Karlsruhe Institute of Technology

Steinbuch Centre for Computing

rootJS - results of the implementation phase

Software Engineering Practice - Winter Term 2015/16

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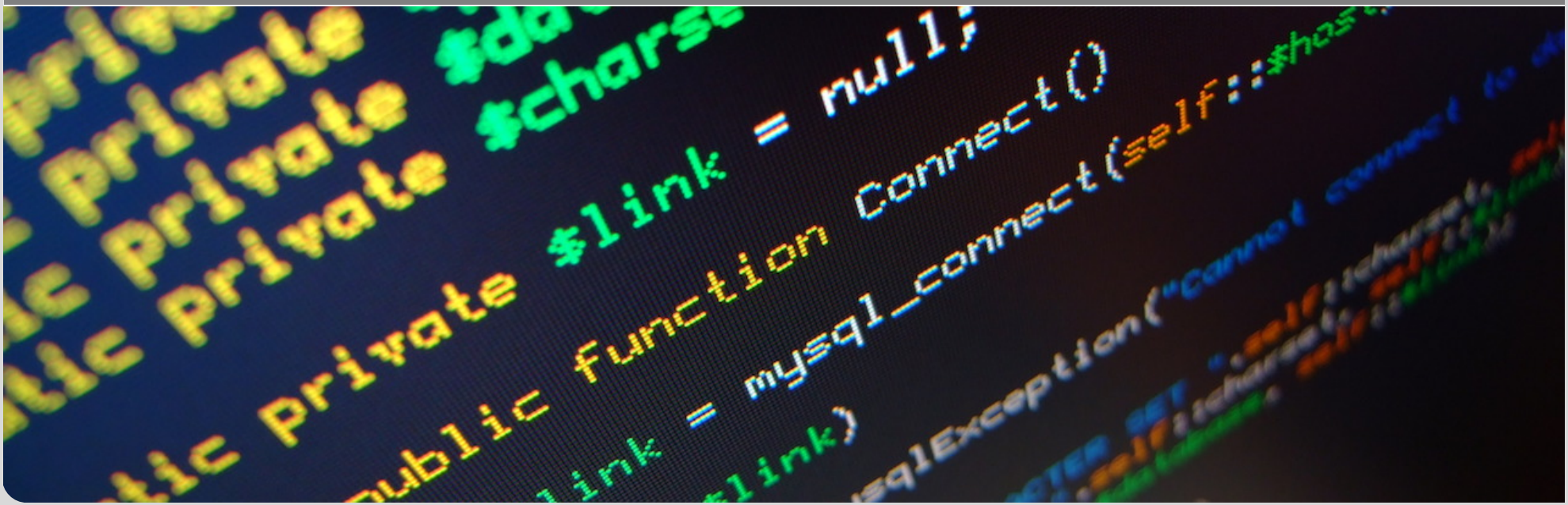

Outline

Required Criteria

The bindings must

- Work on Linux
- Allow the user to interact with any ROOT class from the Node.js JavaScript interpreter
- Accept C++ code for just-in-time compilation
- Update dynamically following changes to C++ internals
- Provide asynchronous wrappers for common I/O operations (i.e. file and tree access)

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The bindings should

- Support the streaming of data in JavaScript Object Notation (JSON) format compatible with JavaScript ROOT
- Implement a web server based on Node.js to mimic the function of the ROOT HTTP server
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Changes in design

- We added a helper class for asynchronous operations, ’AsyncRunner’
- We added MetaInfo to encapsulate differences between TGlobal and TDataMember