NetLogo Profiler Extension

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If your code runs slowly, you want to know why.

A profiler measure how many times subroutines in your model are called and how long each call takes.

NetLogo ships with an "experimental" profiler extension. So you can use it like any extension:

extensions [profiler]

- profiler:start Instructs the profiler to begin recording user-defined procedure calls.
- profiler:stop Instructs the profiler to stop recording user-defined procedure calls.
- profiler:reset discard all collected data.
- profiler:report Reports a string containing a breakdown of all user-defined procedure calls.

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to profile
  setup
  profiler:reset
 profiler:start
  repeat 20 [go]
 profiler:stop
 let _fname "C:/temp/report.txt"
  carefully [file-delete _fname] []
  file-open _fname
  file-print profiler:report
  file-close
end
```

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Inclusive time is just the time it takes to run a procedure. Exclusive time tries to exclude the time taken by other called procedures.

Inclusive time from from entry to exit of the procedure, including time spent in *other* user-defined procedures that it calls.

Exclusive time from from entry to exit of the procedure, excluding time spent in *other* user-defined procedures that it calls.

profiler:exclusive-time *procedure-name* Reports the exclusive time, in milliseconds, that procedure-name ran.

profiler:inclusive-time *procedure-name* Reports the inclusive time, in milliseconds, that *procedure-name* ran.

- Calls column the number of times a user-defined procedure was called. Incl T(ms) column inclusive time, in milliseconds, it took for the procedure call to complete.
- Excl T(ms) column exclusive time, in milliseconds, spent in each user-defined procedure.
- Excl/calls column estimate of the exclusive time, in milliseconds, per call.

The NetLogo profiler helps you see how user-written procedures are performing.

If you don't break your code up into procedures, you will not get much help from the profiler.

This example is from the documentation http:

//ccl.northwestern.edu/netlogo/docs/profiler.html
Sorted by Exclusive Time Name Calls Incl T(ms) Excl/calls
CALLTHEM 13 26.066 19.476 1.498 CALLME 13 6.413 6.413 0.493
REPORTME 13 0.177 0.177 0.014

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Sorted by Number of Calls Name Calls Incl T(ms) Excl T(ms) Excl/calls CALLTHEM 13 26.066 19.476 1.498 CALLME 13 6.413 6.413 0.493 REPORTME 13 0.177 0.177 0.014

profiler: calls *procedure-name* Reports the number of times that *procedure-name* was called. If procedure-name is not defined, then reports 0.