Karlsruhe Institute of Technology

Software Design and Quality

rootJS - Specification

PSE - Software Engineering Practice

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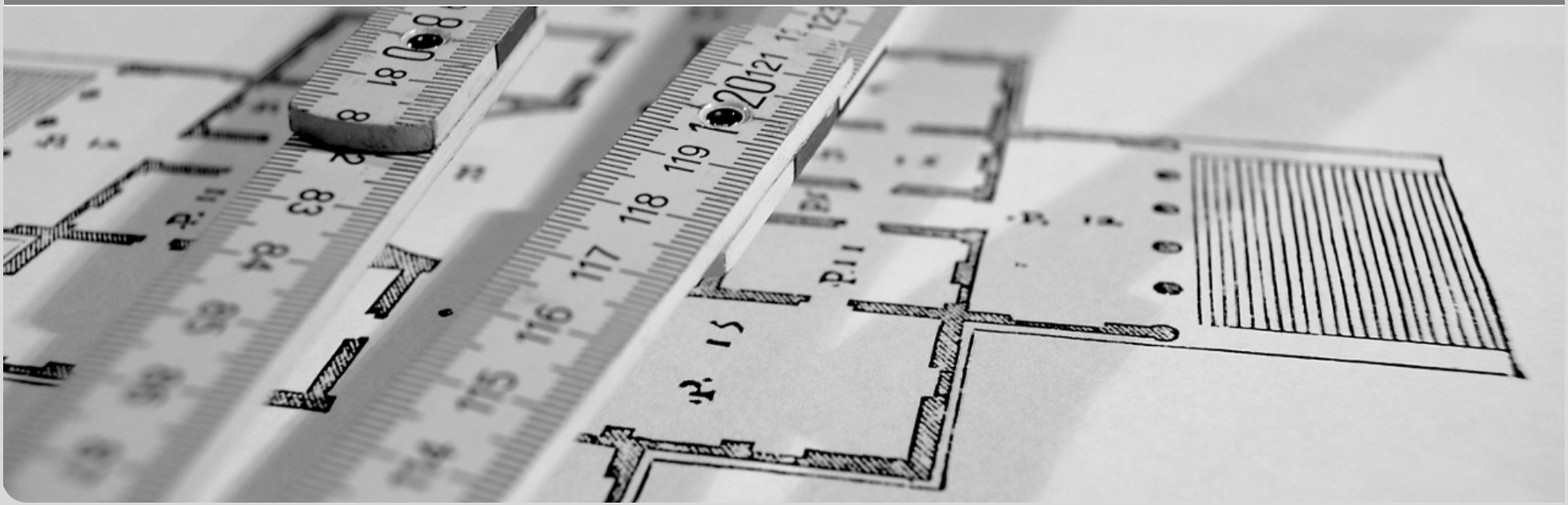
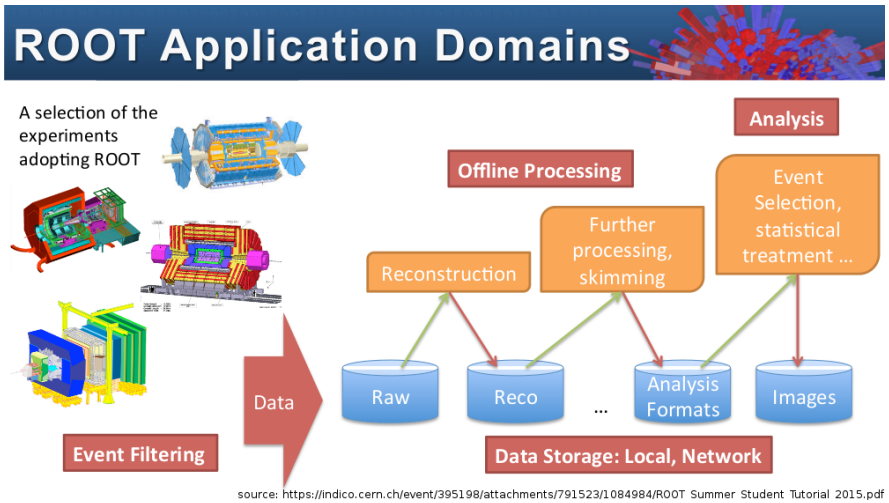
STEINBRUCH CENTER FOR COMPUTING

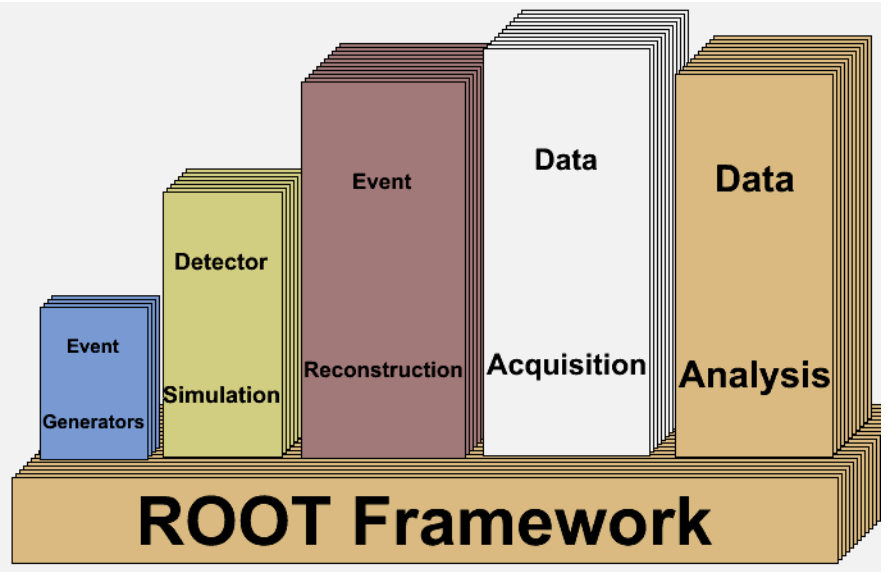


Outline/Gliederung

ROOT

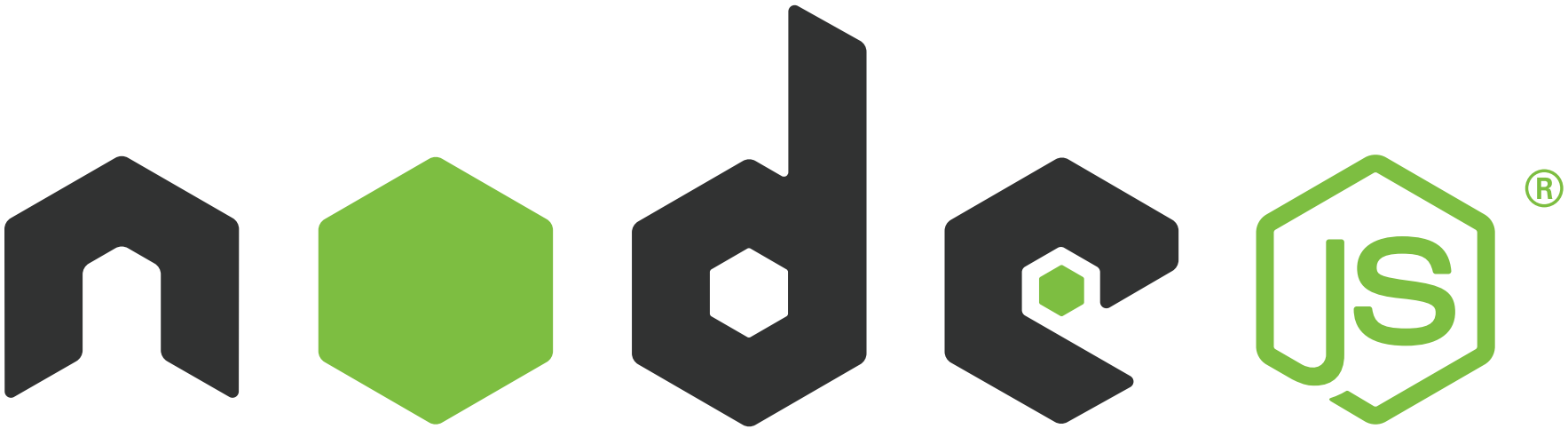
- process and visualize large amounts of scientific data (CERN)
- features a C++ interpreter (CLING) - i.e. used for rapid and efficient prototyping
- persistency mechanism for C++ objects





Node.js

- open source runtime environment
  - develop server side web applications
  - act as a stand alone web server



Node.js

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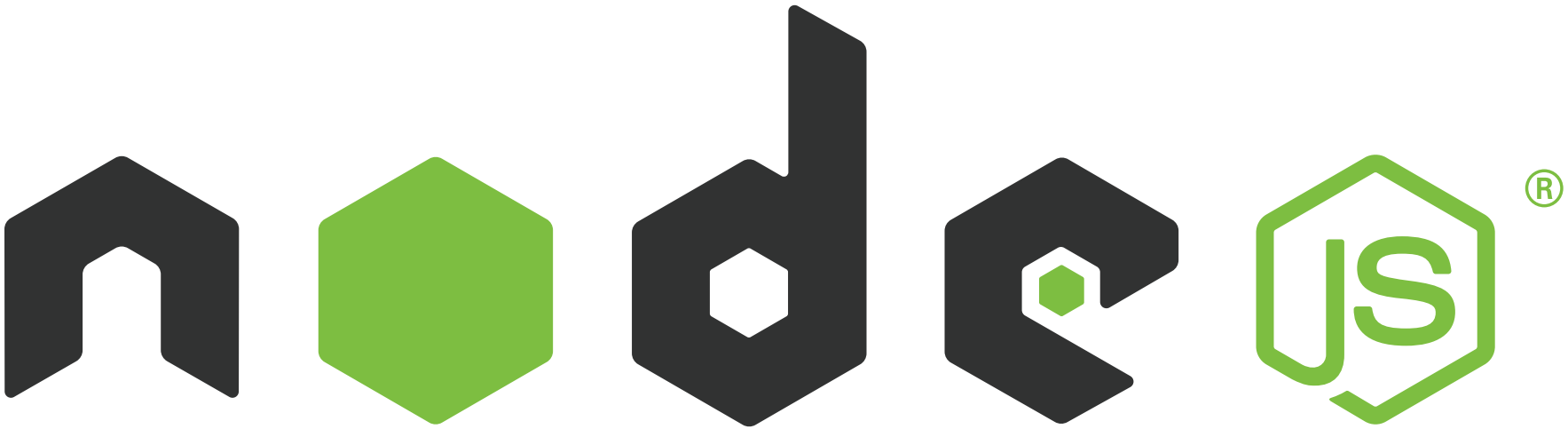
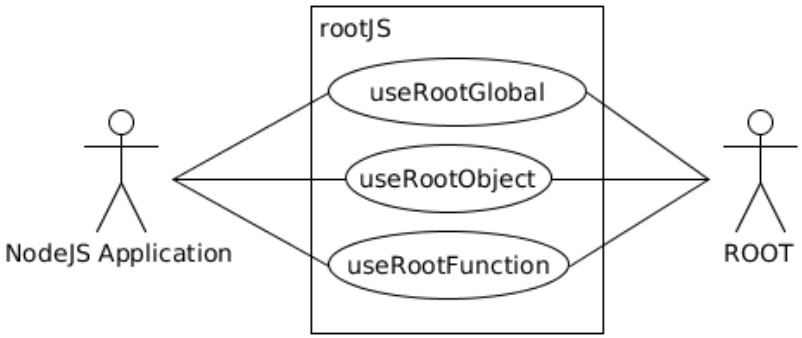
  - develop server side web applications
  - act as a stand alone web server
- Google V8 engine to execute JavaScript code
- rootJS bindings realized as native Node.js module written in C++

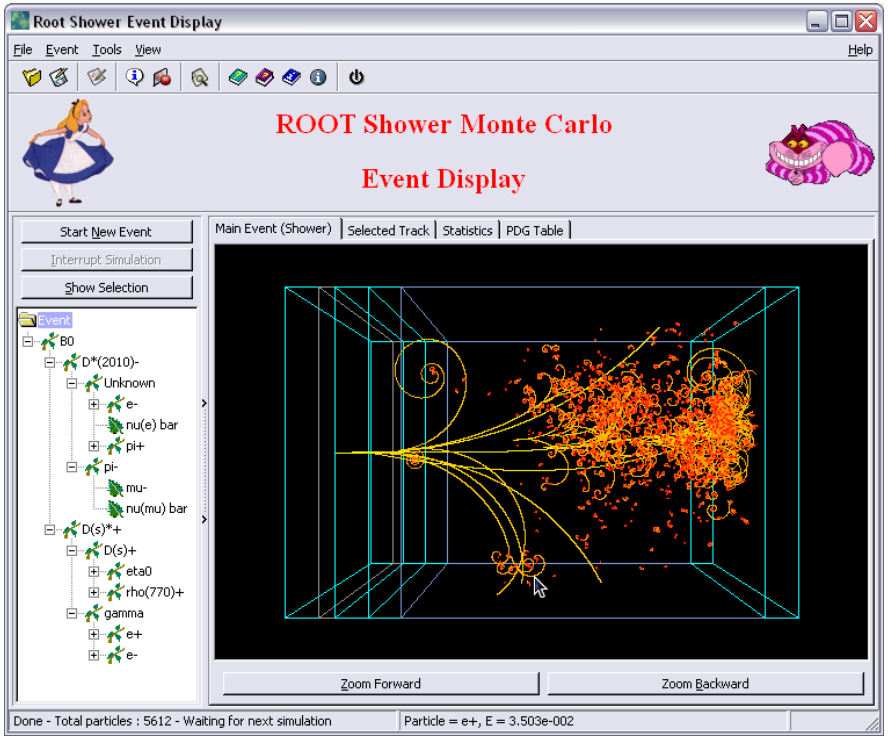


Hardware

Scenario 1

Event Viewer





Initialization

- Expose all
  - Global variables
  - Global functions
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Names

- Functions and classes have the same name as in Root
- Global variables can be called using Get[Variable] and Set[Variable] methods

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- By looking at the object type an corresponding v8::Handle will be generated and returned to node
  - If the result is an object this will be done recursively

References I


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