

LIBRARY IN A WEEK – DAY 2

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C++Now 2014

AGENDA

- Review of yesterday...
 - Jeff's summary
 - Any additional design discussion...
- Initial detailed attempts...
 - Richard, Jeff, ?
- Planning...

DESIGN GOALS (MORNING SESSION)

- Integrate STL well
- Type Safety
- Template parsing error handling
- Provide customization of markup language
- Make configuration simple
- Any data structure convertible to text should work

INTERNAL PROGRAM DATA REPRESENTATION

"THE MODEL"

- Model is applied to the template to produce output
- 2 primary approaches
 - engine model forces user to conform
 - Typically it's a hash of strings to strings
 - And a collection of hashes for 'sections'
 - Disadvantage: copy all your data into model before rendering
 - engine accepts user defined model - mapping internal
 - No engines take this approach so far
 - User data copy not required

OTHER MISC DESIGN DISCUSSIONS

- Boost library use/integration...
 - Possibly us boost::qi for doing formatting
 - Could use boost::spirit for parsing or maybe regex is enough
 - What if model is already boost serializable with name value pairs
 - Could the engine emulate an output Archive type for the objects?
- Data formatting is an issue
 - ctemplate allows program to format -- cannot do anything in template
 - Other systems allow for format control
 - Most systems do html escaping or other format processing of some type
- Test cases
 - print an invoice -- sufficiently complex, easy to understand
 - Hello world...

KISS

- Keep it simple to get something done!
 - Avoid our natural tendency to try and please all
- Trend in other engines is to simplify template language
 - if it 'looks like programming' its too complex

TOOLS & RESOURCE

- Other Libraries
 - ctemplate is a C++ templating engine originally from Google <http://code.google.com/p/ctemplate/>
 - ctp is a C++ templating engine <http://ctpp.havoc.ru/en/whatis.html>
 - Smarty is a PHP template engine <http://www.smarty.net/docsv2/en/>
 - dust is a javascript template engine <http://akdubya.github.io/dustjs/>
- C++11 is language of choice
- Github Repository
 - git clone <https://github.com/JeffGarland/liaw2014.git>
- Mailing List

<http://mail-lists.crystalclearsoftware.com/listinfo.cgi/liaw2014-crystalclearsoftware.com>

NEXT STEPS

- Meet for lunch – outside Flug
- Presentations for Tues