

rootJS - Specification

PSE - Software Engineering Practice

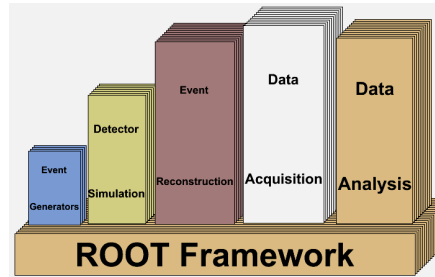
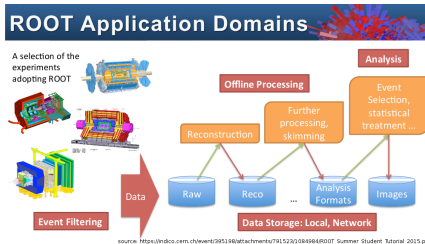
C. Wolff, M. Früh, S. Rajgopal, C. Haas, J. Schwabe, T. Beffart | December 14, 2015

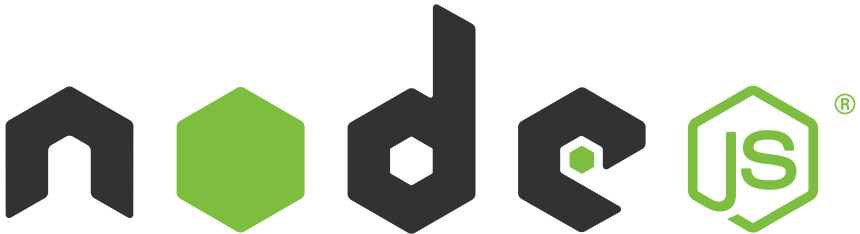
STEINBRUCH CENTER FOR COMPUTING



- 1 Product Environment
 - Software
 - Hardware
- 2 Scenarios
 - Scenario 1
- 3 Use Cases
 - Event Viewer
- 4 System Model
 - Initialization
 - Call a feature

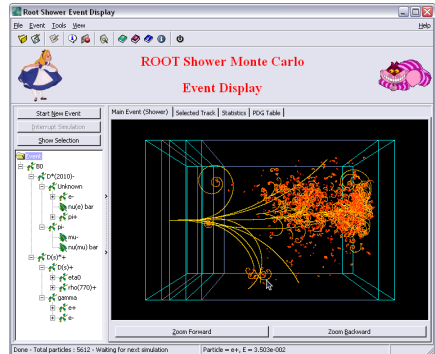
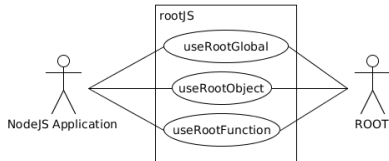
- process and visualize large amounts of scientific data (CERN)
- features a C++ interpreter (CLING) - i.e. used for rapid and efficient prototyping
- persistency mechanism for C++ objects





Scenario 1

Event Viewer



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 - Global variables
 - Global functions
 - Classes

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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

-  CERN. *ROOT application domains*. Dec. 2015. URL: <https://root.cern.ch/application-domains>.
-  CERN. *ROOT Shower Event Display*. Dec. 2015. URL: <https://root.cern.ch/rootshower00png>.
-  *Node.js logo*. Dec. 2015. URL: <https://nodejs.org/static/images/logos/nodejs-light.eps>.
-  Danilo Piparo and Olivier Couet. *ROOT Tutorial for Summer Students*. Dec. 2015. URL: https://indico.cern.ch/event/395198/attachments/791523/1084984/ROOT_Summer_Student_Tutorial_2015.pdf.