

C++ Focus on STL

Containers, Iterators, and Algorithms

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Agenda

Topics (including Optional Parts^{*}) – Covering two Days, Morning and Afternoon

FIRST DAY

- Fundamental Architecture
- STL Containers
- Considering Runtime Performance and Memory Footprint

SECOND DAY

- Iterators and Algorithms
- Extending the STL
- Odds and Ends

Optional Parts (third topic each day) may be integrated with practical exercises on the first day, chosen from:

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- | | |
|---------------------------------|------------------|
| • A Selection of Micro-Projects | • With Solutions |
|---------------------------------|------------------|
-

On the second day solutions to the above, explained as demo-programs, may partially replace individual practical exercises.

Online Version of this Presentation

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Online References

C++ has become a huge topic so it will frequently be necessary to lookup details in an online reference.

As general C++ reference the following can be recommended:

- <http://en.cppreference.com/w/> – totally free, seems to be run by enthusiasts and now includes even [live examples](#)
- <http://www.cplusplus.com/> – obviously financed by moderate pop-ups, nevertheless well organized and up-to-date

Presentation

This presentation uses a free HTML5-based slide-show tool named [remark](#).

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- [JavaScript](#) must be enabled.
- [Modern CSS](#) should be supported.*
- Cookies are **not** used.

*: Given an appropriate level of [CSS knowledge](#) you may be able to tweak the appearance.

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^{*}: With minor extensions, if you happen to know markdown already.

A Hidden Jewel ...

... seems to be the [Algorithm Library](#) part of the STL, judging from how often it stays unused while creativity is put into coding more or less complicated "little pieces of art" (ironic innuendo not by accident).

If there is some time left until we start – may be because we have to wait for late-comers – the following lecture by *Sean Parent* may be of interest:

<https://www.youtube.com/watch?v=IzNtM038Jul>

If there are at least 10...15 minutes to bridge, a good starting point is at [Minute 12:30](#).*

*: If there time for that kind of intermezzo right now but you want to see later on your own how a really complicated code gets simplified by using appropriate STL-algorithms, you may view from [Minute 4:16]. Or go right to the beginning and watch the introduction too – the host is [Alexander Stepanov](#), who designed the STL 20 years ago together with [David Musser](#).