



# Library in a Week: C++11 & Boost Cookbook

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# What is this session?

- Workshop
  - Learn by doing
  - Different topic every year
- Platform for learning from peers
  - About C++, Boost Development, etc
- Community Building
  - Create contributors
  - Create connections



# Ways to participate

- Please participate!
  - ☐ Session(s) are meant to be interactive
  - ☐ Shaped/run by the participants
- Things you can do
  - ☐ Research, Write Code, Present
  - ☐ Come to morning sessions and provide input



# Questions

- Who is a master of C++11 – knows best ways to apply the language and library?
- Who is a master of all of Boost?
- Who has heard complaints about Boost documentation?



# Topic – C++11/Boost Cookbook

- A cookbook of solutions to typical problems in C++11/Boost
- More documentation than a library....
  - But about library usage



# The Perl Cookbook

- What is it?
  - An extraordinarily successful book
  - An idea about how to document coding solutions and teach
- Why are we talking about Perl at a C++ conference?
  - Because we want to learn from other communities
  - Because we want to document C++ best practices



# PLEAC

- PLEAC - Programming Language Examples Alike Cookbook (<http://pleac.sourceforge.net/>).
- C++ version is woefully incomplete
- What about C++11?
- What about Boost?



# Structure of a Cookbook Topic

- Problem

- ☐ Identify a common programming problem

- Solution

- ☐ Describe a solution including example code

- Discussion

- ☐ Provide discussion / code of alternative solutions

- See Also

- ☐ Pointers to other references





# Example

- Chapter 6 Pattern Matching
  - 23 problems
  - Problem 6.3 is “Matching Words”
- Problem – You want to pick out words from a string
- Solution – Determine what separate words from each other and write a regular expression



# Cookbook Related Problems form Chapters

- Strings
- Numbers
- Dates and Times
- Arrays
- Hashes
- Pattern Matching
- File Access
- File Contents
- Directories
- Subroutines
- References & Records
- Packages, Libraries, & Modules
- Classes, Objects, Ties
- Database Access
- Interactivity
- Process Management & Communication
- Sockets
- Internet Services
- CGI Programming
- Web Automation
- mod\_perl
- XML



# Approximate plan

- day 1: Get Organized
  - Selection of focus sections to attack
  - Assignments and teaming
- day 2: Initial Presentations
  - Initial solutions
  - Tool selections
- day 3 & 4: More solution presentations
- day 5: Wrap up – future directions



# Practical Considerations

- What topics to pick
  - Can't do it all
- What limits on the solutions?
  - Is strtok a valid solution to string problem?



# Practical Considerations - Tools

- Wiki?
- GIT, Quickbook
- PLEAC form?
  
- Mail List
  - [cookbook@mail-lists.crystalclearsoftware.com](mailto:cookbook@mail-lists.crystalclearsoftware.com)
  - <http://mail-lists.crystalclearsoftware.com/listinfo.cgi/cookbook-crystalclearsoftware.com>



# Next steps

- Meet for dinner tonight...
- Presentations for Tues
  - ☐ Tools?
  - ☐ Topics?