



Part V: Frame Handling

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1. Frame Basics

1.1 Positioning/Sizing Frame on Page

Note that frame basics are also covered in the Quick Start Guide, available at <http://www.web4print.com/downloads> and on page 3 of Part I of this guide.

To create a new frame, select the Frame Tool, then click the New Frame button, choose a Frame Type (either "Text" for a frame that will contain text or "Image/Colour" for a frame that will contain either an image or a solid fill color), and draw a frame anywhere in the document window.

To move or resize a frame it must be selected. Deselected frames appear with a blue border, selected frames have a red border. Once a frame is selected, you can move it by clicking and dragging from the middle of the frame, or resize it by clicking and dragging from one of the corners or edges.

More precise positioning and resizing can be done numerically using the Frame Position and Frame Size buttons in the Attributes Bar.

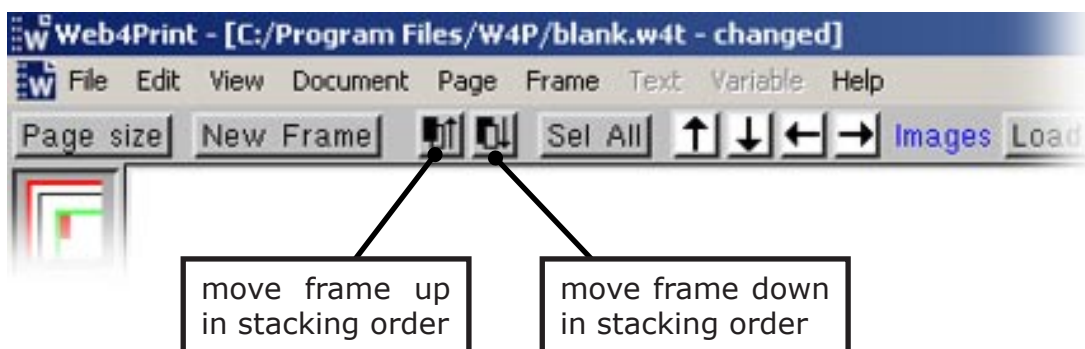
Frame position and size can also be controlled by position/size of another frame by using a Frame Tie (covered on page 11 of this guide).

1.2 Frame Stacking Order and Numbering

In addition to positioning on the document, each frame has a stacking position. The easiest way to think of the frame stacking order is as a vertical stack. If two frames overlap on the page, the frame that is higher in the stack will obscure the lower frame.

The first frame you create will be placed at the bottom of the stacking order and numbered "1". See the topmost window in the Attributes Bar for the selected frame's Frame Number. By default, each successive frame created will receive a higher number (and the next higher position in the stacking order).

To re-order the selected frame's position in the stack, you can use the Stacking Order buttons:





1. Frame Basics

1.2 Frame Stacking Order and Numbering (cont.)

You can also select Frame -> Positioning -> Send to Start or Frame -> Positioning -> Send to End from the top menu. "Send to Start" moves the frame to the bottom position in the stack, "Send to End" moves it to the top position.

If you create 4 frames in a row, they are given the numbers 1, 2, 3, 4. Frame 1 is at the bottom of the stack, Frame 4 is at the top. If you then select Frame 4 and select Frame -> Positioning -> Send to Start, Frame 4 will become Frame 1, Frame 1 will become Frame 2, Frame 2 will become Frame 3, and Frame 3 will become Frame 4. This renumbering is one reason why it is a good idea to organize the visual design of your document first, then create variables and other logical constructs such as frame ties (see p. 11 of this guide) last.

Frame stacking order has other implications as well. On page 4 we will be looking at Frame Avoid, which is an on/off property that can be set for a frame to prevent text in other frames from overlapping it; the avoid property will only apply to frames that are lower in the stacking order. This can be useful in cases where you don't want a given frame to be avoided by every other frame; frames that you do not want to avoid that frame can be moved higher in the stacking order.

Stacking order also affects the order a text stream is read (for more on text streams, see p. 17 of Part II of this guide); text which streams from one frame to another will always begin in the lower-numbered frame and continue in the higher-numbered frame.

1.3 Frame Rotation

In addition to position on page and stacking order, a frame can be rotated to any angle. To rotate a frame to a specific angle, select Frame -> Positioning -> Set Frame Rotation... Then enter a number from 0-360 to specify how many degrees clockwise to rotate the frame. Note that the frame will be rotated around the upper left corner.

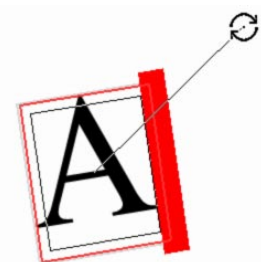
To set rotation by hand, select the Frame Rotation Tool by selecting Frame -> Positioning -> Rotate Frame.

Now click inside the frame to set the center point around which you will rotate the frame, then click outside the frame to place the end of the rotation handle, do not release the mouse button, drag the rotation handle around to rotate frame, and release when frame is in desired position. Note that you can always drag the handle out further which makes it easier to rotate in finer increments.

To see the exact rotation in degrees after rotating with the Frame Rotation Tool, select Frame -> Positioning -> Set Frame Rotation... from the top menu.



using Set Frame Rotation (45)



using the Frame Rotation Tool

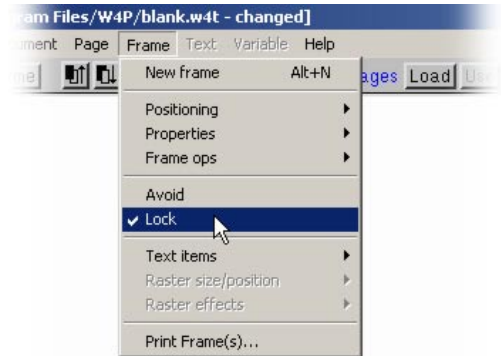


1. Frame Basics

1.4 Frame Lock

It is a good idea to lock frames in place once you have them positioned properly. As frames have to be selected in order to be resized or moved, it is not terribly likely that you will accidentally move a frame; however in cases where multiple frames overlap, it can be the case that you accidentally select the wrong frame, then move it.

To lock or unlock a frame, select Frame -> Lock from the top menu. A checkmark indicates the frame is locked:



1.5 Frame Avoid

Frame Avoid is an option that can be turned on/off by selecting Frame -> Avoid from the top menu. A checkmark indicates Avoid is on.

Frame Avoid prevents the frame from being overlapped by text in other frames. Note that Avoid will only apply to frames that are *lower* in the stacking order. This means that you can arrange your frame order such that some text will avoid a given frame, and some will not:

One thing was certain, that the WHITE kitten had had nothing todo with it:—it was the black kitten’s fault entirely. For the white kitten had been having its face washed by the old cat for the last quarter of an hour (and bearing it pretty well, considering); so you see that it LDN’T have had any in the mischief.

The way Dinah washed her children’s faces was this: first she held the poor thing down by its ear with one paw, and then with the other paw she rubbed its face over, the wrong way, beginning at the nose: and now, as I said, she was hard at work on the white kitten which was lying quite still and trying to purr—no doubt feeling that it was all meant for its good.

Frame 1 - text in frame avoids Frame 2

Frame 2 - Avoid is on, so text in lower frames avoids

overlapping text

Frame 3 - text in frame overlaps Frame 2; because it is higher in the stacking order it is unaffected by Avoid in Frame 2.



1. Frame Basics

1.5 Frame Avoid (cont.)

Generally, when you set Avoid on for a frame, you will want some space around the frame as well. Select Frame -> Properties -> Gap Around Frame... The Gap Around Frame dialog box will open. Now you may specify the width of the desired gap for each side of the frame.



One thing was certain, that the WHITE kitten had had nothing to do with it—it was the black kitten's fault entirely. For the white kitten had been having its face washed by the old cat for the last quarter of an hour (and bearing it pretty well, considering); so you see that it COULDN'T have had any hand in the mischief.

The way Dinah washed her children's faces was this: first she held the poor thing down by its ear with one paw, and then with the other paw she rubbed its face all over, the wrong way, beginning at the nose: and just now, as I said, she was hard at work on the white kitten, which was lying quite still and trying to purr—no doubt feeling that it was all meant for its good. ■



2. Columns and Margins

2.1 Setting Up Columns and Margins

By default, when a text frame is first created, it is composed of one column, with no margins. To divide a frame into more than one column, or to change the inside margins of the frame, select Frame -> Properties -> Columns/Margins... to open the Columns/Margins dialog box:

The screenshot shows the 'Columns/Margins' dialog box with the following settings and callouts:

- Column mode:** Latin (selected), Arabic. Callout: "Column mode defaults to Latin; Arabic Column mode flows text from the right column to the left"
- text flow:** Normal (selected), Fill top, Fill cols. Callout: "text flow should generally be left as the default; Normal"
- Number of columns:** 1 (max 20). Callout: "specify number of columns, up to 20"
- Space between columns:** 5mm. Callout: "specify space between columns (default is 5mm)"
- Text Margins:** Top (0mm), Left (0mm), Right (0mm), Bottom (0mm). Callout: "set inside text margins"
- Buttons:** Help, Unequal measures, Equal measures, Cancel. Callout: "By default, columns are set to divide the frame equally. To create columns of varying width, click the Unequal Measures button to open the Setup Unequal Columns dialog box and set each column and gutter individually." and "If your frame has only one column or columns of equal width, click the Equal Measures button when you are done with this dialog (or press the Enter key)."

Additional callouts for 'Fill top' and 'Fill cols':

- "Fill top" is a special option that will break to a new column for each paragraph break and will never break a paragraph across columns
- "Fill cols" is a special option that will prevent paragraphs from breaking across columns



2. Columns and Margins

2.2 Convert Columns to Frames

In some cases, you may have created a frame with multiple columns and then decided it would be more convenient to have the text flowing through separate frames instead.

Select the frame, then select Frame -> Frame Ops -> Columns to Frames from the top menu.

Each column, excluding gutters, will become its own text frame, all containing the same text stream which will flow from the left column to the right, assuming you are using Latin Column Mode (for more on text streaming, see p. 17 of Part II of this guide). If you wish all these frames to contain the same body of text, you can use the Repeat Text button in the Attributes Bar.

Note that this method is really only of use if you already have columns set up and decide that you would rather they be separate frames; if you just need to divide a frame into equally-sized evenly-spaced smaller frames, the Split Frames function is probably a better option (see p. 16).



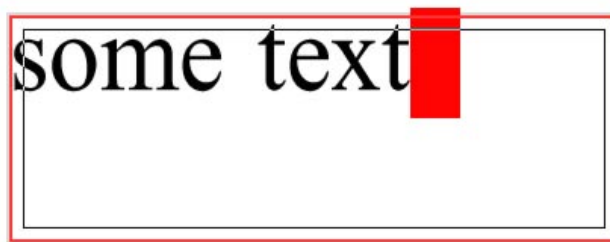
3. Copy Fit and Frame Ties

3.1 Copy Fit to Frame

One of Web4Print's most powerful features is its ability to adjust position and size of page elements depending on their contents. We will now look at how to set up a frame to resize/reformat text to fit varying amounts depending on quantity of variable text.

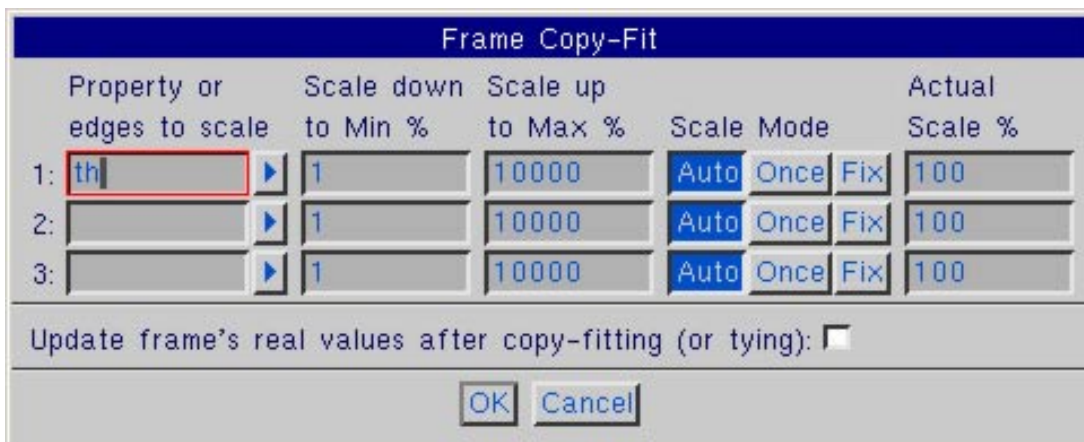
To demonstrate the way this function would be used in practice, we would need to create a template with variable text, upload it to the server, and experiment with differing amounts of text; however this is not necessary to demonstrate Copy Fit as we can just manually adjust the amount of text in the frame and see Copy Fit in action.

Create a text frame with a bit of text in it:



We will first see how to set up our frame so that its contents will always fill it as much as possible. Select Frame -> Properties -> Copy Fit to Frame... to open the Frame Copy Fit dialog box (you can also use the keyboard shortcut ctrl-Y).

This dialog allows you to set three variable properties of the frame. You can either type in the abbreviation for a property (such as "th" for text height) or select it from a drop-down list by clicking the arrow button to the left of the property field.





3. Copy Fit and Frame Ties

3.1 Copy Fit to Frame (cont.)

Enter "th" into the first property field. Leave all the other default settings. The next two fields after the property field specify the range in which to scale the property. By default the range is set from 1% to 10000% of original size; for all practical purposes this amounts to saying "set this property to any size necessary to fit". Note that the "th" property refers to the overall size of the font, and will not adjust *only* the height of the characters. This is in contrast to some of the other text-scaling properties, such as "tw" (text width), which we will look at in more detail shortly.

Click OK and notice that your text expands to fit the frame. Now add some more text and see how the text size adjusts to fit (you may need to press the Esc key to force a screen refresh). Delete all but one character and see that it expands to fit the frame as much as it can.

Note that the Copy Fit is applied as a percentage of the original setting of the particular property. For this reason, if we have a text frame containing two paragraphs, one 12pt and one 20pt, when Copy Fit is applied, their relative sizes will stay the same; i.e., they will each be resized the same percentage. For instance, they might both be reset to 200% to fill the frame, in which case the first paragraph would then appear at 24pt and the second at 40pt.

In some cases, you don't necessarily want the text to fill the frame at all costs; there are minimum and maximum acceptable sizes. You can also use a combination of up to three different properties; you might allow 80-120% for "th", and a slight variation in text width ("tw") as well. If you do opt to allow variation of text width, letter spacing, or other such properties, be sure to only allow a slight variation; otherwise your text will look very distorted and hard to read. It is worth experimenting to find what range is acceptable for your particular application.

A common use for Copy Fit is to ensure that, in marginal cases, text doesn't exceed the bounds of the frame. That is to say, in nearly every case the text will fit, but once in a while (for instance, if someone enters an especially long name) it will be too long for the frame. In this case, the "th" range might be set to something like 90-100%. This means that if the text does not fill the frame, it won't be scaled up, but if it exceeds the frame, it will be scaled to fit down to 90%, but no smaller.

The key Copy Fit properties for fitting text are as follows:

th (text height)	sets <i>size</i> of type; note that this property scales characters <i>proportionately</i> (actually scales <i>both</i> height and width)
tw (text width)	sets <i>width</i> of characters <i>only</i> (squashes/expands width)
tlb (leading)	sets leading (space between lines of type)
twb (word spacing)	sets spacing between words
tlb (letter spacing)	sets spacing between characters



3. Copy Fit and Frame Ties

3.2 Using Copy Fit to Fit Frame to Contents

In addition to using Copy Fit to fit the text to the frame, you can also set some properties of the frame to adjust to variable amounts of text.

Create a text frame. Enter some text into the frame. Select the Frame Tool and select Frame -> Properties -> Copy Fit to Frame... from the top menu to open the Frame Copy Fit dialog box. Now set the first property to "\b". This refers to the bottom edge of the frame. Click the "Update Frame's Real Values" box at the bottom of the dialog box (what this does will be explained in more detail in Section 3.3 below). Leave the other default settings. The frame will now automatically rescale its bottom edge from 1-10000% of its original size to fit its contents as closely as possible. Experiment with entering more or less text to see this in action (you may need to press the "Esc" key to force a screen refresh).

Any of the edges can be specified for scaling, "\t", "\b", "\l", "\r" for any of the individual edges, "\tb" for equal scaling of top and bottom, "\lr" for equal scaling of left and right, or "\tblr" for equal scaling of all edges (resize the entire frame).

Note: Use of more than a few Copy Fits of frame edges on a page can lead to exponential server load and should be avoided. This is more likely to be an issue with text-rich pages.

3.3 Update Frame's Real Values

This is an on/off option that controls how Copy Fit or Frame Ties are applied to the frame. If checked, it means that the frame's base size/position will actually change when changes are applied. In turn, this means future calculations will be applied to the new base size.

With Update Frame's Real Values *off*, you will see blue dashed lines indicating future changes that will be made to the frame on the server when Copy Fit/Frame Ties are applied.

With Update Frame's Real Values *on*, the frame will resize/reposition itself instantly based on its current contents/requirements of current Copy Fit or Frame Tie settings. This function is useful for testing Copy Fit settings as well as for aligning/scaling frames to one another, as shown on page 12.

Using the Update Frame's Real Values option can be dangerous. Because your frame's base values are updated, you can sometimes accidentally create a sort of feedback loop, for instance where two frames continuously resize themselves, causing the job to crash or hang up when the server attempts to process it, or just causing your frames to wind up ridiculously huge. If Update Frame's Real Values is unchecked, you can be sure your properties will stay within the specified ranges.



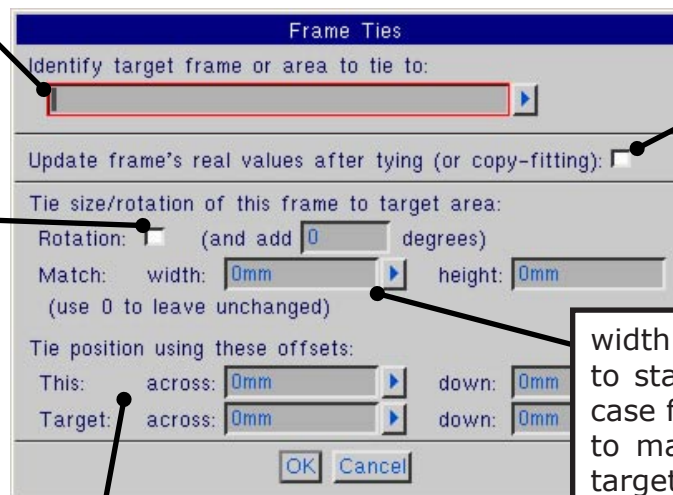
3. Copy Fit and Frame Ties

3.4 Tie Frame to Another

Another useful frame function is the ability to tie one frame to another. You can either link one frame to another at a given point (any corner or center of any edge), or you can tie their width, height, or rotation, so that one frame resizes to match the size (or turns to match the rotation) of another.

Create two frames, then select one and select Frame -> Properties -> Tie Frame to Another... from the top menu to open the Frame Ties dialog box.

Identify target frame (frame to tie to). Takes a Frame Number or a relative number; for instance, if your current frame is frame 3 and you wish to tie to frame 2, you may enter "-1"; relative values make it less likely your frame ties will be disrupted by changes to the stacking order of frames; note you can also tie to page boundaries by entering "?p" or selecting from drop-down list



Update Frame's Real Values option is explained on page 10 of this guide

check box to tie rotation to target frame; option to add any number of degrees to rotation

width and height can be set to static dimensions (in which case frame will reposition itself to match upper left corner of target), or more commonly, can be set to match width/height of target frame or a fraction/multiple of target frame's dimensions (drop-down list)

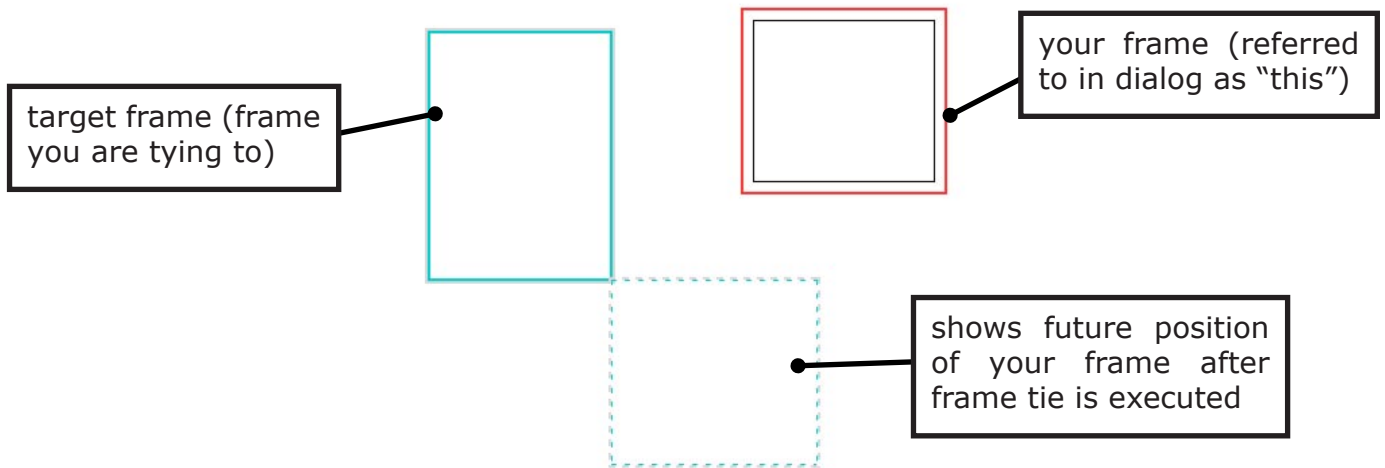
tie position to target frame—can tie any corner or edge to any of target's corners/edges; can also use a distance in these fields to specify distance from upper left corner; for instance, leaving "This" unchanged (0mm each), and setting "Target" fields to 5mm each would reposition this frame to 5mm across and 5mm down from target frame's upper left corner



3. Copy Fit and Frame Ties

3.5 Tie Frame to Another (cont.)

Now, under "Tie position using these offsets" at the bottom of the dialog box, use the dropdown menu for "This" to select "top left" and the dropdown menu for "Target" to select "bottom right". Click OK. Notice the blue dashed box. This is an indicator of where your frame will reposition itself when the final page is formatted on the Web4Print server.



Now try opening the Frame Ties dialog again. Check the Update Frame's Real Values checkbox. Click OK. Note that your frame now moves itself to the tied position. This is a useful feature for aligning and repositioning frames while laying out a document. (See page 10 for more on the implications of using Update Frame's Real Values).



4. Frame Rules

4.1 Creating Frame Rules

Frame rules work basically the same as paragraph rules, and if you have not already, we recommend reading through Section 1: Paragraph Rules in Part III of this guide.

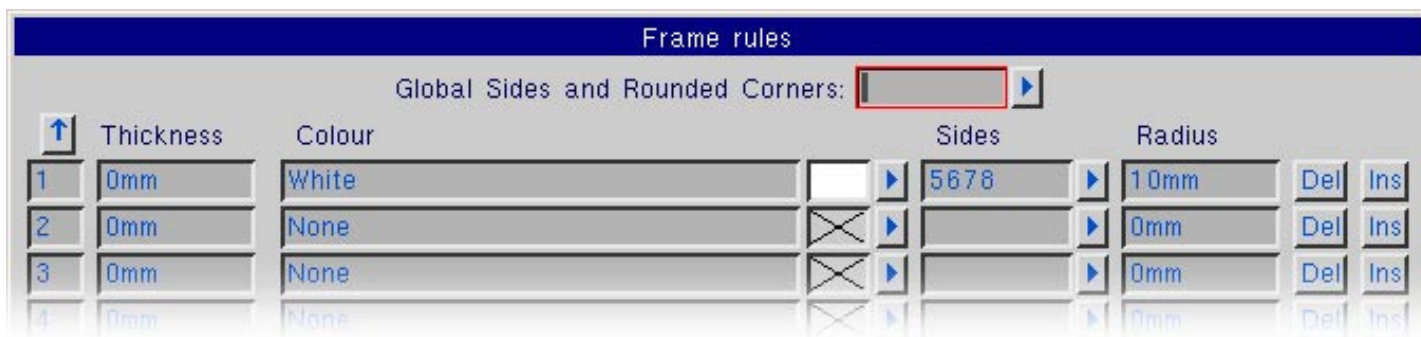
We will take a quick look here at creating frame rules on an image frame. Create a new image frame, load an image into your document, and use that image in your frame (for instructions, see p. 8 in Part II and p. 10 in Part IV of this guide).



Open the Frame Rules dialog box by selecting Frame -> Properties -> Rules... from the top menu (frame must first be selected). This dialog is very similar to the Paragraph Rules dialog box; see detailed diagram on p. 3 of Part III of this guide.

We are going to use frame rules to create a mask to give our image rounded corners. You will recall from the section on paragraph rules in Part III that 5, 6, 7, and 8 are the codes for "outside corners"; the space between a rounded corner and the corner of the frame.

Enter the following into the first Rule Set in the Frame Rules dialog:



"Thickness" is set to "0mm", because the rule itself has no thickness; "Colour" is set to "White"; "Sides" is set to "5678", this applies our rules to all corners—if we had specified "56", for instance, they would have only applied to the top left and top right corners, and "Radius" is set to 10mm—this is the radius of the rounded corners. The diagram on page 15 specifies what each parameter is for the "Sides" field.



4. Frame Rules

4.1 Creating Frame Rules (cont.)

We have now created rounded-corner masks for our image. Hide frame guides (see p. 20, Part II) to get a look at the final image:



A combination of Frame Rules can be used for a variety of effects. Up to 20 rules may be specified for each frame. Using the same image above, we could specify the following set of rules to create a 3D picture-frame effect:

	Thickness	Colour	Sides
1	0.5mm	20%	tblr
2	0.4mm	50%	tl
3	0.4mm	30%	br
4	0.4mm	70%	tl
5	0.4mm	35%	br
6	0.4mm	80%	tl
7	0.4mm	50%	br
8	0.5mm	90%	tblr
9	0.4mm	50%	tl
10	0.4mm	80%	br
11	0.4mm	35%	tl
12	0.4mm	70%	br
13	0.4mm	30%	tl
14	0.4mm	50%	br
15	0.5mm	20%	tblr

These rules will be applied from the outside in. Basically, we are using a series of different rules in shades of gray to give a beveled lighting effect to the picture-frame. Note the color specifications; these can be thought of as percent of white mixed into black, so "100%" would be the same color as "White", "20%" is a very dark gray, "90%" is a very light gray. For more on color specifications, see p. 9, Part II of this guide.



4. Frame Rules

4.1 Creating Frame Rules (cont.)

Let's take a look at our final picture-frame effect:



4.2 Guide to Frame Rules Parameters

These are the characters you enter into the "Sides" field to specify where on the frame the rule is to be applied. These can be used in any combination, such as "tl" to specify top and left sides, or "678" to specify outside corners top right, bottom left, and bottom right, respectively.

	top	bottom	left	right
sides	t	b	l	r

	top left	top right	bottom left	bottom right
rounded corners	1	2	3	4
outside corners	5	6	7	8

Rounded corners are generally used in combination with sides; for instance "tblr12" would yield rules around all four sides, with normal corners on the bottom and rounded corners on the top. If these rules were applied to an image frame, to mask the image where it protrudes from behind the rounded corners, a new rule set would be created with color set to "White" (assuming a white background) and sides set to "56".



4. Other Frame Functions

4.1 Split Frames

In Section 2.2 (p. 7), we looked at using the Convert Columns to Frames function to create multiple frames of equal size. There is a more direct way to do more-or-less the same thing in the Frames menu. Select any frame, then select Frame -> Frame Ops -> Split... from the top menu to open the Split Frames dialog box. The options in this dialog are quite straightforward—just enter number of frames across, number of frames down, horizontal gap between frames, and vertical gap between frames. This is the preferred way to divide frames evenly.

4.2 Duplicate Frame

The Duplicate Frame function is very similar to the Split Frames function described above. Select any frame, then select Frame -> Frame Ops -> Duplicate... from the top menu to open the Duplicate Frames dialog box. Rather than entering how many frames to split horizontally and vertically, as above, you have the option of entering how many frames to copy horizontally and vertically; note that this is total number of copies including the original—if you want one new copy just to the right of your original, you will enter "2" for "Across" and "1" for down. As with Split Frames, you can also specify gap in between these frames.

If you duplicate a text frame, as with Split Frames, the result will be multiple frames containing the same text stream. If you duplicate an image frame which contains an image, the new frames will contain the same image and will have the same scaling options as the original.