NAME

seq.open − OPEN/CAESAR connection for traces encoded in the SEQ format

SYNOPSIS

seq.open *[seq_options] filename[* **.seq***] [cc_options] prog[***.a|.c|.o***] [prog_options]*

DESCRIPTION

Taking as input the graph *filename***.seq**, which represents a set of one or more execution traces encoded in the simple SEQ format (see the **seq**(LOCAL) manual page for a definition of this format), and an OPEN/CAESAR program *prog*[**.a|.c|.o**], **seq.open** generates an executable program *prog* by performing appropriate calls to the C compiler. Finally, *prog* is executed.

According to the principles of the OPEN/CAESAR architecture, *prog* is obtained by combining three different modules:

- the graph module is obtained by scanning *filename***.seq**
- the storage module is the standard OPEN/CAESAR library
- the exploration module is *prog*[**.a|.c|.o**]

The **seq.open** tool was designed to handle very large execution traces, such as those obtained by a random execution of a real system. For this reason, **seq.open** works on-the-fly, without storing in memory the entire contents of *filename***.seq**. In order to speed up the exploration, an hash-based cache table of bounded size is used to avoid multiple computations of label strings and successor transitions.

PROCESSING OF THE EXPLORATION MODULE

The exploration module *prog*[**.a|.c|.o**] is supposed to contain an OPEN/CAESAR application program, such as **exhibitor**, **evaluator**, **terminator**...

The exploration module can be supplied in three different forms. It can be either an archive file (with **.a** suffix), or a source C program (with **.c** suffix) or an object code file (with **.o** suffix).

If *prog***.a** is not present in the current directory, **seq.open** attempts to fetch it in the OPEN/CAESAR binary library **$CADP/bin.‘arch‘**.

If *prog***.c** is not present in the current directory, **seq.open** attempts to fetch it in the OPEN/CAESAR source library **$CADP/src/open_caesar**.

If *prog***.o** is not present in the current directory, **seq.open** attempts to fetch it in the OPEN/CAESAR binary library **$CADP/bin.‘arch‘**.

If no suffix (**.a**, **.c**, **.o**) is specified on the command line for the exploration module *prog*, **seq.open** will make successive attempts to fetch this exploration module: first, as a source C program with **.c** suffix; then as an archive file with **.a** suffix; finally as an object code file with suffix **.o**.

DETERMINATION OF INCLUDE OR LINK MODE

Only the ‘‘link mode’’ of OPEN/CAESAR is supported by **seq.open**.

OPTIONS

The *cc_options*, if any, are passed to the C compiler.

The *prog_options*, if any, are passed to *prog*.

The following options *seq_options* are currently available:

-seqno *number*

Select the *number*-th sequence in *filename***.seq** as the only sequence to be considered during exploration. *number* should be a positive integer. By default (if this option is not present on the command-line) or if *seqno* is equal to zero, all sequences contained in *filename***.seq** will be considered. If *filename***.seq** only contains a single sequence, using option '**-seqno** 1' may speed up the execution by avoiding a preliminary scan of the sequence file.

-cache *number*
Select the size of the hash-based cache table used to avoid recomputations of label strings and successor transitions. This size defines the number of entries in the cache table. If *number* is not a prime, it will be replaced by the closest higher prime number. By default (if this option is not present on the command-line), the cache size will be 49999.

-stat Print statistics about the usage of cache, such as the number of failures (the requested data is not stored in the cache) and the number of successes (the requested data is already in cache) every time a sink state is reached (i.e., at the end of each sequence). Not a default option.

EXIT STATUS

Exit status is 0 if everything is alright, 1 otherwise.

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OPERANDS

*filename***.seq**	sequence graph (input)
*prog***.a**	exploration module (archive, input)
*prog***.c**	exploration module (source, input)
*prog***.o**	exploration module (object code, input)
prog	executable program (output)

FILES

$CADP/com/seq.open	"seq.open" shell script
$CADP/bin.'arch'/libseq_open.a	"seq.open" static library
$CADP/incl/caesar_*.h	OPEN/CAESAR interfaces
$CADP/bin.'arch'/libcaesar.a	OPEN/CAESAR library
$CADP/src/open_caesar/*.c	exploration modules (source)
$CADP/bin.'arch'/*.a	exploration modules (archive)
$CADP/bin.'arch'/*.o	exploration modules (object code)

SEE ALSO

seq(LOCAL), **lotos.open**(LOCAL), **exhibitor**(LOCAL)

Additional information is available from the CADP Web page located at http://cadp.inria.fr

Directives for installation are given in files **$CADP/INSTALLATION_***.

Recent changes and improvements to this software are reported and commented in file **$CADP/HISTORY**.

BUGS

Please report bugs to Hubert.Garavel@inria.fr