

CoCoA-5 - Feature #711

External Libs: print credits?

18 May 2015 10:59 - John Abbott

Status:	Closed	Start date:	18 May 2015
Priority:	Normal	Due date:	
Assignee:	Anna Maria Bigatti	% Done:	100%
Category:	External Libs	Estimated time:	4.40 hours
Target version:	CoCoA-5.2.0 spring 2017	Spent time:	4.45 hours
Description			
At the Normaliz workshop I noticed that two other pieces of software printed out "credits" when external libraries were used. Should CoCoA do something similar?			
Related issues:			
Related to CoCoA-5 - Feature #185: Banner for CoCoA-5		Closed	11 Jun 2012
Related to CoCoA-5 - Design #943: Managing credits		In Progress	12 Oct 2016
Related to CoCoALib - Feature #1050: ExternalLibs: function for getting info		Closed	24 Apr 2017
Related to CoCoA-5 - Bug #1046: CoCoA-5 no longer lists the external libs pre...		Closed	13 Apr 2017
Related to CoCoA-5 - Support #677: Credits to CoCoA-5 contributors		New	02 Apr 2015

History

#1 - 18 May 2015 11:05 - John Abbott

One piece of software printed out a message every time a Normaliz function was called: this produced thousands of messages -- too many I think.

Another piece of software printed out a "detailed" message the first time a foreign function was called, but not for any subsequent calls. This does mean that the output of a top-level function call may depend on what functions have been called earlier in the session. Of course, these informative messages are somehow different from the standard output -- the standard output is the same, but there may be some "incidental" output.

Personally I do not much like the idea of printing out "incidental" messages in the middle of a computation.

#2 - 18 May 2015 11:11 - John Abbott

I propose printing out a message about external libraries at the same time as the banner is printed out -- and the message should be suppressed if the banner is suppressed.

I would like a very short message such as:

```
CoCoA with external libs: NORMALIZ, FROBBY
```

Perhaps there could be a second line explaining how to find out more about the external libs. Presumably it can just say to look up the extlib name in the on-line manual.

NOTE should there also be a "credit" for GMP?

#3 - 18 May 2015 12:12 - Anna Maria Bigatti

- Status changed from New to In Progress

- Assignee set to Anna Maria Bigatti

Done in init.cpkg5.... but that's not good: it does not see the "--no-preamble" flag :(undoing it.

#4 - 18 May 2015 12:21 - John Abbott

We would like authors to cite CoCoA when they use in their research. Presumably then they should also cite any external libs which were used. But how can they know whether an external lib was used?

One possibility would be to have counters (one for each external lib) which increment every time CoCoALib calls a function from an external lib. Then you can check the counters before your computation, and again afterwards; those counters which changed indicate which external libs were used (and "how much" they were used).

Is it a sane idea to create such (global) counters? Implementation might be messy (especially in a threadsafe manner).

#5 - 18 May 2015 15:02 - Anna Maria Bigatti

Anna Maria Bigatti wrote:

Done in init.cpkg5.... but that's not good: it does not see the "--no-preamble" flag :(undoing it.

not elegant but done in Banner.C

#6 - 19 May 2015 13:38 - John Abbott

- % Done changed from 0 to 50

I think that Banner.C is a reasonable place to put it. I have cleaned up the code slightly; it now also prints out the external libs even in the GUI :-)

PS shouldn't Banner.C be called banner.C?

UPDATE now I see that all the other C5 files follow the convention that the name starts with a capital.

#7 - 20 May 2015 18:16 - John Abbott

I spoke to Christof about the idea of recording when ext libs are actually used (e.g. see my suggestion of counters in note 4).

Christof thinks that a boolean for each ext lib is more useful than a counter. The counter would simply count how many calls, and could not easily distinguish between a simple call to set a flag, and a complex call to compute a Hilbert basis...

It would be helpful to have a command for resetting all the flags; so the expected use would be:

- reset all flags;
- perform your computation;
- check the flags to see which ext libs were used.

These flags should exist in CoCoALib too; I suppose a `std::map` is probably the most appropriate structure.

#8 - 20 May 2015 18:33 - John Abbott

Now I'm less sure about using a `std::map` since it might be difficult and/or costly to make it threadsafe.

Probably a global vector<int> is a better solution. I would like that simultaneous setting of several flags in the vector produces the correct output: *i.e.* at the end all of the flags are set. If an int is write-atomic then this should work out OK. Perhaps vector<double> is safer?

Or maybe separate global flags can be used for each ext lib? But how can this be done in a simple/automatic/scalable/safe manner?

I also want to be able to reset all flags for ext libs (without knowing precisely which ones are actually present).

#9 - 30 May 2015 19:49 - John Abbott

If we do implement some scheme for recognising use of external libraries, probably we should also do something similar for contributed packages -- that way, those who do contribute to CoCoA could get some recognition. Then if we do it for contributed packages, what about contributed parts of CoCoALib?

Mmm, tricky. :-/

#10 - 17 Feb 2016 15:35 - John Abbott

- Target version changed from CoCoA-5.1.3/4 Jan 2016 to CoCoA-5.2.0 spring 2017

The last comment said "Mmmm, tricky!" -- that's good enough reason to postpone! ;-)

#11 - 12 Oct 2016 14:30 - Anna Maria Bigatti

- Related to Design #943: Managing credits added

#12 - 12 Oct 2016 14:33 - Anna Maria Bigatti

- Status changed from In Progress to Feedback

- % Done changed from 50 to 90

list of linked libraries is printed what cocoa starts.

For the refinements I opened issue [#943](#).

Feedback on this? Close?

#13 - 27 Apr 2017 11:40 - John Abbott

- Status changed from Feedback to Closed

- % Done changed from 90 to 100

- Estimated time changed from 2.00 h to 4.40 h

I think it is best to skip the fancy idea suggested in comment 7, at least for the time being.

Closing after 7 months in feedback.

#14 - 27 Apr 2017 11:40 - John Abbott

- Related to Feature #1050: ExternalLibs: function for getting info added

#15 - 27 Apr 2017 11:40 - John Abbott

- Related to Bug #1046: CoCoA-5 no longer lists the external libs present added

#16 - 28 Apr 2017 14:49 - Winfried Bruns

The Normaliz header of the development version that will soon become 3.3.0 now lists the external packages compiled into libnormaliz, at the moment the candidates are CoCoALib and SCIP. See example below. libnormaliz does not know which packages are compiled into it.

```
\.....|
      Normaliz 3.3.0                \.....|
      (C) The Normaliz Team, University of Osnabrueck \...|
      February 2017                 \..|
                                      \ |
                                      \|
-----
with paackage(s) CoCoALib
```

#17 - 14 Oct 2020 15:15 - John Abbott

- Related to Support #677: Credits to CoCoA-5 contributors added