



Contribution ID: 255

Type: **Poster presentation**

Geant4 application in a web browser

Monday, 14 October 2013 15:00 (45 minutes)

Geant4 application in a web browser

Geant4 is a toolkit for the simulation of the passage of particles through matter. The Geant4 visualization system supports many drivers including OpenGL, OpenInventor, HepRep, DAWN, VRML, RayTracer, gMocren and ASCII Tree, with diverse and complementary functionalities.

Web applications have an increasing role in our work, and thanks to emerging frameworks such as Wt [1], we are now able to build a web application on top of a C++ application without rewriting all the code. Because the Geant4 toolkit's visualization and user interface modules are well decoupled from the rest of Geant4, it is straightforward to adapt these modules to render in a web application instead of a computer's native window manager. The API of the Wt framework closely matches that of Qt[3] so we can benefit from our experience in developing the Geant4 Qt driver. Rendering is through the WebGL[2] framework.

In this presentation, we will show how we ported the Geant4 interface to a Web application and how, with minimal effort, other Geant4 users can replicate this process to share their own Geant4 applications in a web browser.

[1] <http://www.webtoolkit.eu>

[2] <http://www.khronos.org/webgl/>

[3] <http://geant4.web.cern.ch/geant4/UserDocumentation/UsersGuides/ForApplicationDeveloper/html/ch08s03.html#sect.VisDrv.Qt>

Summary

Primary author: GARNIER, Laurent (LAL-IN2P3-CNRS)

Presenter: GARNIER, Laurent (LAL-IN2P3-CNRS)

Session Classification: Poster presentations

Track Classification: Facilities, Production Infrastructures, Networking and Collaborative Tools