

8

Finding Information

Using the project find panel

Searching for project symbols

Searching for any text

Looking up reference
documentation

Looking up man pages

Replacing code all at once

Replacing code sequentially

Attempt the end, and never stand to doubt;
Nothing's so hard, but search will find it out.

Robert Herrick

As the power of endurance weakens with age, the urgency
of the pursuit grows more intense...And research is always
incomplete.

Mark Pattison

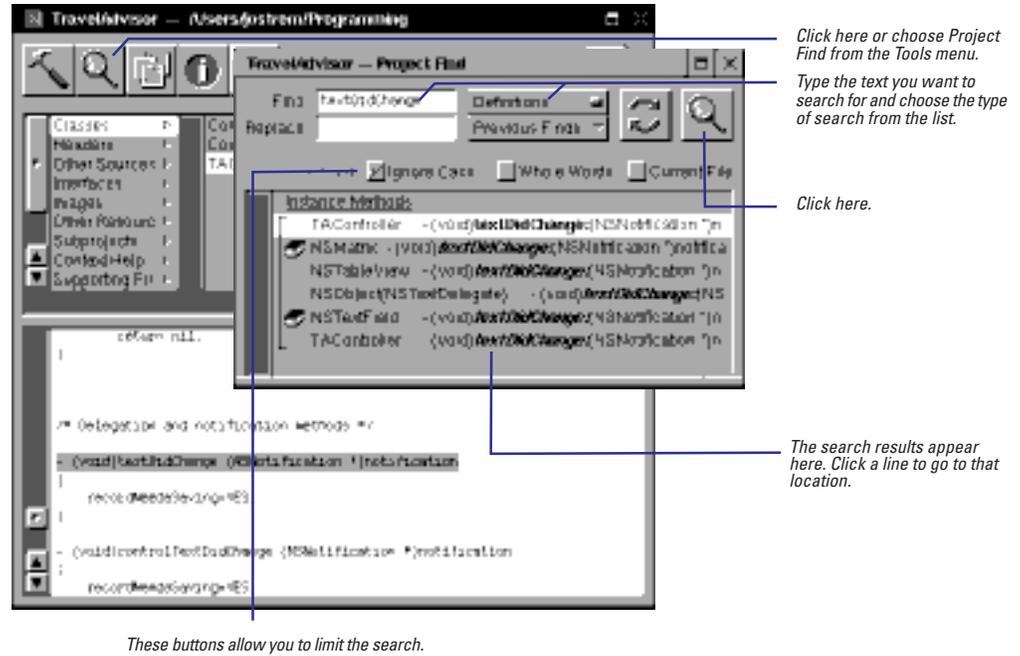
Where ask is have, where seek is find,
Where knock is open wide.

Christopher Smart

Using the project find panel

- 1 Click the Project Find button in Project Builder's main window.
- 2 Enter text to search for in the Find field.
- 3 Choose the type of search from the pop-up list.
- 4 Click the Find button.

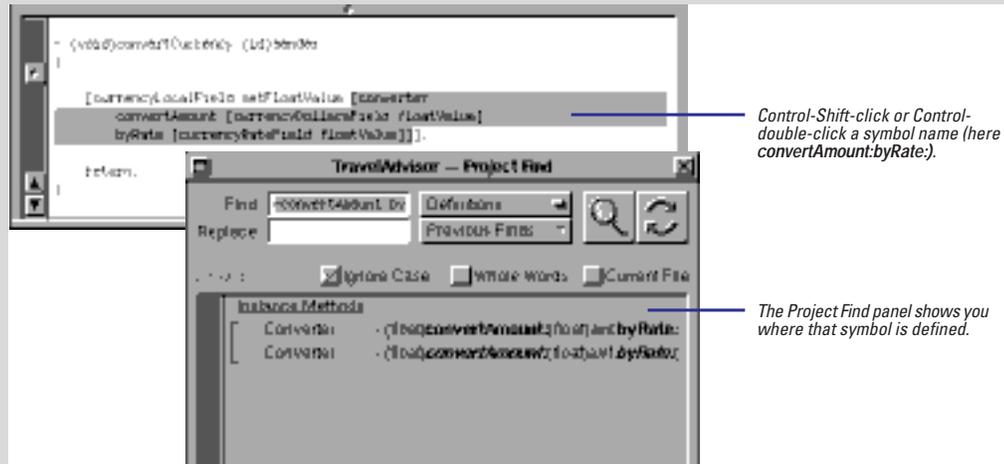
The Project Find panel isn't just a find panel—it's an information source. It searches your entire project, including the frameworks. It can tell you what type of symbol (such as class, method, or variable) the string you entered is, how that symbol is defined, where that symbol is used, and if there's documentation. Then, like any good find panel, it takes you right where you want to go.



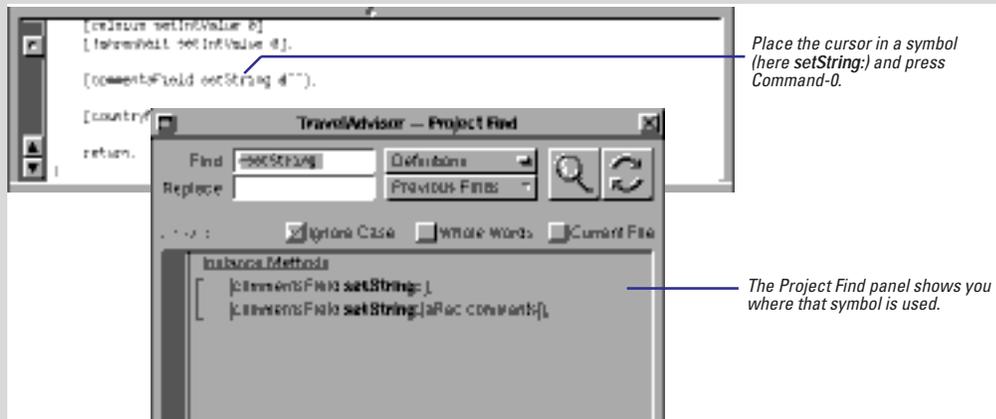
The Project Find panel makes use of the project index. If your project is not indexed, you can only perform textual searches. For more information on the project's index, see Chapter 1.

Project Find Shortcuts

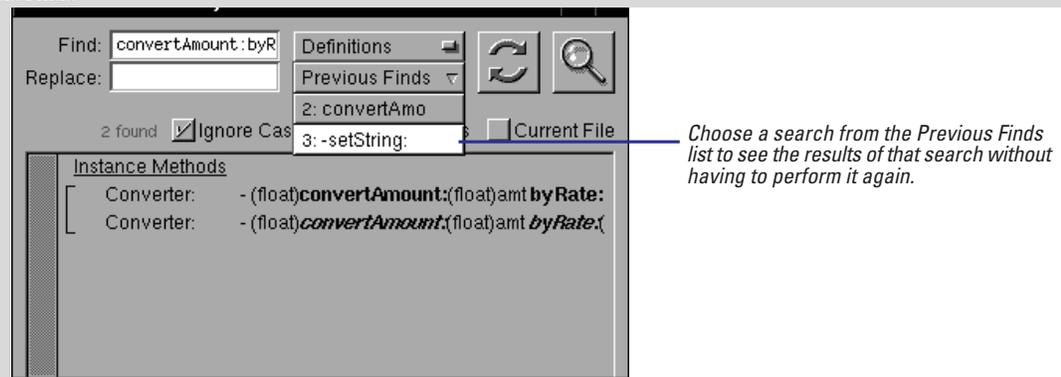
Definition Search Shortcut



Reference Search Shortcut



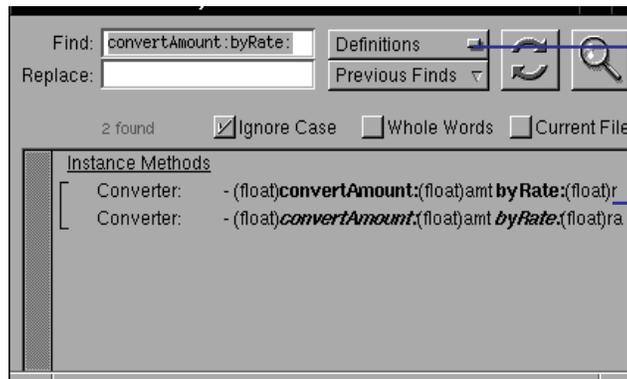
Previous Finds



Searching for project symbols

- ▶ To find out how and where a symbol is defined, choose **Definition search** in the Project Find pop-up list.
- ▶ To find where a symbol is used, choose **Reference search** in the pop-up list.

If you need to look up the syntax of a method or the type of a variable, perform a Definitions search in the Project Find panel. Project Find looks for any and all symbols named with the specified string and then shows both the line where the symbol is declared and where it is defined.



Choose Definitions from the pop-up list to find the symbol's definition.

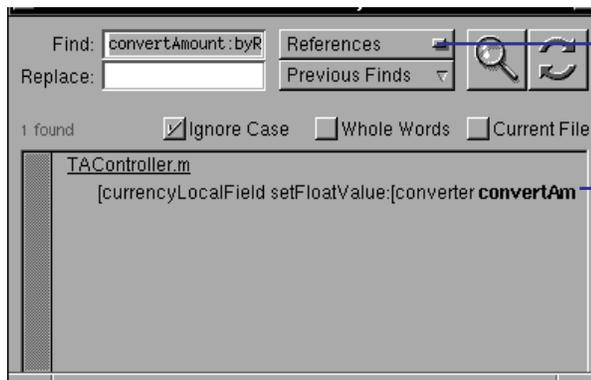
The results are classified by symbol type and contain the locations of both declarations and implementations.

Quick Find

If you know the name of a symbol, you can quickly and directly ascertain where it is defined or referenced. Type a known class, protocol, method, function, macro, or type in the Find field using a special syntax described below. Then click the Find button to display definitions.

Class	@class
Protocol	<protocol>
Instance method	-method
Class method	+method
Method in particular class	[class method]
Function	function()
Macro	#macro

Sometimes, you want to know where a symbol is used rather than where it is defined. In these cases, you should choose References from the panel's pop-up list. The Reference search will show you each line of code that references the specified symbol. Click one of the lines to jump to that location.



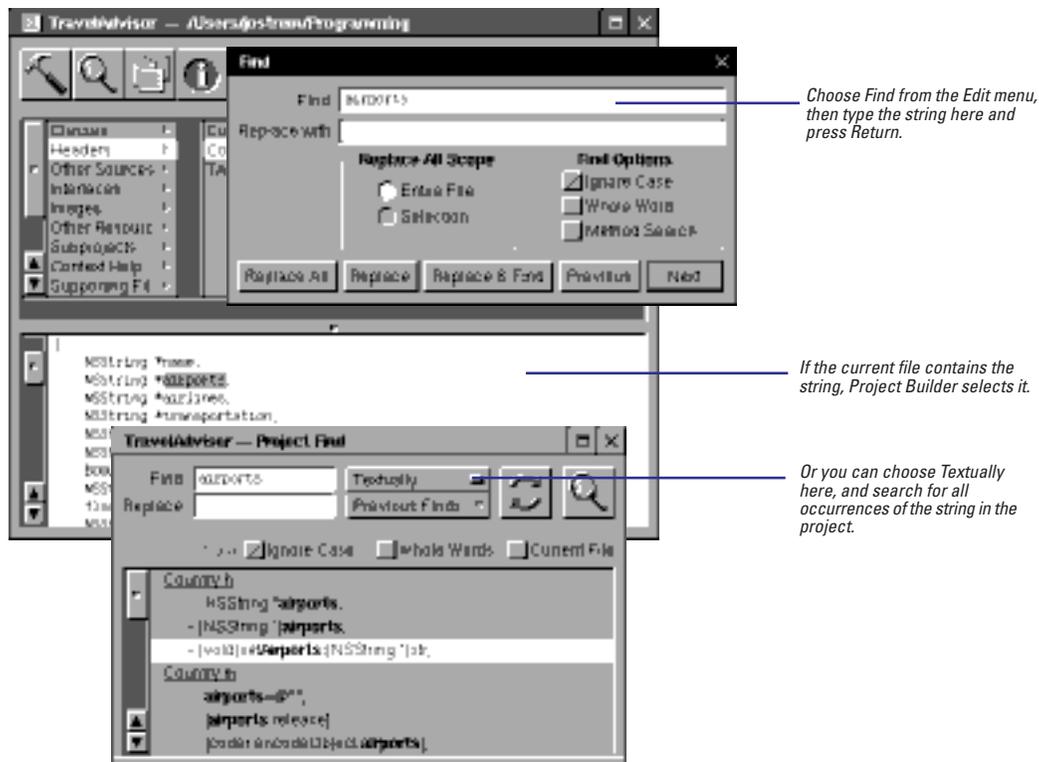
Choose References from the pop-up list to find where the symbol is referenced.

The results show all uses of the symbol within your source code.

Searching for any text

- ▶ To search for a string in a particular file, choose Find from the Edit menu.
- ▶ To search for a partial string within a file, type Control-s to use the incremental search facility.
- ▶ To search for a string project wide, use the Project Find panel and choose searching Textually.

Sometimes it's better to perform a text-based search than a language-based search. For example, if you know you're in the correct file and you just want to go to a different place in that file, you can use the text-based search within a file. Just choose Find from the Edit menu or type Command/Control-f, and the standard OpenStep find panel is displayed.



Choose Find from the Edit menu, then type the string here and press Return.

If the current file contains the string, Project Builder selects it.

Or you can choose Textually here, and search for all occurrences of the string in the project.

Customizing Searching

Project Builder's Preferences panel allows you some control over incremental searching and over the Project Find panel. To see these preferences, choose Preferences from the Info menu and choose Find from the pop-up list.

The first two groups of preferences control incremental searching. Turn on the wrapping preferences if you want incremental searching to wrap around to the beginning of the file when it reaches the end.

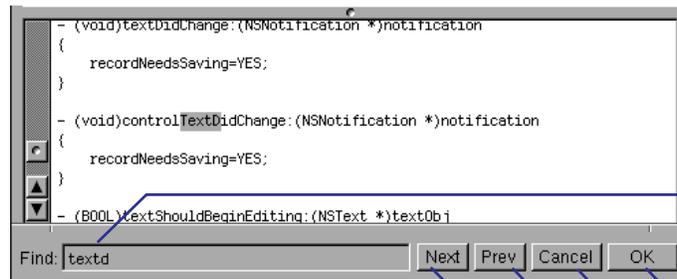
Allow searching for newlines lets you enter a newline in the search string. By default, typing a newline will exit the incremental search window.

If Ignore case is set, incremental searching ignores the case of the characters you type, instead searching for both the upper and lower-case version of the letter. If you want a case-sensitive search, turn off this preference.

The Language-based find preferences control the searches you perform from the Project Find panel. If you normally use the right mouse button to display the menu in OPENSTEP applications, you can enable the right mouse button in Project Builder as an alternative to the Control-Shift-clicking a symbol. (It performs a Definition search on that symbol.) The Order results by type options groups definition searches by the file in which they were found rather than by the Objective-C symbol type.

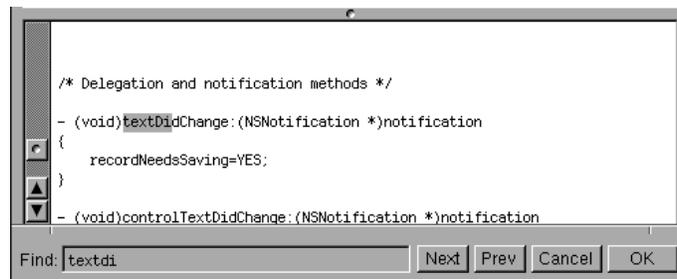
Note: When you choose Textually in the Project Find panel, only your project's files are searched. Frameworks and documentation aren't searched.

Another nifty way to get to where you want to go is to use the incremental search and replace facility. Incremental searching is a quick way to search if you know you're in the right file and you only know part of the symbol's name (or you want to type as few characters as possible).



Press Control-s, then begin typing a string.

These buttons allow you to search forward or backward, to cancel the search, or to end it.



As you continue typing, the selection moves. When you want to stop, press Return or click the mouse anywhere.

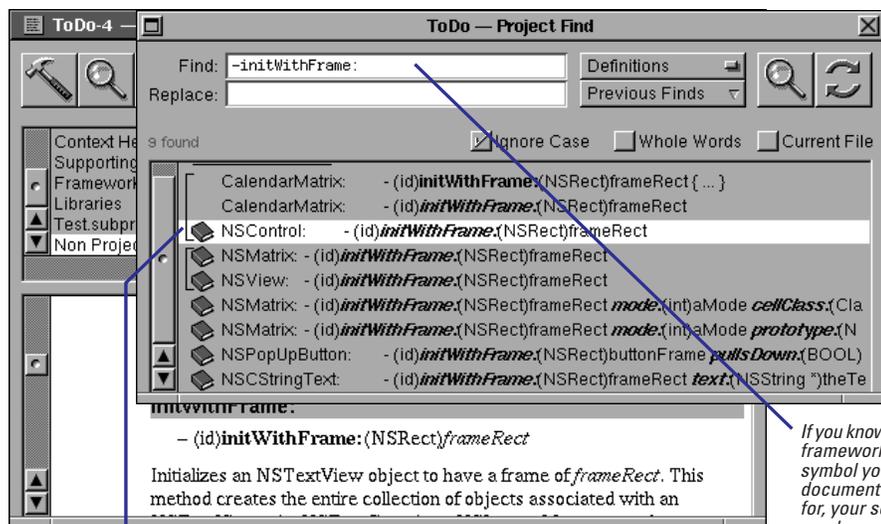
Tip: You can also use incremental search to navigate through the hits in the Project Find panel. Just type Control-s while the Project Find window is key.

In addition to the file-based Find panel and the incremental search facility, the Project Find panel can also perform text-based searches. This might be useful when you're trying to find text inside a comment and you don't know which file contains the comment.

Looking up reference documentation

- 1 **Open the Project Find panel.**
- 2 **Perform a search for definitions of project symbols.**
- 3 **Click the book icon to the left of a search-result item.**
- 4 **Examine the documentation displayed in the code editor.**

The Project Find gives you access to documentation on the OpenStep frameworks imported by your projects. For applications, these frameworks always include the Application Kit and Foundation. By linking descriptions in the documentation to individual results of searches for symbol definitions, Project Find enables you to navigate quickly to a particular description.



The book icon indicates that reference documentation on the class, protocol, method, function, or other type is available.

If you know which framework symbol you want documentation for, your search can be narrow and explicit.

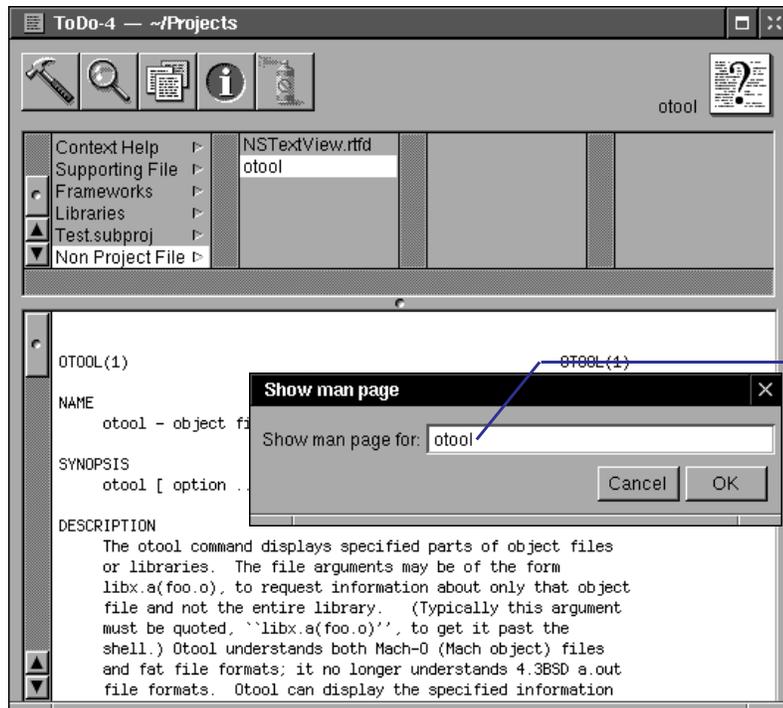
The related passage in the documentation appears in the code editor. From here you can browse through the rest of the file; if the file you're viewing is a class or protocol specification, you can go to the beginning of the file to read an overall description of the class (or protocol) and its methods. Project Builder puts documentation files in Non Project Files so you can access and examine these files throughout a coding session. As with code files, you can display documentation in a separate tear-off window or in an additional view in the code editor.

Looking up man pages

- 1 Choose **Edit ► Find ► Man Page**.
- 2 In the “**Show man page**” panel, **type the name of a standard C library routine, or command-line program**.
- 3 Click the **OK** button.
- 4 Examine the man page in **Non Project Files**.

For access to OPENSTEP documentation other than framework reference, access the Digital Librarian bookshelf **NextDeveloper.bshlf**. This bookshelf also provides instructions for creating your own bookshelf and customizing it with documentation targets.

Rhapsody includes the man pages facility, which displays information on standard C library routines, command-line programs, and (for Mach), custom programming tools provided by NeXT. Project Builder gives you access to this facility, eliminating the need to switch contexts in order to issue the **man** command at a Terminal shell.



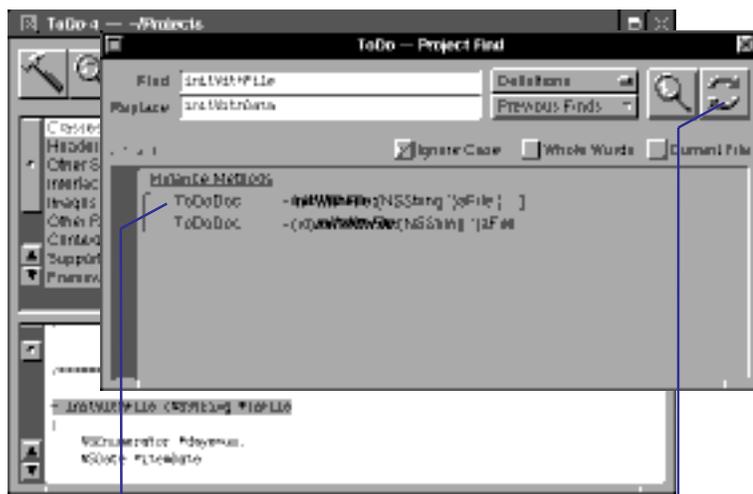
You must type the complete name of the routine, tool, or utility. Name completion is disabled in this field because these names are not part of the project.

The related man page appears in the code editor. Project Builder puts referenced man pages in Non Project Files so you can access and examine these files throughout a coding session. As with code files, you can display man pages in a separate tear-off window or in an additional view in the code editor.

Replacing code all at once

- 1 **Open the Project Find panel.**
- 2 **Perform a search for symbol definitions or references, or for text strings.**
- 3 **Type in the Replace field the text to replace the entry in the Find field.**
- 4 **Replace the text globally or selectively:**
 - ▶ **Globally:** Click the Replace button.
 - Or*
 - ▶ **Selectively:** Select the items in the search results to replace, then click the Replace button.
- 5 **Confirm the replacement.**

The Project Find panel allows you to replace symbols in your code or other text at one time. Use the Project Find panel when you prefer simultaneous replacement project-wide rather than sequential replacement within a file.

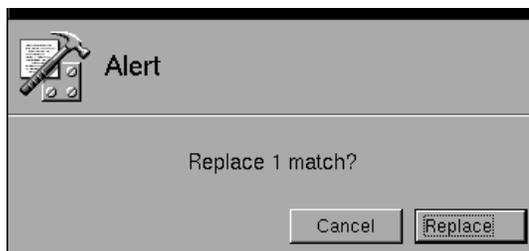


You can select items and review them to determine if they should be replaced. Shift-click to unselect items.

The Replace button

Select contiguous multiple items by dragging across them; select non-contiguous items by Shift-clicking. If you want the replacement made to every item in the search results, leave all items unselected.

When you click the Replace button, Project Builder prompts you for confirmation before performing the replacement.



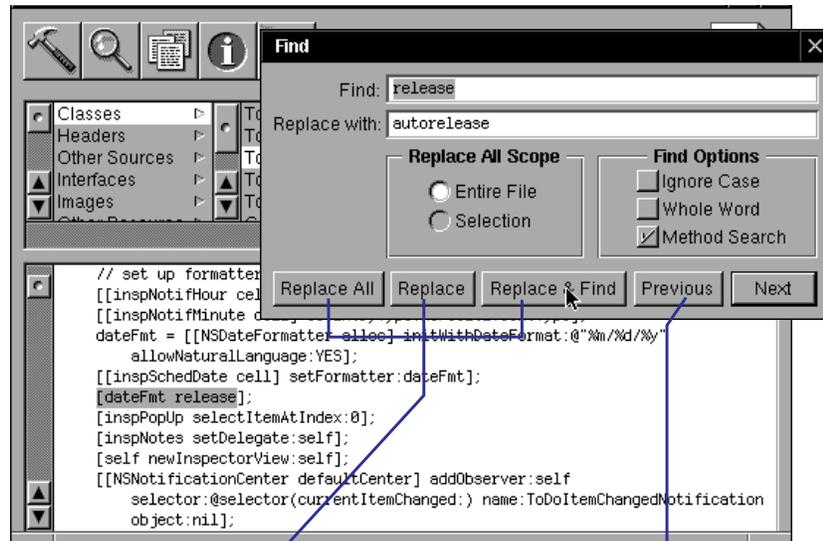
See the following task, “Replacing code sequentially,” for this alternate search-and-replace technique.

You can undo replacement changes with successive Edit ▶ Undo ▶ Undo commands.

Replacing code sequentially

- 1 **Choose Edit ► Find ► Find Panel.**
- 2 **Type the string of text to find in the Find field.**
- 3 **In the Replace field type the string of text to replace what's in the Find field.**
- 4 **Click Next.**
- 5 **Review the highlighted text in context, replace (or don't replace) the text, and:**
 - **Go on to the next occurrence.**
Or
 - **Conclude the find session.**
Or
 - **Replace all occurrences to the end of the file.**

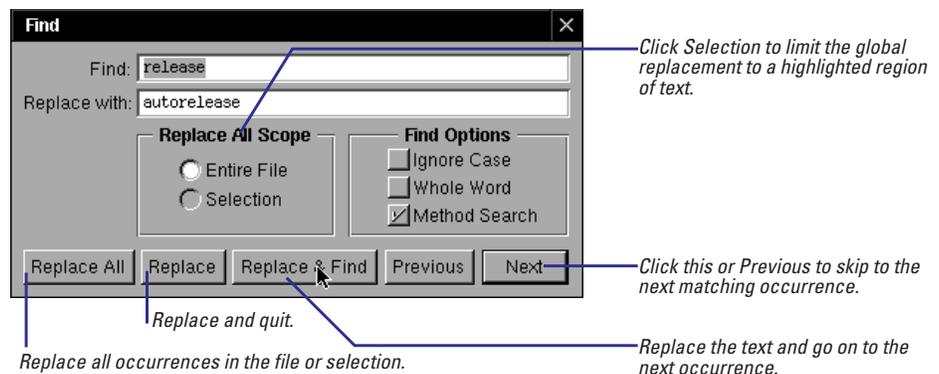
The Find panel differs from the Project Find in a couple of significant ways. It limits the text that it replaces to the file currently displayed in the code editor (or to a selected region). And it allows you to replace code or other text sequentially by highlighting each successive find in the code editor, thereby giving you the opportunity to evaluate the change in context before making it.



To replace code, click one of these buttons.

Click to begin the search in reverse direction.

Once you begin a search, you have several replacement options at each matching occurrence of text:



You can undo replacement changes with successive Edit ► Undo ► Undo commands.