately below that a 12-digit hex number, grouped in three fields of four digits, separate by hypens. Here's how to install your password:

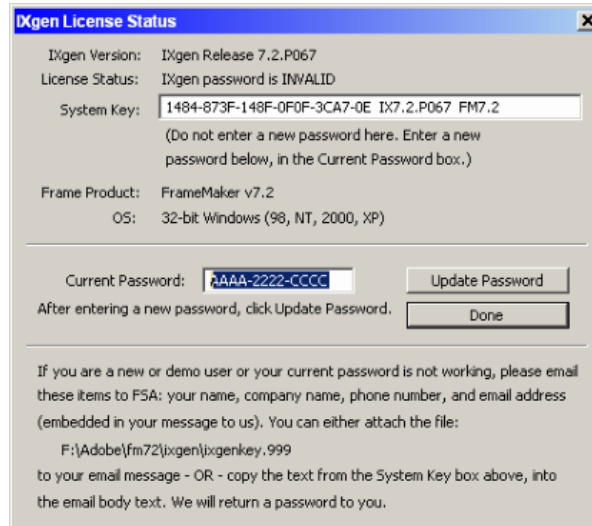
1. Drag through the password string in your password email, then copy it (control-C) to the clipboard.
2. If FrameMaker is not running, restart it, "running as administrator", just as you did when acquiring the system key. If FrameMaker is running but was not started by "running as administrator," close and restart FrameMaker, again by right-clicking on framemaker.exe and "running as administrator
3. Select "License..." from the IXgen drop-down menu.
4. Go to the "Current Password" field, click at the end of the field and back-space to clear out the entire contents of the Current Password field. Or, simply select the entire password string in preparation for a paste overwrite.
5. Paste the new password (control-V) into the Current Password field.
6. Click the "Update Password" button. Before dismissing the dialog box, review the "License Status", second line down from the top of the dialog box. This should now read "Password is Valid". If not, please see Troubleshooting. Curious about the password expiration date? See the FAQ question regarding password classifications.
7. Click "Done". Congratulations! You're not ready to being using IXgen. If you're new to IXgen, we suggest a walk through the IXgen Users Guide. If you're in a hurry, take a look at the "Cookbook" chapter. You'll get some good ideas for what you can do with IXgen. There's also a guided demo that came with your IXgen distribution entitled "demoixgn.pdf".

Example Password Input Screens

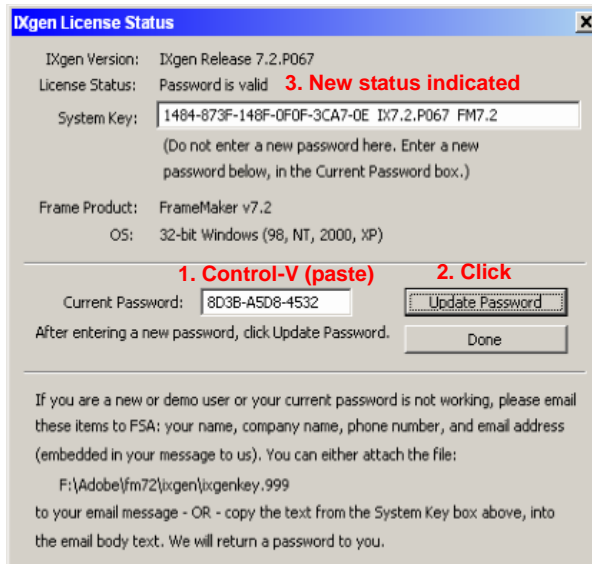
Restart FrameMaker, once again running as Administrator. In the password email we sent to you, select the password string. Use control-C to copy the password onto the clipboard.

Step 4: Installing the IXgen Password

Next, again access the IXgen>License Dialog box. Select the string in the “Current Password” field, as shown here:



1. Press control-V to paste and over-write the “placeholder” password of AAAA-2222-CCCC with the real password we’ve sent to you.
2. Click Update Password.



3. Check the “License Status”. The password should be valid.

You are now ready to use IXgen. Review other portions of this manual. For several practical and “getting started” ideas, review *Suggested IXgen Uses (Cookbook)* starting on page 78.

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