

CoCoA-5 - Bug #1794

Strange bug: demo-Osaka2015

16 Mar 2024 12:13 - John Abbott

Status:	Resolved	Start date:	16 Mar 2024
Priority:	Normal	Due date:	
Assignee:		% Done:	70%
Category:	bug	Estimated time:	0.00 hour
Target version:	CoCoA-5.4.2	Spent time:	1.00 hour
Description			
I observe differing output with the test demo-Osaka2015 when compiled using clang and with debugging active. The problem seems not to arise with g++. Platform is Linux (Ubuntu 23.04).			

History

#1 - 16 Mar 2024 12:16 - John Abbott

My g++ reports version info gcc version 11.4.0 (Ubuntu 11.4.0-1ubuntu1~22.04)
My clang reports version info Ubuntu clang version 14.0.0-1ubuntu1.1.

Is this bug reproducible on other platforms?

My current guess is that a random number generator behaves differently... but I've not yet looked at the code!

#2 - 20 Mar 2024 22:41 - John Abbott

- Status changed from New to In Progress
- % Done changed from 0 to 10

The cause is not too surprising: demo-Osaka2015.cocoa5 uses a random example (on line 72). Evidently, with debugging active, some random numbers are used internally, and this affects the publicly visible sequence.

BTW I have verified that the problem exists **also** when compiling with g++ in debug mode. Curiously, the .cocoa5 files contains a comment saying what the random values are... but the comment is not the same as what is actually generated...

Ideally we would replace the randomness by specific "random" numbers.

#3 - 21 Mar 2024 09:39 - Anna Maria Bigatti

John Abbott wrote:

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For some reason (I cannot remember, but I think I knew it when it first happened, recently) the random values I'm getting now differ from the original version of the test (in the comment). I didn't think it depended on clang, so I changed the expected output.

Ideally we would replace the randomness by specific "random" numbers.

OK, I agree, especially if that changes with debugging on/off. Should I do it?

#4 - 19 Apr 2024 22:10 - John Abbott

- *Status changed from In Progress to Resolved*

- *% Done changed from 10 to 70*

random is called harmlessly in `exbugs.cocoa5`.

We should check **ErrMesg.cocoa5** and **test-ApproxSolve.cocoa5**; it is not clear to me that random is used harmlessly in these files!!