

CoCoALib - Design #1225

Move to C++14 (skipping C++11)

06 Sep 2018 16:07 - John Abbott

Status:	In Progress	Start date:	06 Sep 2018
Priority:	High	Due date:	
Assignee:		% Done:	30%
Category:	Portability	Estimated time:	0.00 hour
Target version:	CoCoALib-0.99900	Spent time:	2.25 hours
Description			
Revise the source to use C++14 (and avoid "deprecated" features).			
Related issues:			
Related to CoCoALib - Feature #82: C++11 compatibility questions		Closed	26 Jan 2012
Related to CoCoALib - Design #891: Replace auto_ptr in preparation for C++11?		Closed	17 Jun 2016
Related to CoCoA-5 - Support #1240: John's visit Feb 2019		Closed	08 Feb 2019
Related to CoCoALib - Bug #1256: RingID: different values in test-output on d...		Closed	15 Mar 2019
Related to CoCoALib - Design #1257: C++14: use nullptr		Closed	18 Mar 2019
Related to CoCoALib - Design #1259: ThreadsafeCounter is now obsolete?		Closed	25 Mar 2019
Related to CoCoALib - Design #710: Update normaliz interface?		In Progress	17 May 2015
Related to CoCoALib - Feature #1218: 32-bit or 64-bit preprocessor macro?		Closed	08 Aug 2018
Related to CoCoALib - Design #581: C++14: MachineInt		Closed	04 Jul 2014
Related to CoCoA-5 - Feature #1305: Create a directory		New	02 Sep 2019
Related to CoCoALib - Design #1242: C++14: Use type auto where appropriate		In Progress	08 Feb 2019
Related to CoCoALib - Design #1346: C++14: use the new for loop syntax where ...		In Progress	21 Oct 2019
Related to CoCoALib - Feature #142: Improve threadsafety		In Progress	30 Apr 2012
Related to CoCoALib - Design #1446: Start using C++14 "move" capability		In Progress	12 Mar 2020
Related to CoCoALib - Design #1511: Use C++14 constexpr		Closed	14 Oct 2020
Related to CoCoA-5 - Design #1519: Interpreter fn Value::from can use std::move?		New	26 Oct 2020
Related to CoCoA-5 - Design #1520: Replace BOOST_FOREACH by new C++14 range f...		Closed	26 Oct 2020
Related to CoCoALib - Design #894: strict enum types: C++11 extension		In Progress	21 Jun 2016
Related to CoCoALib - Design #1572: Use noexcept		Resolved	29 Jan 2021
Related to CoCoALib - Design #1625: Use new C++ keyword override		Closed	25 Oct 2021
Related to CoCoALib - Design #1627: Use keyword "delete" for deleted functions		Closed	29 Oct 2021
Related to CoCoALib - Feature #1702: Use C++ attributes		In Progress	18 Oct 2022

History

#1 - 06 Sep 2018 16:10 - John Abbott

Maintaining backward compatibility with pre-2011 C++ is probably fairly pointless, and is causing problems with users who want to use more recent versions of C++. Gereon reports that auto_ptr has been removed from C++17.

#2 - 06 Sep 2018 16:15 - John Abbott

- Related to Feature #82: C++11 compatibility questions added

#3 - 06 Sep 2018 16:17 - John Abbott

Here is a list of "upgrades" to make to our source:

- make appropriate changes so that **std::move** can be used
- (related to "move" above) change void fns which return single values via an OUT arg
- **[DONE]** use **atomic** counters instead of ThreadsafeCounter (see [#1259](#))
- use **auto** type for some local variables (see issue [#1242](#))
- **[DELEGATED]** there is a new syntax for **for** loops with iterators (see issue [#1346](#))
- there are new machine integer types (investigate!)

- other???
- **[DONE]** replace **auto_ptr** by **unique_ptr** (or whatever is appropriate)
- **[DONE]** modify **configure** script, and replace auxiliary script **cxx03.sh** by **cxx14.sh**
- **[DONE]** use **nullptr** instead of **NULL** or **0** (see [#1257](#))

Note: add new entries as we think of them (then tick them off)

#4 - 06 Sep 2018 16:54 - John Abbott

- *Related to Design #891: Replace auto_ptr in preparation for C++11? added*

#5 - 26 Feb 2019 16:17 - John Abbott

Check that the new configuration system works on several different platforms (incl. Microsoft???)

#6 - 04 Mar 2019 13:39 - Anna Maria Bigatti

- *Related to Support #1240: John's visit Feb 2019 added*

#7 - 05 Mar 2019 18:39 - John Abbott

- *Status changed from New to In Progress*

- *% Done changed from 0 to 20*

So far I have done the following:

- revised and renamed script cxx03.sh into cxx14.sh
- revised configure script accordingly
- replaced auto_ptr by unique_ptr (somewhat blindly)
- so far everything works fine on Anna's computer

#8 - 06 Mar 2019 18:16 - John Abbott

- *% Done changed from 20 to 30*

JAA has checked in latest changes. Hope they work for Anna!

#9 - 11 Mar 2019 15:16 - Anna Maria Bigatti

John Abbott wrote:

JAA has checked in latest changes. Hope they work for Anna!

whateve that was, it compiles and run the tests!

#10 - 15 Mar 2019 18:00 - John Abbott

- *Related to Bug #1256: RingID: different values in test-output on different platforms added*

#11 - 18 Mar 2019 11:29 - John Abbott

- Related to Design #1257: C++14: use nullptr added

#12 - 25 Mar 2019 12:02 - John Abbott

- Related to Design #1259: ThreadsafeCounter is now obsolete? added

#13 - 25 Mar 2019 15:34 - John Abbott

- Related to Design #710: Update normaliz interface? added

#14 - 05 Apr 2019 15:47 - John Abbott

- Related to Feature #1218: 32-bit or 64-bit preprocessor macro? added

#15 - 05 Apr 2019 16:06 - John Abbott

- Related to Design #581: C++14: MachineInt added

#16 - 02 Sep 2019 15:56 - Anna Maria Bigatti

- Related to Feature #1305: Create a directory added

#17 - 18 Oct 2019 11:15 - John Abbott

- Related to Design #1242: C++14: Use type auto where appropriate added

#18 - 21 Oct 2019 12:26 - John Abbott

- Related to Design #1346: C++14: use the new for loop syntax where appropriate (like cocoa's foreach) added

#19 - 22 Oct 2019 12:05 - John Abbott

- Related to Feature #142: Improve threadsafety added

#20 - 12 Mar 2020 14:44 - John Abbott

- Target version changed from CoCoALib-1.0 to CoCoALib-0.99850

#21 - 12 Mar 2020 14:46 - John Abbott

- Related to Design #1446: Start using C++14 "move" capability added

#22 - 14 Oct 2020 21:51 - John Abbott

- Related to Design #1511: Use C++14 constexpr added

#23 - 26 Oct 2020 09:55 - John Abbott

- Related to Design #1519: Interpreter fn Value::from can use std::move? added

#24 - 26 Oct 2020 10:05 - John Abbott

- Related to Design #1520: Replace BOOST_FOREACH by new C++14 range for syntax added

#25 - 28 Oct 2020 23:20 - John Abbott

- Related to Design #894: strict enum types: C++11 extension added

#26 - 29 Jan 2021 20:18 - John Abbott

- Related to Design #1572: Use noexcept added

#27 - 25 Oct 2021 19:53 - John Abbott

- Related to Design #1625: Use new C++ keyword override added

#28 - 29 Oct 2021 21:50 - John Abbott

- Related to Design #1627: Use keyword "delete" for deleted functions added

#29 - 18 Oct 2022 20:57 - John Abbott

- Related to Feature #1702: Use C++ attributes added

#30 - 08 Mar 2024 17:46 - John Abbott

- Target version changed from CoCoALib-0.99850 to CoCoALib-0.99900