

SML Debugger and Script Timer

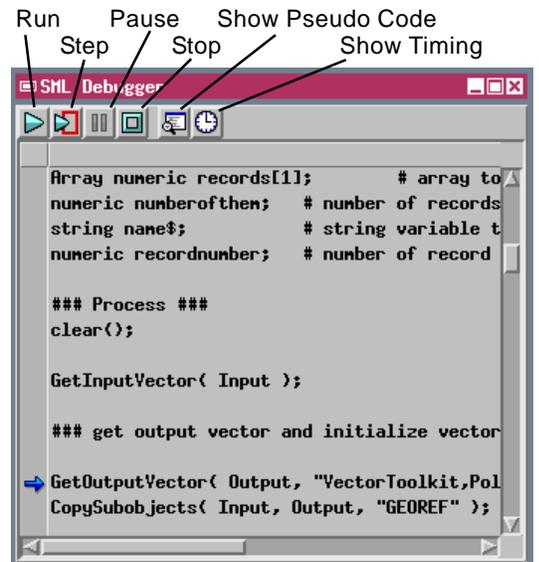
The SML Debugger window provides a specialized script execution environment designed to help you analyze and debug a complex script. You can also use it to evaluate the speed and efficiency of different parts of your scripts.

The SML Debugger window shows the script and provides icon buttons that let you run the script or step through it one statement at a time. As the script executes, an arrow pointer moves in the left column of the window to show the statement currently being executed. (Experienced programmers may wish to turn on the Show Pseudo Code icon button to expand the script view to show and step through assembly pseudocode generated for each statement.) When you step through a script with processing loops, the pointer steps through a loop as many time as the loop is repeated. You can also insert temporary break points by clicking in the left column; each break point is shown by a red button symbol. Execution of the script stops automatically whenever a break point is encountered. You can remove a break point by clicking on its symbol.

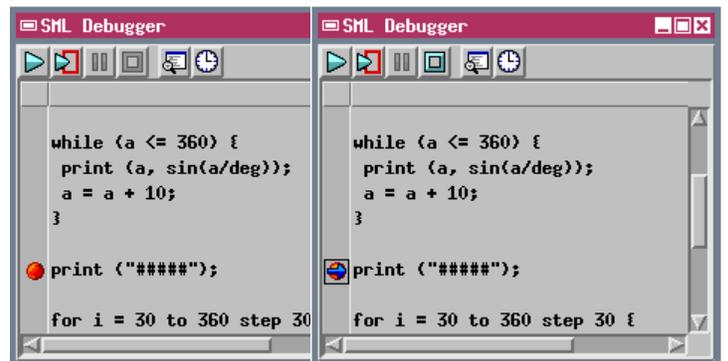
If the script uses the \$include preprocessor command to include another SML script, you can click on an icon in the left column to expand the script pane to show the included script statements.

When you turn on the Show Timing option and run the script, the left column of the SML Debugger window also shows the execution time (in seconds, to hundredth-second accuracy) for each script step. Cumulative times are shown for repeated processing loops. For user-defined functions and procedures, cumulative times for one or more function calls are shown with the function definition, not where the function is called in the script.

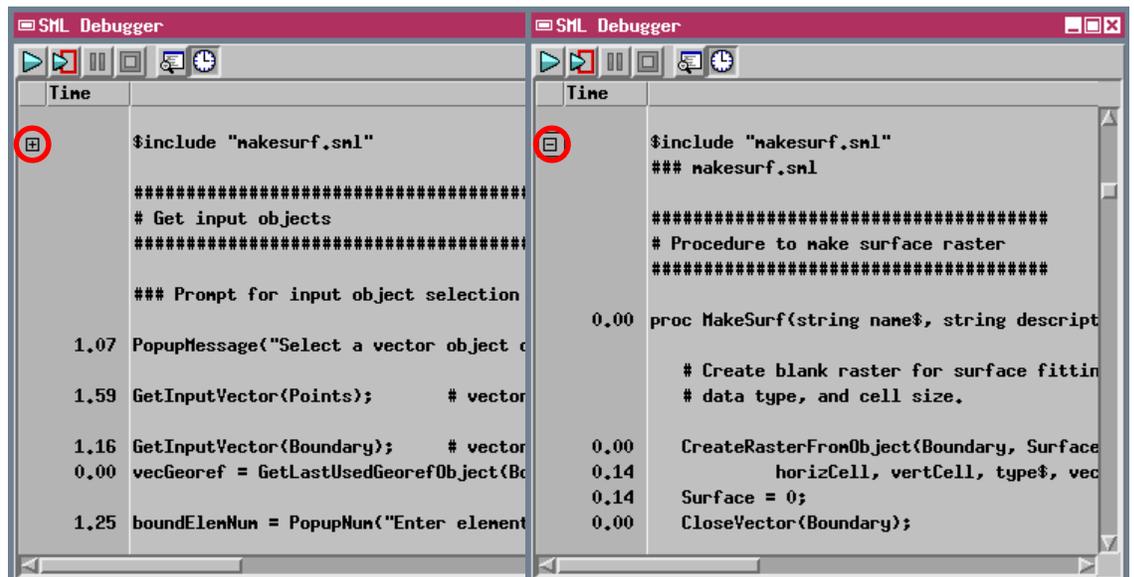
Times less than 0.005 second (typical for simple assignment statements) are shown as 0.00 in the timing column. If you think a script is taking an excessively long time to run, you can use the script timings to see what parts of the script are taking the longest times to execute and assess where you may be able to increase the script's speed and efficiency.



Open the SML Debugger window using File / Open from the SML window.



Left-click in the left column to place a temporary break point (indicated by red button symbol, left above); script execution stops when it reaches the break point (above right).



Click the + icon to expand the script view to see the code and timings for an included script.