

NAME

odebug – Source-level debugger for Occam programs

SYNOPSIS

odebug *file*

DESCRIPTION

This manual page documents the source-level debugger of the **SPOC (Southampton Portable Occam Compilation) system**. **odebug** is a Unix shell script file, which executes the **GNU gdb** debugger preparing it (with a predefined set of macro commands) for debugging Occam programs. When the script is run it must be supplied with the name of an executable file which has been produced by running **occ2c** with a **-g** option and then compiling the generated C using **gcc** with a **-g** option. The debugger runs the program, executing the C preamble and then stops at the first line of occam, displaying the source for that line.

A tutorial describing use of the debugger can be found in the *SPOC User Guide*.

The most useful commands available are summarised below, some are standard **gdb** commands, others are defined in the script **occam.gdb** which is distributed with the system.

break [*file:*] *line*

Set a breakpoint at line *line* (in *file*).

break [*file:*] *function*

Set a breakpoint at *function* (in *file*). The specified function name must be that of the C function generated for the occam subroutine, the mappings are given by the **olistsubs** command.

step Executes occam line by line.

cont Continues execution until next breakpoint

list [[*file:*] *line*]

Lists code around current line of execution or at *line* (in *file*) if those options are supplied.

rerun Restarts execution of occam program

oall Displays values of all occam variables in scope

oids Displays values of a list of occam identifiers

A space separated identifier list should be placed in ID using the set command before this command is called. For example:

```
set ID="a b fred"
```

```
oids
```

ostep Steps through the occam program and displaying the new values of the currently selected occam variables.

oframe Displays values of all occam variables declared in current stack frame.

oup Displays values of all occam variables declared in caller's stack frame. This can be called repeatedly to progress further away from the current stack frame.

odown Displays values of all occam variables declared in callee's stack frame. This can be called repeatedly to return back towards the current stack frame.

oshow Repeats most recent occam variable dump.

olistsubs

Lists all occam subroutines in the module and gives the C function names which they map to. This is useful for placing breakpoints on entry to a specific routine.

onext Steps through the execution of the program stopping at the start of each freshly scheduled process.

BUGS

Bugs?