

CoCoALib - Feature #758

configure: have option to say to look for external libs

31 Jul 2015 17:21 - John Abbott

Status:	In Progress	Start date:	31 Jul 2015
Priority:	Normal	Due date:	
Assignee:		% Done:	10%
Category:	Improving	Estimated time:	0.00 hour
Target version:	CoCoALib-1.0	Spent time:	0.60 hour
Description Suggestion: let the user say <code>./configure --with-libgsl=search</code> so that a script searches for the appropriate library. Currently, if you want GSL, you have to look for it yourself, and then put in the path after <code>--with-libgsl=</code> .			

History

#1 - 31 Jul 2015 17:23 - John Abbott

When would this idea really be useful?

It makes sense really only for libraries which would normally have a system-wide installation (*e.g.* under `/usr/local/lib/`).

Perhaps it could also look in a user's subtree for a "personal installation" (but this could be quite expensive if the script uses `find`)

#2 - 31 Jul 2015 17:25 - John Abbott

If we do adopt this idea, what syntax should be used?

```
./configure --with-libgsl  
./configure --with-libgsl=auto  
./configure --with-libgsl=search
```

Other suggestions?

In any case, if the user says `--with-libgsl` and the script cannot find it then an error should be signalled.

#3 - 03 Aug 2015 12:10 - Anna Maria Bigatti

John Abbott wrote:

```
If we do adopt this idea, what syntax should be used?  
./configure --with-libgsl=auto
```

This is my preference. And I think it should only look for a system-wide installation. Does `libnormaliz` have a system-wide installer? While `GSL` is the only one, I regard this issue as low priority.

#4 - 03 Sep 2015 11:41 - John Abbott

- Status changed from *New* to *In Progress*

- % Done changed from 0 to 10

Christof reports having seen a form like `--with-extlib=system` to mean that `extlib` is automatically sought in the "standard system directories".

JAA's interpretation is that first an attempt is made to see whether simply adding `-lexlib` is enough to achieve compilation; if not then a script can search for `extlib.a` or `extlib.so` (or `extlib.dylib`) in the usual system directories (a list maintained manually).

There are some minor complications:

- library name is of the form `libXYZ`
- the `-l` option should then be `-lXYZ`
- the file to look for should be `libXYZ.a` (or `.so` or `.dylib`)

What to do if several libraries are found? (e.g. static and dynamic ones)

Once the library have been found; the corresponding header file must also be found. Its name will presumably be `XYZ.h` or `XYZ.H` (or even `XYZ.hpp`?)