

NumberThem 1.2

Automatic Page Numbering for Macromedia FreeHand 10 & MX

A Freeware Xtra by Michael Thies

<http://www.mthies.de/nutxtra>

Overview

NumberThem is a free Xtra (extension module) that adds automatic page numbering to Macromedia's vector drawing application. First, create a single text box that serves as a template for the placement and formatting of page numbers in your document. Then invoke the *NumberThem* Xtra to add page numbers to all pages in your document. After you have added, deleted, or rearranged pages in your document, invoke *NumberThem* again to update all page numbers automatically.

Beyond simple page numbers *NumberThem* can solve more involved numbering tasks. It offers several different automatic counters and can insert numbers in various formats. There is even support for different placement of page numbers on odd and even pages. Finally, 2-dimensional numbering provides a hierarchical numbering system with two levels, based on the placement of document pages on FreeHand's pasteboard.

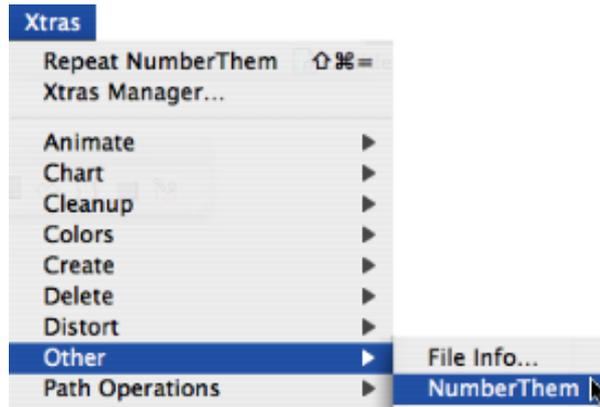
Installation

1. Quit FreeHand, if it is currently running.
- 2a. For **FreeHand MX** on **MacOS X**:
Drag the file `NumberThem Xtra` to the folder `Xtras` inside the `FreeHand MX` folder. There should be a file `Xtras Readme.htm` inside this folder already.
- 2b. For **FreeHand 10** on **MacOS X**:
Drag the file `NumberThem Xtra` to the folder `Xtras` inside the folder `English` (for an English version of FreeHand 10) inside the `FreeHand 10` folder. All the pre-installed Xtras of FreeHand 10 should be inside this folder already.
- 2c. For all versions of **Freehand** on **Windows**:
Drag the file `NumberThem.x32` to the folder `Xtras` inside the folder `English` (for an English version of FreeHand) inside the program folder. All the pre-installed Xtras of FreeHand should be inside this folder already.
3. Launch FreeHand and check that an additional menu item **Xtras / Other / NumberThem** appears.

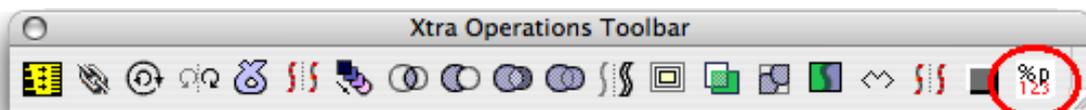
The *NumberThem* Xtra has been extensively tested with FreeHand 10, FreeHand MX, and FreeHand MXa running on MacOS X 10.2.x to 10.3.3. Less testing has been done with FreeHand MXa running on Windows 98SE and Windows XP. I have used the Xtra on documents of more than 200 pages without problems, although numbering that many pages takes a couple of seconds. The *NumberThem* Xtra is available in two separate distributions for MacOS X and Windows.

Basic Usage

Open the document `First Example` that is included with the *NumberThem* download (or open one of your own FreeHand documents). `First Example` is an ordinary FreeHand 10 document that can also be opened with FreeHand MX. It has not been prepared for page numbering in any way (yet).



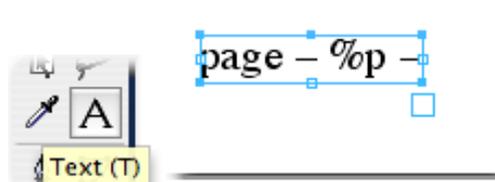
Now invoke the *NumberThem* Xtra on the document. You can do this either from the menu bar (**Xtras / Other / NumberThem**) or via a button in the **Xtra Operations Toolbar** (**Windows / Toolbars / Xtra Operations**). If the button is not visible, you might have to enlarge the toolbar's window to make room for the new, rightmost button.

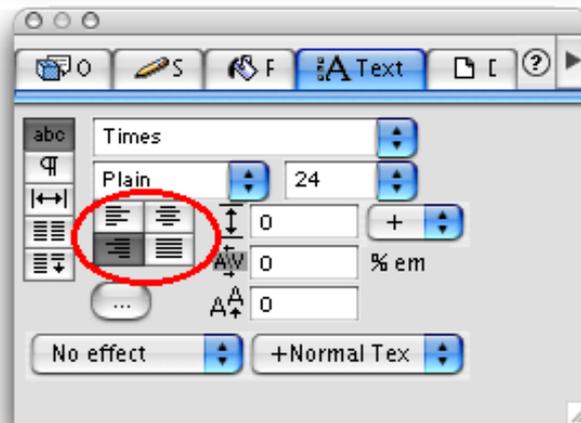
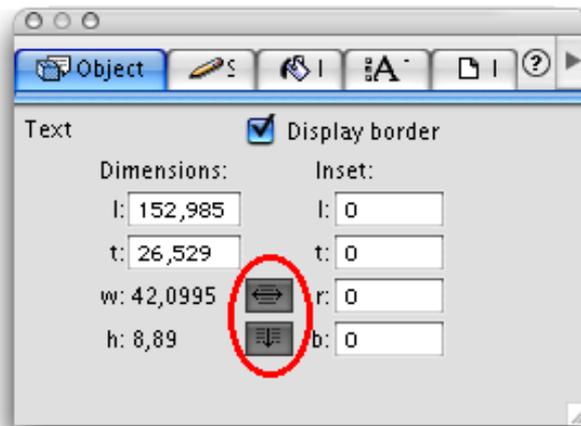


The following dialog box appears and two layers have been added to your document. The layer named *NumberThem* will contain the text box that serves as a template for all your page numbers and the layer named *Numbers* will receive the actual page numbers, as generated by the *NumberThem* Xtra. The layer *NumberThem* has been activated already so that you can add your template box right away.

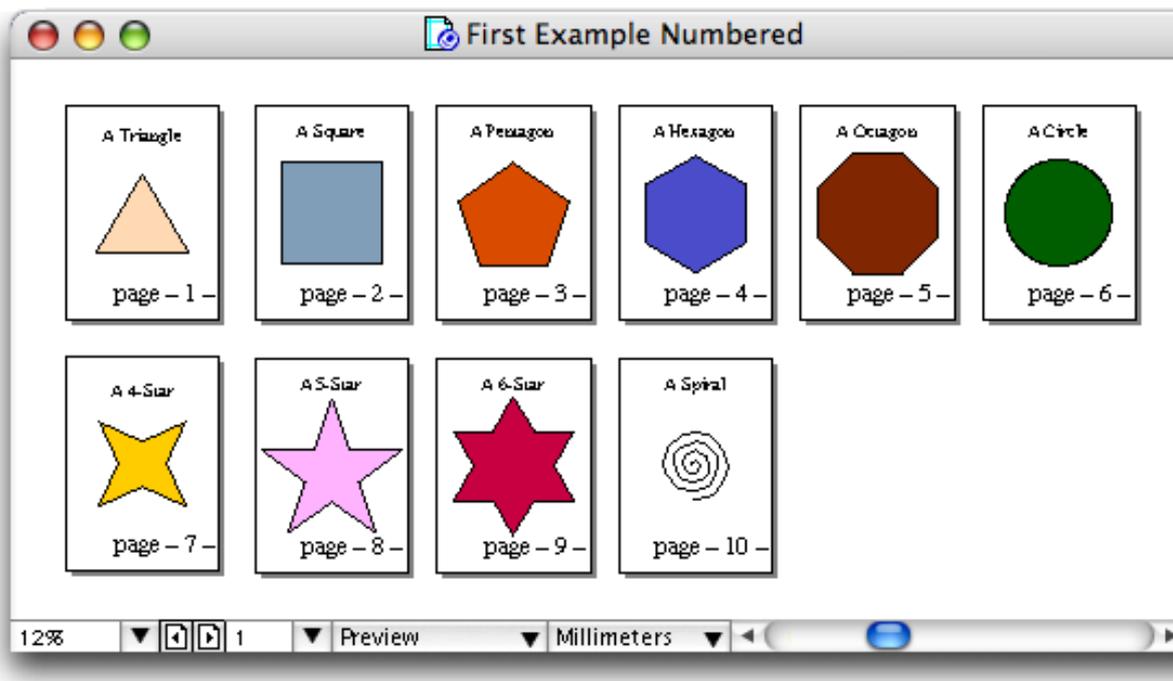


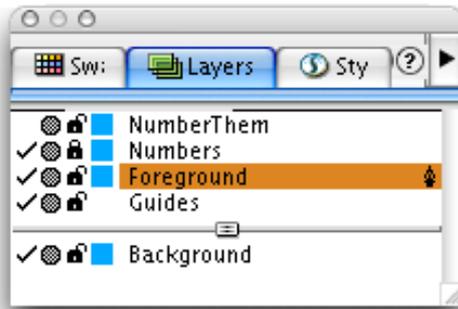
Use the text tool to create a text box in the lower right corner of the first page and type **page – %p –** as the text. Adjust the text font and size to your liking, but make sure that the text box is auto-adjusting and that the text is right aligned.





Again, invoke the *NumberThem Xtra* on the document. This time page numbers are added to all pages in the document. Each page contains a copy of your template text box where the placeholder `%p` has been replaced with the actual page number. The *NumberThem* layer has been hidden by the Xtra so that the template box does not clutter up your view of the document. Only the text boxes with the actual page numbers on the *Numbers* layer remain visible.





You can now add pages to the document, rearrange some of the pages, or delete existing pages. To update all page numbers simply invoke the *NumberThem Xtra* again. This works as long as you do not delete the page with the template text box.

If you change the text in the template box or its formatting, the *NumberThem Xtra* will pick up these changes the next time you update the page numbers.

Happy numbering,
Michael Thies

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email: mthies@uni-paderborn.de

Advanced Features

This reference section describes the most important features of the *NumberThem Xtra* in more detail. There are several different kinds of numbers that can be inserted and updated automatically. Several different numbering schemes and systems are supported. Finally, the *NumberThem Xtra* understands a couple of special text commands that aid in more involved numbering tasks.

Formatting Counters

The *NumberThem Xtra* picks up all text boxes that reside on the layer named `NumberThem` and copies them to the `Numbers` layer. Special placeholders in the text, which are marked with a percent sign (%), are replaced with the value of a counter. For example, the placeholder `%p` is replaced with the number of that page in the FreeHand document. All text formatting is preserved in the process so that the actual page number picks up the text font, style, and font size of the characters `%p` in the template.

Because the width of the text box can change when the placeholder is replaced, the copied text box is aligned to the position of the template box based on its text alignment. For example, if the template box contains right aligned text, the right edge of the copied text box will line up with the right edge of the template box. I suggest that you always use auto-adjusting text boxes with the desired paragraph alignment as template boxes. Otherwise, copied text boxes might overflow or become misaligned where page numbers switch from single digit to two digit numbers.

A template text box is used to number the page that it appears on and to number all subsequent pages that do not contain new template boxes of their own. In this way you can change page numbering anywhere within the document or suppress page numbers on the first page(s) of your document. You can have multiple template boxes per page, for example to display different counter values in the header and footer of each page. Of course a single template box may contain multiple placeholders. This is used to achieve page numbers like **page 2 of 5**. See the section on common numbering tasks for details.

Anatomy of Placeholders

The percent sign (%) is used to mark the start of a placeholder in the template text boxes. All other characters are copied and preserved verbatim. If you need a literal percent sign in the template text, you have to double it: `100%%` becomes `100%` in the copied text.

A placeholder has the following general structure

`% [<format-letter>] [<counter-adjustment>] <counter-letter>`

where all parts except the percent sign % and the *counter-letter* are optional.

Valid *counter-letters* include:

- p** display number of the current page within document. First page in document is number 1. This is the same as the page number in the status area of a FreeHand document window.
- t** display total number of pages in document. This counter does *not* change its value from page to page.
- x** display the number of the current page within its row on the pasteboard. Leftmost page in each row is number 1.
- y** display the number of the row of pages on the pasteboard that contains the current page. Top row on pasteboard is number 1.
- %** inserts a literal percent sign in the copied template text.
- u** display a counter that is incremented once for each page on which it is used. Counter starts at 1.
- v** display a counter that is incremented once each time it is used, possibly more than once per page. Counter starts at 1.

Examples:

%p

%p of %t

page %y.%x

page %p is 100%% free

The *format-letter* determines the format or numbering system which is used to express the value of the specified counter.

Valid *format-letters* are:

- n** display counter in numeric form (arabic digits). This is also the default, if *format-letter* is omitted.
- r** display the counter in lowercase roman numerals: i, ii, iii, iv, v, ...
- R** display the counter in uppercase roman numerals: I, II, III, IV, V, ...
- a** display the counter as lowercase letters: a, ..., z, aa, ab, ..., az, ba, ...
- A** display the counter as uppercase letters: A, ..., Z, AA, AB, ..., AZ, BA, ...
- z** display counter in numeric form zero-padded to two digits: 01, 02, ..., 09, 10, ...
- Z** display counter in numeric form zero-padded to three digits: 001, ..., 009, 010, ..., 099, 100, ...

Examples:

%rp

%Ay-%zx

By default, virtually all counters start with a value of 1 for the first page of a FreeHand document, but you can use a *counter-adjustment* to count pages differently. A *counter-adjustment* is either an *assignment* or an *offset*. An *assignment* consists of an equals sign (=) followed by a whole number. That number is used to initialize the counter on the page where the template box is defined. For example, **%=1p** in a template box on the third page of a document results in two unnumbered pages of front matter and page numbers 1, 2, ... on subsequent pages. Similarly, **%R=100p** on the first page of a document would number the pages from 100 onward in uppercase roman numerals: C, CI, CII, CIII, CIV, CV, ...

Alternatively, an *offset* can be added to the value of the counter before it is displayed on a page. An

offset is simply a positive or negative whole number, without a leading equals sign. Use offsets to refer to neighboring pages in the document or to adjust the total number of pages. For example, **%p/%+1p** might appear in a business letter and displays the number of the current page followed by the number of the next page. The placeholder **%-2t** adjusts the total number of pages (in counter *t*) for a document with two unnumbered pages of front matter.

Examples:

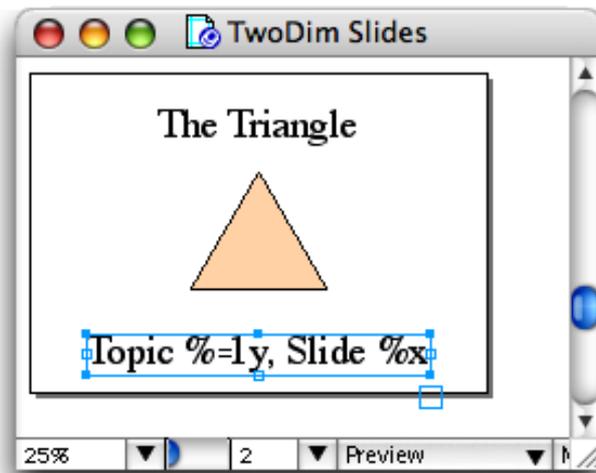
%=10p

%A=1y.%z-1x

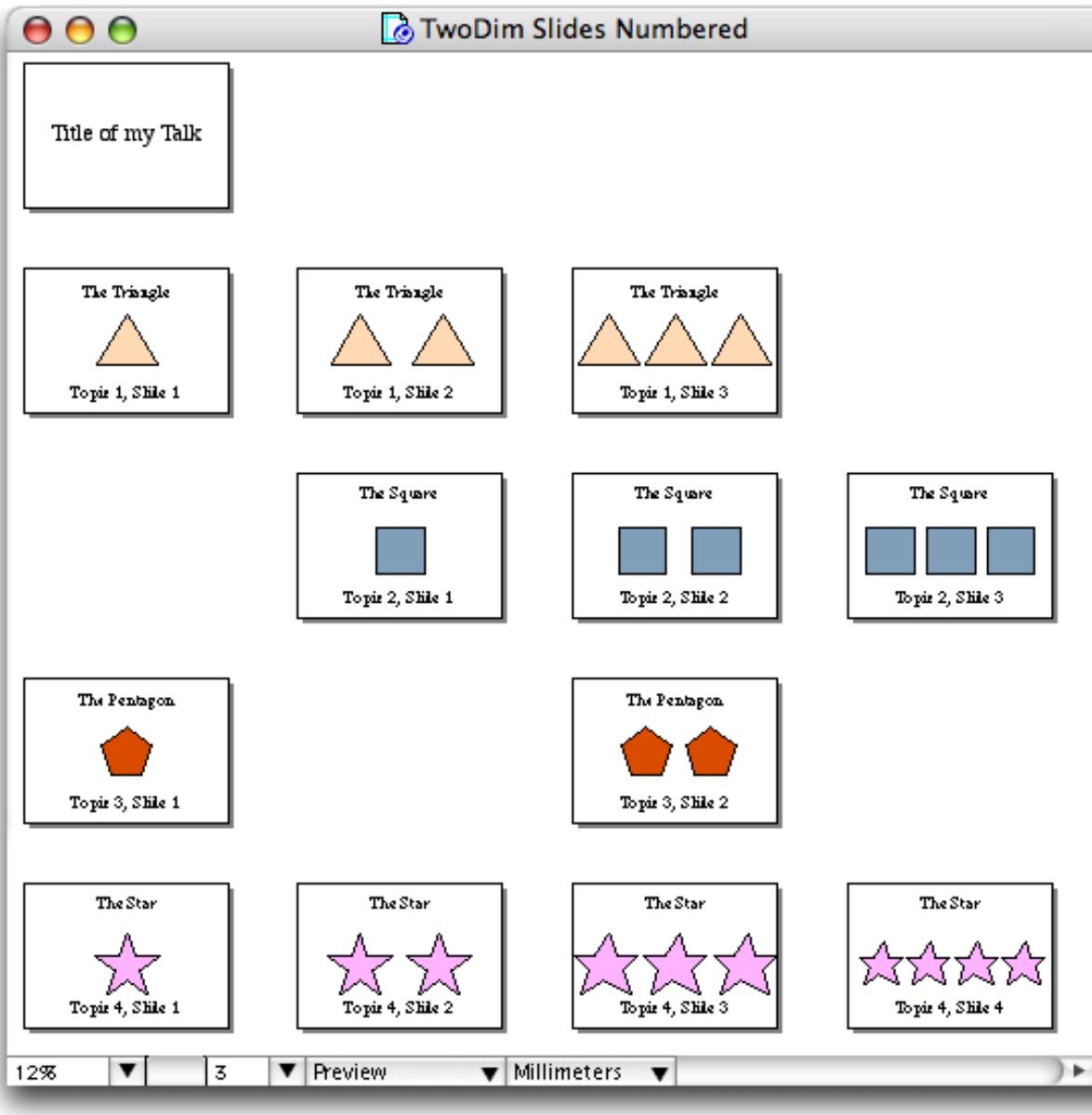
2-dimensional Numbering

All pages of a FreeHand document are located on a huge 2-dimensional working area: the pasteboard. Pages can be arranged freely on the pasteboard. Typically you will line them up neatly in rows and columns. The *NumberThem* Xtra offers two counters that reflect the arrangement of pages. The **y** counter numbers the rows of pages on the pasteboard. Row 1 is the topmost row on the pasteboard. The **x** counter numbers the pages within a single row on the pasteboard, where 1 denotes the leftmost page in the row.

The example document *TwoDim Slides* uses a hierarchical numbering scheme with two levels that relies on the **x** and **y** counters. Each row of slides on the pasteboard corresponds to one topic in the talk. Hence, the **y** counter can be used to number the topics. Within each topic the **x** counter provides consecutive secondary page numbers for the constituent slides.



If you look at the contents of the template boxes on page 2 on the *NumberThem* layer, note that the placeholder **%=1y** is used to number the topics. This reserves the first row of pages on the pasteboard for an unnumbered title slide and starts counting topics with a value of 1 on page 2 in the second row of the pasteboard.



Numbering Commands

The *NumberThem Xtra* recognizes a few commands that control numbering. You enter commands into text boxes on the *NumberThem* layer, just like template boxes. Numbering commands have single character names and are prefixed with the two characters **%!**. The command must appear at the very start of the text inside a text box to be recognized. A text box containing a numbering command is otherwise ignored. Hence, you must use a separate text box for a numbering command in addition to any text boxes that serve as templates for page numbers.

Valid numbering commands include:

- i** ignore the current page in the numbering. All counters keep their previous values. You will usually use this command in the form **%!ih**. This hides all counter displays on the current page and results in a completely unnumbered page.
- h** hides the display of all template boxes from the preceding page on the current page. If the current page contains template boxes of its own, these boxes are used for the current page only. The next page will again refer to the template boxes specified before the current page.
- c** clear all template boxes. Used to prevent template boxes on a preceding page to carry

- over to the current page.
- 2 enable separate template boxes for odd and even pages.

Examples:

%!c
%!ih

Common Numbering Tasks

This section explains how ten common requirements concerning page numbering can be achieved with the *NumberThem Xtra*.

How do I start page numbers at other values than 1 for the first page?

Use an assignment to adjust the starting value of the counter in the placeholder: **%=100p** will set the page counter **p** to a value of 100 on the page where this placeholder is defined in a template box. For subsequent pages the value of the counter is incremented as usual. **%=0p** will start numbering pages from zero onward.

How do I add roman page numbers to my document?

Add a format letter to the placeholder. This displays the value of the counter in a different numbering system. For example, **%rp** yields page numbers in lowercase roman numerals and **%Rt** shows the total number of pages in uppercase roman numerals.

How do I suppress page numbers on the title page(s) of my document?

Put your template text box on the first page to display a page number, for example on page 3 of your document (on the *NumberThem* layer). Preceding pages will not show the page number, as template boxes only carry over to following pages. If the title pages are not to be counted in the page numbering, use an assignment like **%=1p** on your first body page to start with a page number of 1 after the unnumbered title pages.

How do I suppress page numbers on the final page(s) of my document?

Put the clear numbering command **%!c** on the first page that is not to show a page number (on the *NumberThem* layer). This stops the template boxes of preceding body pages to carry over.

How do I create page numbers of the form “page 2 of 5”?

Use the page counter **p** and the total page counter **t** in a single template text box like this:
page %p of %t

How do I change the style of my page numbers in the middle of my document?

Add one or more template boxes to the *NumberThem* layer on the first page with the new numbering style. Template boxes are used for the page that they appear on and any subsequent pages, until a page specifies at least one template box of its own. From that point onward the new set of template boxes is used.

How do I override the position of the page number on a single page in my document?

Use the numbering command **%!h** to hide the previously defined template boxes and define another template box on the exceptional page (on the *NumberThem* layer). This template box serves as an override for that single page only. The next page will revert to the former numbering style.

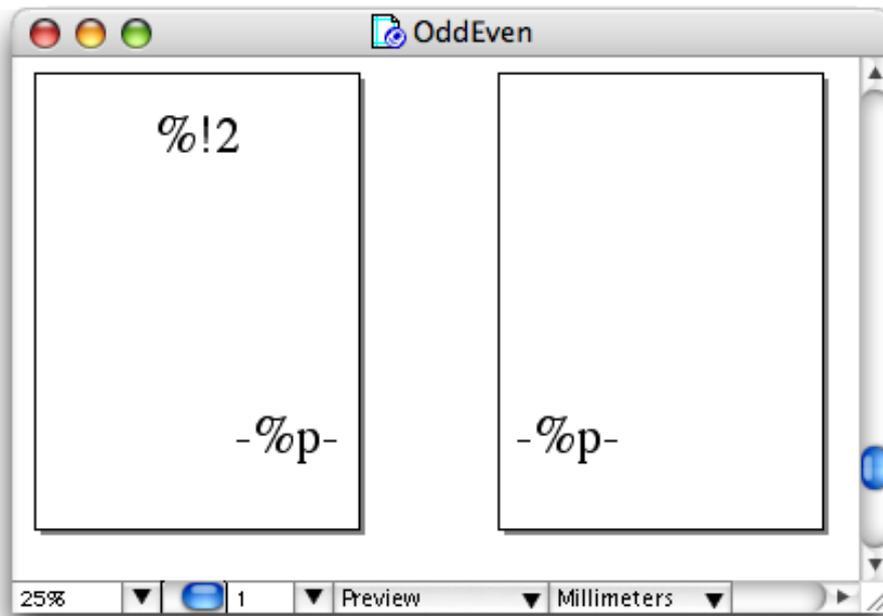
How do I insert unnumbered pages into my document?

To suppress display of page numbers on a page and to skip page numbering for that page, combine two numbering commands: **%hi**. **h** hides all template boxes for that page and **i** ignores the page when assigning page numbers. Note that the unnumbered page is still included in the total page counter **t**.

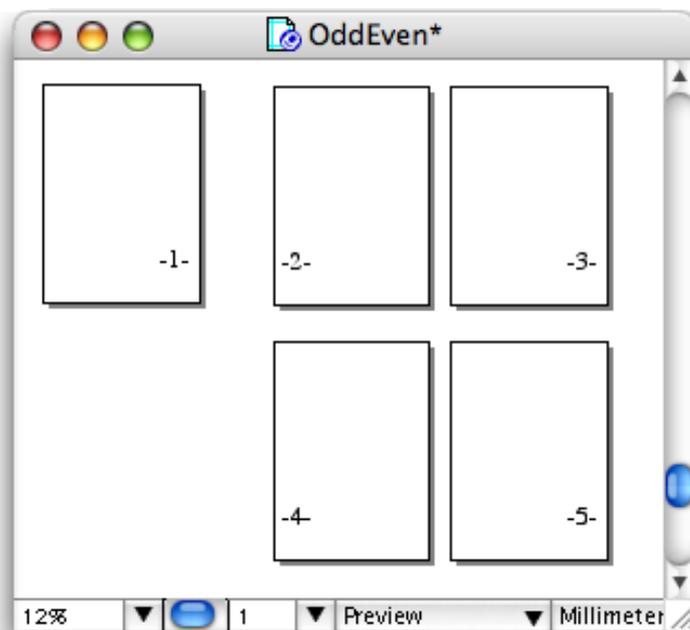
How do I get different positions for page numbers on odd and even pages?

Use the numbering command **%!2** on the first page to enable separate template boxes for odd and even pages. Template boxes on the *NumberThem* layer of the first page determine the numbering of odd pages and template boxes on the second page control numbering of even pages. Note that the notion of odd and even pages depends on the position of a page in the complete document. It does

not matter where the two-paged section starts.



The above set of numbering command and template boxes achieves page numbers that are placed at the outside margin of the document (away from the binding) as shown below. This means, a right aligned page number is placed near the right margin of odd pages and a left aligned page numbers appears near the left margin of even pages.



How do I create a hierarchical numbering scheme with two levels?

Arrange pages on the pasteboard in a 2-dimensional fashion and use the counters **y** and **x** to refer to the row number of a page on the pasteboard and its position within that row respectively. Hence, **y** supplies the first/top level of the numbering scheme and **x** supplies the second/lower level. A template for a full hierarchical number would be **%y.%x** or **%Ay.%x** for alphabetical marking of sections.

Error Messages

This section lists all error messages that are specific to the *NumberThem* Xtra and gives possible solutions.

Special layers have been created. Add template text boxes to the 'NumberThem' layer.

This is not really an error. If you invoke the Xtra on a document that lacks the two special layers (*NumberThem* and *Numbers*), the Xtra does *not* attempt to number the document, but creates the two layers for you. Proceed as indicated: create template text boxes and invoke the Xtra again to actually number the document.

Open or create a document first.

The Xtra has been invoked while no FreeHand document was open, but the Xtra needs a document to operate on.

Invalid %-placeholder in template box on page *n*.

A template text box on the given page contains an incorrect placeholder. Use only valid format letters, counter adjusts, and counter letters in your template boxes.

Unknown %!-command on page *n*.

A text box on the given page contains an invalid numbering command. Use only valid command letters.

Too many template boxes.

There may be at most 128 template boxes on the *NumberThem* layer in a document. Since a single template box defines page numbering for many subsequent pages, 128 template boxes should be plenty. Reduce the number of template boxes used. Note that text boxes with numbering commands do *not* count toward this limit.

Template groups nested too deeply.

When looking for template boxes on the *NumberThem* layer the Xtra peeks into groups of graphic objects. This error indicates that such groups have been nested more than 8 levels deep. Remove unnecessary groups or use less complex grouping structures on the *NumberThem* layer.

Failed to create layers.

The document lacks the two special layers (*NumberThem* and *Numbers*), but the Xtra could not create them. Make sure the Freehand document is not locked.

Failed to get page info.

The Xtra could not get information on a page in the current FreeHand document. This error indicates that something is severely wrong. Save your document and quit Freehand as soon as possible.

Obscure Features

There are additional counter letters and numbering commands to cope with even more complicated numbering tasks.

The more obscure *counter-letters* are:

- u** display a counter that is incremented once for each page on which it is used. Counter starts at 1.
- v** display a counter that is incremented once each time it is used, possibly more than once per page. Counter starts at 1.
- w** like counter **v**, but this counter is reset to 1 at the start of each row of pages on the pasteboard.
- q** displays the page number like counter **p**, but this counter is not reset by the reset numbering command **%!r** (see below).
- s** displays a counter that is never incremented automatically. Use an assignment to spread a fixed value to multiple pages.

Examples:

Step %u:

item %v in section %w

page %p(%q)

Volume %R=7s

The more obscure numbering commands are:

- r** reset all counters to 1. Only the counter **t** (total number of pages) and the global page counter **q** keep their values beyond a reset command.
- a** add the template boxes on the current page to any template boxes carried over from a preceding page. Subsequent pages will also receive this augmented set of template boxes. The default behavior would be to forget the previously specified template boxes and to use the template boxes on the current page instead.
- 1** disable separate template boxes for odd and even pages. This restores the default behavior.
- 4** enable separate template boxes for four interleaved groups of pages.

Examples:

%!a

%!r1

Known Problems

There is currently one known unintuitive feature/limitation: template text boxes cannot reside on master pages or in symbols. You must put your template boxes on the actual pages of your document on the layer named `NumberThem`. Macromedia's Developer Kit for FreeHand Xtras is so old that it does not mention the concept of master pages or symbols at all. Hence, it is unclear if and how an Xtra can get access to their contents. The `NumberThem` Xtra will remain blind with respect to master pages and symbols until an improved Developer Kit or more information is made available by Macromedia.

Version History

A later version might be available for download at <http://www.mthies.de/nutxtra>

- 1.2 27-May-2004** First public release.
 - Separate Windows version of Xtra available.
 - More intuitive way to set initial values of counters.
- 1.1 16-May-2004** First public release.
 - Added independent treatment of odd and even pages.
 - Hide command can be used for single page overrides.
- 1.0 10-March-2004** Not released.
 - Feature complete version for personal testing.

Reporting a Bug

If one of your template boxes or numbering commands seems to be ignored, make sure that the corresponding text box actually resides on the special layer named `NumberThem`. Text boxes on other layers are ignored completely by the Xtra.

Before reporting a bug, check <http://www.mthies.de/nutxtra> for a later version of the

NumberThem Xtra that might fix your problem. If you think that you have found a bug, you may contact me by email at mthies@uni-paderborn.de. Please, specify *NumberThem* in the subject line and give the exact version number of the *NumberThem Xtra*, the *FreeHand* application and the operating system (MacOS X or Windows) involved.

If possible, send me a small *FreeHand* document that exhibits the problem. For example, you should remove all layers, except the two special layers *NumberThem* and *Numbers*, from your document. This yields a much smaller document without dependencies on referenced graphics or classified content. Make sure that the smaller document still exhibits the same numbering problem as your original document.

The Windows version of the *NumberThem Xtra* is mainly provided as a courtesy. I might not be able to reproduce or fix bugs that are specific to the Windows version of the *Xtra*, since I have only limited access to a Windows version of *FreeHand*.

You may also send suggestions for improvements, although the *NumberThem Xtra* in its present form fulfills my personal numbering needs quite well. As my time for this project is limited, I cannot promise that I will incorporate such changes anytime soon or at all. Obviously, smaller changes are more likely to be included.

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