Mastering master pages: part 1 of 2

FrameMaker's master pages enable you to control the layout of your document's pages — and more. Steve Rickaby looks at the options.

Even if you are a novice user of FrameMaker, you will have used master pages, although you may not have realised it. FrameMaker uses master pages to control the page layout of every page of a document or book.

Jane Dards touched on master pages in the context of side-heads in her article 'A Bit on the Side' in the Summer 2005 issue of *Communicator*. This, the first of two articles, gives a general overview of master pages and their various options, then describes how they can be applied automatically. The second article will consider some slightly more exciting ways of using master pages.

Some aspects of master pages can seem complex and confusing, but correctly applied, they can make your work with FrameMaker a lot more productive and enjoyable. As a simple example, it is easy to make FrameMaker format the first page of each chapter of a book differently.

Two types of document

One way of looking at the use of master pages is mentally to divide documents into two broad groups:
- Book- or report-style publications, in which most pages follow similar layouts.
- Newsletter- or magazine-style publications, in which many (or all) pages have different layouts.

These two document groups have very different layout requirements, irrespective of how they are ultimately delivered to their consumers. FrameMaker caters for both.

Displaying and working on master pages

When you create a new document by selecting **File>New Document**, FrameMaker opens a dialog that enables you to:
- Choose from a number of templates.
- Create a blank document by clicking on one of the **Use Blank Paper** buttons.

If you click on **Custom**, FrameMaker displays the Custom Blank Paper dialog, shown in Figure 1. This enables you to choose a page size, margins, number of columns, and single or double-sided pagination. Your document's master pages, and the objects FrameMaker places on them by default, depend on the choices you make in this dialog. For example, selecting **Double-Sided** creates a blank document with two master pages, **Left** and **Right**, which have mirrored inner and outer margin layouts.

FrameMaker applies default master pages to every body page automatically unless you override it. With a document open, selecting **View>Master Pages** displays a master page: the master page displayed will be that applied to the body page displayed before you switched to master page view. You should see something like Figure 2 (which has been truncated). There are a couple of things to notice about the master page:
- The view's bottom border says '**Right** (2 of 2)', indicating that you are viewing the **Right** master page. (The other, obviously, is the **Left** master page.)
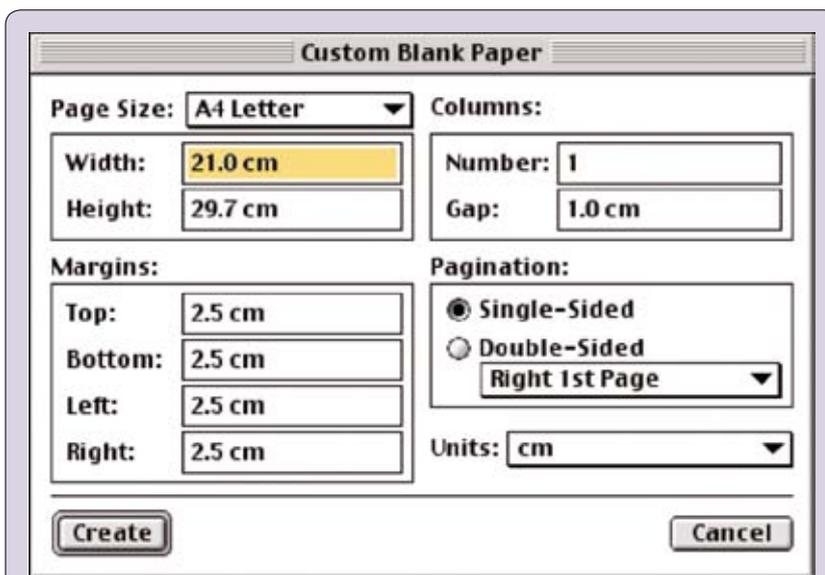- FrameMaker has created three text frames on the page: a header frame, a main text frame, and a footer frame.

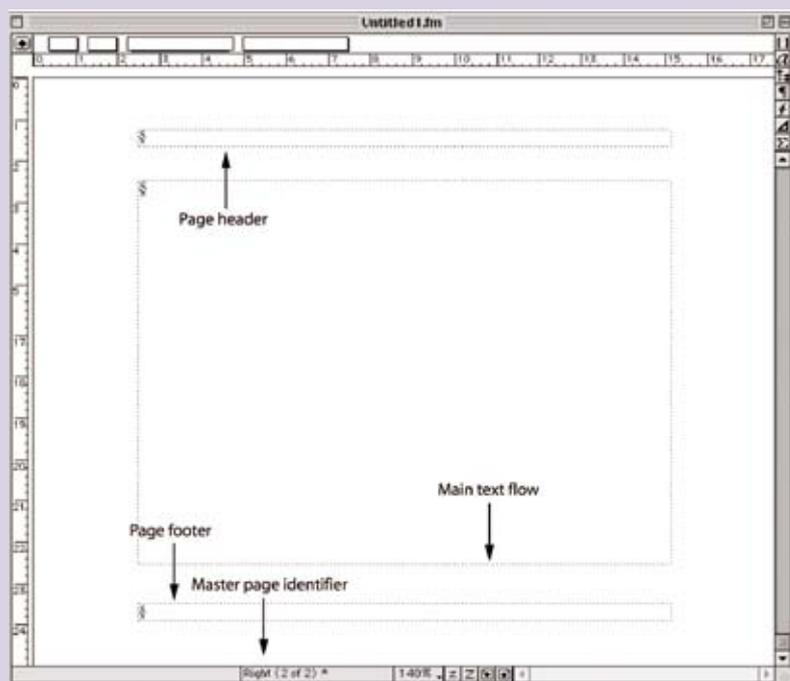**Figure 1. The Custom Blank Paper dialog**

Figure 2. Master page view (truncated)

You view and work on FrameMaker master pages in the same way as you do body pages. For example, you can draw or place graphical objects on a master page, and they will then appear on any body page that uses that master page. However, there's an important difference between master pages and body pages: if you use the text frame tool to draw a frame on a master page, FrameMaker will ask you what the frame is for, displaying the Add New Text Frame dialog (Figure 3). To understand how this works, we need to look at the different ways in which FrameMaker uses master page text frames.
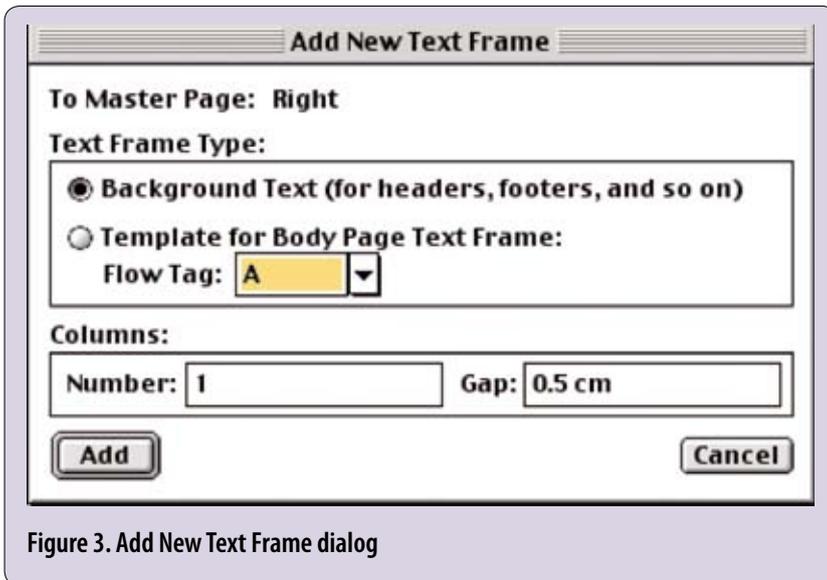

Figure 3. Add New Text Frame dialog

Two types of master page frame
Text frames on master pages are of two types: background text and *tagged flows*. FrameMaker handles these very differently. As Figure 3 shows, tagged flows are identified by alphabetical flow tags. A helpful way of thinking about flows is to think of them as *stories*: if, for example, you are laying out a newsletter, you might wish to continue a front-page story on an inner page. A separate flow enables you to do this. For documents such as reports, books, manuals, and so on, you would normally use only one flow. You can tell tagged and untagged flows apart by selecting them and then selecting **Graphics>Object Properties** to display the Customize Text Frame dialog—a tagged flow will have a flow tag, while a text frame used for background text will not. (To select a background frame, you must be displaying master pages.)

The Customize Text Frame dialog is also where the text flow can be set to display multiple columns—don't be tempted to create separate text frames on the master pages for this. FrameMaker can also be asked to balance columns to equalise the amount of white space on partial pages.

In Figure 2, the header and footer frames are untagged, while the main text frame has the flow tag **A** by default (although you can give a flow any name you want). When you are working

on body pages, FrameMaker displays the flow tag at the bottom-left of the document window.

To create a new master page, select **Special>Add Master Page** while displaying master pages. The Add Master Page dialog offers you the option of creating an empty master page (one with no text frames), or a copy of an existing master page. You can then edit the new master page as required.

How FrameMaker uses master pages
The simplest case is a single-sided document with one master page, which FrameMaker calls (perhaps a little confusingly) **Right** by default. The main text frame will have a flow tag **A** and the **Autoconnect** property—about which more below—will be on.

As you add text to the first body page, FrameMaker places it in the main text flow (frame) until the end of the frame is reached. When you add more text or graphics, referred to as 'overmatter', FrameMaker creates a new page and frame to accommodate them.

This 'word processor-ish' behaviour is what is normally required in books, manuals, reports and so on, and seems natural. However, if you are working using custom page layouts, for example in a magazine layout in which each page is different, overmatter is a potential problem. You don't want a new page to be created automatically: overmatter might be relegated to a distant page later in the magazine or newsletter, or might need to be cut entirely.

You can prevent FrameMaker adding new pages to accommodate overmatter by disabling the **Autoconnect** property for the main text flow(s) on the master page(s), then reapplying the master pages. FrameMaker will then indicate the presence of overmatter by displaying the bottom border of the main text flow as a solid line, and will not create new pages for it. FrameMaker provides several commands for manually linking text flows under **Format>Customize Layout**.

In a more complex situation, for example in which master pages contain multiple text flows, some of which have **Autoconnect** on and some of which do not, the **Autoconnect** flag is always honoured—pages and frames will not be created to accommodate overmatter if **Autoconnect** is off for the flow, even if additional pages already exist that contain frames belonging to that flow.

Adding objects to headers and footers
Although you can create as many master pages as you like, this does not mean that you have to have a different master page for each different header and footer. FrameMaker's running header/footer variables enable you to add header or footer text that is based on objects on the body pages. For example, if you are writing a user guide in which each chapter is divided into sections that are titled using a paragraph tag **A-head**, defining the **Running H/F 1** variable

as **<$paratext[A-head]>** and placing it in the header of the **Right** master page will cause the current major section heading to appear on all subsequent right-hand body pages.

Page numbers are catered for by FrameMaker's predefined variable **<$curpagenum>**, while other variables cover things like the page count, the current date, the date the document was created, and the date it was last modified.

Applying master pages automatically

Let's assume that by this stage you have a double-sided document with three master pages: the default **Left** page, the default **Right** page, and a special one called **First**, to be used on the first page, for example in each chapter of a book. This is probably one of the commonest uses for custom master pages.

In a double-sided document FrameMaker alternately applies the **Left** and **Right** master pages by default: if your document starts on a right-hand page, FrameMaker applies the **Right** master page to it automatically. How then can you apply the **First** master page?

You could, of course, display the first page and apply the **First** master page to it manually, using **Format>Master Page Layout>Master Page Usage**. However, it is possible to automate this process, because from Version 7.0, FrameMaker enables you to associate a master page with the presence of a paragraph tag (or element, in structured FrameMaker) on a body page.

This is done using a special flow on the reference pages, **Master Page Maps**, which contains a mapping table: **UnstructMasterPageMaps** for unstructured FrameMaker documents, and **StructMasterPageMaps** for structured documents. These tables do not exist until you select the **Format>Page Layout>Apply Master Pages** command for the first time in a document.

The master page mapping table for unstructured documents contains four columns:
- The paragraph tag name
- The right-hand master page to use
- The left-hand master page to use
- A range indicator, described below
- A comments field, where you can describe the purpose of the automatic master page application (very useful later!).

The range indicator has three possible values:
- **Single** (or blank) applies the named left- or right-hand master page only to the body page that contains the named paragraph tag.
- **Span pages** applies the left and right-hand master pages to the body page range from the first to the last occurrence of the named paragraph tag.
- **Until changed** applies the named left and right-hand master pages until either a further master page mapping is triggered, or the end of the document is reached.

So, in the example of our **First** master page for a book chapter, we could create a paragraph tag **ChapHeading** to format the chapter heading, and an entry in the **UnstructMasterPageMaps** table as follows:
- **Paragraph tag name:** ChapHeading
- **Right-hand master page:** First
- **Left-hand master page:** (blank)
- **Range indicator:** Single.

When you then select **Format>Page Layout> Apply Master Pages**, FrameMaker will apply the **First** master page to any right-hand body page that contains a paragraph of type **ChapHeading**, and only to those pages.

Adding static page objects

Master pages are also used for adding page decorations, such as graphics that appear in the same place on each page on which they are used, or coloured page backgrounds.

With a master page displayed, you can select **File>Import>File** to import a graphic directly onto a master page. FrameMaker places the graphic centrally on the page. This not always terribly helpful, as it is likely to land behind the main flow frame, making the graphic unselectable unless you apply **Graphics>Send to Back** to the main flow frame. The simplest way around this is to draw a graphic frame on the master page using the graphics frame tool on the **Tools** palette, then import the graphic into that.

One thing that's worth remembering, which can cause some confusion, is that objects placed in tagged flows on master pages do not appear on body pages: to display a background object on a body page, you need to place it in an untagged flow or graphic frame.

Dynamic objects on master pages

By now you could be forgiven for thinking that master pages are a little dry and dusty: necessary, but not particularly exciting. However, with a little cunning, it's possible to place *dynamic* objects on master pages. By 'dynamic', I mean objects on a master page that can be made to move and/or display differently on body pages, under the control of features such as autonumber threads, paragraph formats, markers and so on. We will look at how this can be done in the next article in this series. **C**

For more information

Most of the FrameMaker features described in this article are covered in the *FrameMaker User Guide* and on-line help. You can find full details of master page mapping in the user guide. The FrameUsers site and mail list are also recommended resources: www.frameusers.com.

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