

# Chapter 14

## Working with Other Applications

By their very nature, equations are rarely presented by themselves. They are nearly always part of some larger document or presentation. With this in mind, we have made every effort to ensure that EquationBuilder works seamlessly with other applications running under NEXTSTEP.

This chapter presents an overview of possible strategies for integrating EquationBuilder with other applications.

All compatibility information in this chapter is based on the latest available release of the mentioned applications at the time this manual went to press. It can only serve as a guide based on our own experiences, and should not be taken as the final word. Your best bet is to try it yourself and see if things work.

## Object links

EquationBuilder fully supports NEXTSTEP 3.0's Object Links feature, for incorporating externally generated graphics within master documents. If your other publishing apps support object linking, this facility may be the best way to integrate them with EquationBuilder.

Using Object Links, EquationBuilder becomes a <sup>a</sup>source<sup>o</sup> application for other publishing and graphics <sup>a</sup>destination<sup>o</sup> apps. In other words, object linking allows you to directly, intelligently link equations into other applications that support this feature of NEXTSTEP.

When an EquationBuilder expression is linked into the document of another application, the destination app retains link information about that expression, allowing you to re-edit the original source in EqB, percolating changes back to the destination at its request.

The destination app can request updating under several circumstances, e.g. manually, whenever the source is saved, or continually as the source document changes.

Among those applications included in NEXTSTEP 3.0 which support object linking are Edit, Draw, and IconBuilder. As other applications are written or updated, for NEXTSTEP 3.0, support for Object Links will become more and more common.

Linking an equation into a destination app is really quite easy. There are only three steps:

First, select the equation you wish to link *in its entirety*.

- Note

You cannot link only part of an equation into a destination document. EquationBuilder assumes that an equation (or, more accurately, its Equation object) is integral and provides object linking only at that high level.

Remember: to avoid confusion, you must select the entire equation for linking. **Edit**  $\pm$  **Select**  $\rightarrow$  **All** (**Command-a**) is a handy shortcut.

Next, pick **Edit**  $\pm$  **Copy** (**Command-c**).

Finally, switch to your destination app, set the insertion point, if applicable, and select **Edit**  $\pm$  **Link**  $\pm$  **Paste**  $\rightarrow$  **Link** (**Command-V**).

The selected equation should now appear in the destination document. Using the destination app's Link Inspector (**Edit > Link > Link Inspector...**), you can modify the update interval and otherwise control the behavior of the new object link.

- Note

Setting the link to update continually may cause a performance hit to EqB, depending on your particular machine configuration. If you find this to be the case, an appropriate strategy is usually to update whenever the source is saved: when you are finished editing the linked equation (however temporarily), saving the document sends changes back to the destination app which updates itself accordingly.

For more information about Object Links, please refer to the appropriate NEXTSTEP documentation.

## **Drag-and-drop**

Because EquationBuilder's native file format is Encapsulated PostScript, in principle it should be possible to drag-and-drop .eqn files into other applications. Applications like Concurrency™ 1.0, FrameMaker® 3.0, PasteUp™ 1.0, and Mesa™ 1.0 all recognize .eqn files and properly image them.

Other applications, like Adobe Illustrator<sup>®</sup> 3.0, Create<sup>™</sup> 1.0, and PresentationBuilder<sup>™</sup> 1.0 will only accept .eqn files via drag-and-drop if their file extensions are changed to .eps.

Some applications like Diagram!<sup>™</sup> 1.1 and Mail accept the .eqn file, but do not image the file as an equation. If the file extension is changed to .eps, the equations will image properly.

In general, if you are having trouble getting equations into another application, change the file extension to .eps and try again. Chances are that things will then work properly.

## Copy and Paste

EquationBuilder can provide both Encapsulated PostScript and TeX to other applications. Because the receiving application may not know which form you prefer, you may end up with the wrong one. If this happens, use one of the **Copy As** options to explicitly specify which form of the equation you want. (See Chapter 20 for more information.)

- **Note**

There is a bug in FrameMaker 3.0 that corrupts Encapsulated PostScript when pasting. This sometimes leads to PostScript errors when printing. The workaround is to **Import**  $\frac{1}{4}$  .eqn files, rather than paste them in.

Although many applications allow you to paste EPS files in, only a handful allow you to copy and paste them out again. Among these are Adobe Illustrator, Create, and Edit.

If you are able to copy an equation as EPS, you will then be able to paste it back into EquationBuilder for editing.

Working with TeX is much easier since nearly all applications support copy-paste of ASCII (which is what makes up TeX documents).

## **Embedded equations**

A fourth alternative, which is currently supported by FrameMaker 3.0, Concurrence 1.0, and PasteUp 1.0, allows you to embed an EqB equation within a document. After importing an .eqn file, such as by drag-and-drop, you can just double click on its image to re-edit it in EquationBuilder. (Note that with FrameMaker, you will need to specify EquationBuilder as an inset editor. See the

FrameMaker manual for details).

Embedding an equation is similar to using object linking; however, special features such as continuous updating are not supported.

## **In-line equations**

Unfortunately, at the time of this writing, only PasteUp automatically positions equations within lines of text so that the baseline of the equation exactly matches the baseline of the text. Until very recently, there had been no way for an application to know how far to automatically shift the equation to properly align with the base of the text.

However, an extension has been added to the EPS specification that stipulates how such information can be included. EquationBuilder already supports this new extension. Unfortunately, it may take some time for support of this new standard to spread to other applications. If in-line equations are important to your work, you should consider contacting the developers of the applications you most often use to inform them of the utility of the new standard. Please contact us if you (or they) would like more information.

## Workspace Manager contents inspector

EquationBuilder supplies the Workspace Manager with a contents inspector for .eqn files.

Modeled after NeXT's .eps contents inspector, the Workspace Manger uses the supplied contents inspector to display the EPS image of any selected .eqn file from within the Workspace Manager's own inspector panel.

Please refer to the Workspace Manager's documentation to learn more about working with the contents inspector.

- Note

EquationBuilder supplies its contents inspector as the EQNInspector.bundle contained within the EquationBuilder.app file package. To facilitate operation of the contents inspector, you need to install EquationBuilder.app (or at least EQNInspector.bundle) in an application search path recognized by the Workspace Manager, e.g. either ~/Apps or /LocalApps.



