

CoCoA - Support #266

Compilation on M\$Windows: cygwin

17 Oct 2012 18:39 - Anna Maria Bigatti

Status:	Closed	Start date:	17 Oct 2012
Priority:	Normal	Due date:	
Assignee:	Anna Maria Bigatti	% Done:	100%
Category:	Portability	Estimated time:	0.00 hour
Target version:	CoCoA-5.0.3	Spent time:	13.00 hours
Description			
We should offer all documentation is needed for compiling CoCoALib/CoCoA-5 on MSWindows.			
<ul style="list-style-type: none">• We believe it should be easy (is it?) to compile CoCoALib under cygwin. And CoCoA-5? And the GUI?• CoCoA-5 has been compiled using MSVC (thanks Bruno Simoes), but the GUI has some mysterious problems. And the textual version? Are all the necessary files in our distribution?			
We look for guineapigs. Christof? ;-)			
Related issues:			
Related to CoCoA-5 - Feature #270: Distribution for linux		Closed	18 Oct 2012
Related to CoCoA-5 - Support #187: CoCoA-5 (partial) releases: make the proce...		Closed	13 Jun 2012
Related to CoCoALib - Support #302: Compilation on M\$Windows: Visual Studio		In Progress	11 Feb 2013
Related to CoCoA-5 - Support #629: Windows-GUI: compilation with MinGW		In Progress	25 Sep 2014

History

#1 - 18 Oct 2012 12:38 - Christof Soeger

Will try it!

#2 - 18 Oct 2012 16:42 - Christof Soeger

I will document everything :-)

First my test with cygwin:
installed:

```
• libgmp-devel: includes the headers
• libgmp3, libgmpxx4: the lib and the c++ interface
• gmp: not sure if it is needed
• libboost-devel: boost headers and link libraries
  I couldn't find qmake in the cygwin setup so I will skip building the gui.

$ ./configure
Starting configuration process for CoCoALib...

Using GMP version 4.3.2 with gmpxx at system default location

which: no qmake in [long list of paths]

Not using BOOST ==> compilation of CoCoA5+GUI disabled

cclplus: fatal error: CheckULong2Long.C: Permission denied
compilation terminated.
***ERROR*** [[./cpp-flags-ulong2long.sh]] Compilation of test program failed
***ERROR*** Customization failed
***ERROR***
```

Taking the default gmp location works, what a great achievement :)

For boost the search was not successful, the configure script should print information about that! My manual debugging yield:

```
csoeger@t510-3 ~/cocoa/CoCoALib-0.9952/configuration
$ ./boost-find-hdrs.sh
/usr/include

csoeger@t510-3 ~/cocoa/CoCoALib-0.9952/configuration
$ ./boost-find-lib.sh /usr/include/
WARNING: CoCoA-5 needs the following BOOST sublibraries:  thread system filesystem
```

libnormaliz just needs the headers, so it should still be possible to compile with libnormaliz.
libboost-devel also installed the runtime libraries (says cygwin) and have these two files related to the error:
/usr/lib/libboost_filesystem-mt.a
/usr/lib/libboost_filesystem-mt.dll.a
I guess the script needs an adaption for that.

The "permission denied" was caused by strange file permissions. I unpacked the .tgz in windows and all files have no permission at all. Probably it would be wise to unpack it in cygwin.

Changed the permission for that file and now the configure goes through.

And also the make causes no problem now! When the boost location script is updated I will try to build C5.

#3 - 18 Oct 2012 17:27 - Christof Soeger

--with-libnormaliz test:

```
Not using BOOST ==> compilation of CoCoA5+GUI disabled

The C++ compiler is g++
The C++ compilation flags are "-Wall -pedantic -O2"

OPTIONAL external libraries:
Not using Frobbly
Not using GSL
Using Normaliz: /home/csoeger/source/libnormaliz/libnormaliz.a

-----
CoCoALib configuration process complete
Configuration info saved in file configuration/autoconf.mk
-----

csoeger@t510-3 ~/cocoa/CoCoALib-0.9952
$ make
=====
Compiling CoCoALib-0.9952
  CXX = g++
  CXXFLAGS = -Wall -pedantic -O2
  CXXFLAGS_DEFINES = -DCoCoA_ULONGLONG2LONG=1 -DCoCoA_WITH_NORMALIZ -Wno-long-long
=====
```

So it seems to work even when it says no boost. And it indeed does, test and example work!

#4 - 12 Dec 2012 15:52 - John Abbott

- *Status changed from New to In Progress*
- *Target version set to CoCoA-5.0.3*
- *% Done changed from 0 to 20*

I have added a new file **INSTALL-cygwin** in the CoCoA root directory; it contains a summary of various hints for preparing Cygwin to build CoCoALib and CoCoA-5. At the moment it is in italian. It seems to cover most points Christof mentioned.

#5 - 06 Feb 2013 16:29 - Christof Soeger

- *% Done changed from 20 to 30*

After a fresh install I can confirm it still works as before. :-)

The INSTALL-cygwin file is indeed helpful. It says to create symbolic links for the boost libs. Can the configure script be changed to also find the libs in the cygwin setup?

For compilation with MSVS I will create a new issue since it is quite different. Can you upadate the title of this topic?

#6 - 06 Feb 2013 16:36 - Anna Maria Bigatti

- *Subject changed from Compilation on M\$Windows to Compilation on M\$Windows: cygwin*

#7 - 15 May 2013 12:16 - Anna Maria Bigatti

I think I managed to compile the **textual** version and prepare a distribution for it!
it is available on the web page (5.0.3-text-win)

Most of the work done by John Abbott in preparing the configuration.
Thanks to Alessandro Cartatone for all the assistance on the virtual machine.

#8 - 15 Sep 2014 18:02 - Anna Maria Bigatti

- *Assignee set to Anna Maria Bigatti*
- *% Done changed from 30 to 100*

what was done, was done (now closing)

#9 - 15 Sep 2014 18:03 - Anna Maria Bigatti

- *Status changed from In Progress to Closed*