Atlantis3D via GraXML

➢ Demo

➢ Data Model

➢ Web Start

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Third meeting on
Event Displays for ATLAS
*CERN / 10 Mar 08*
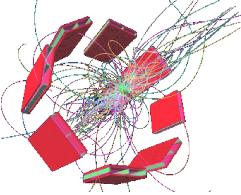
Data Model

➢ Data described by XML Schemas (for event data and for geometry)

  ➢ AGDD or GDML could be used to describe geometry

➢ Generic Model (Java classes) generated from Schemas (JAXB)

➢ Generic Model instance (objects) can be created by

  ➢ Parsing XML file

  ➢ Assembling in memory (like in the Atlantis-GraXML connection)

➢ Similar mechanism possible even for C++

XML Schema	—generation→	Classes
XML File	—parsing→	Objects
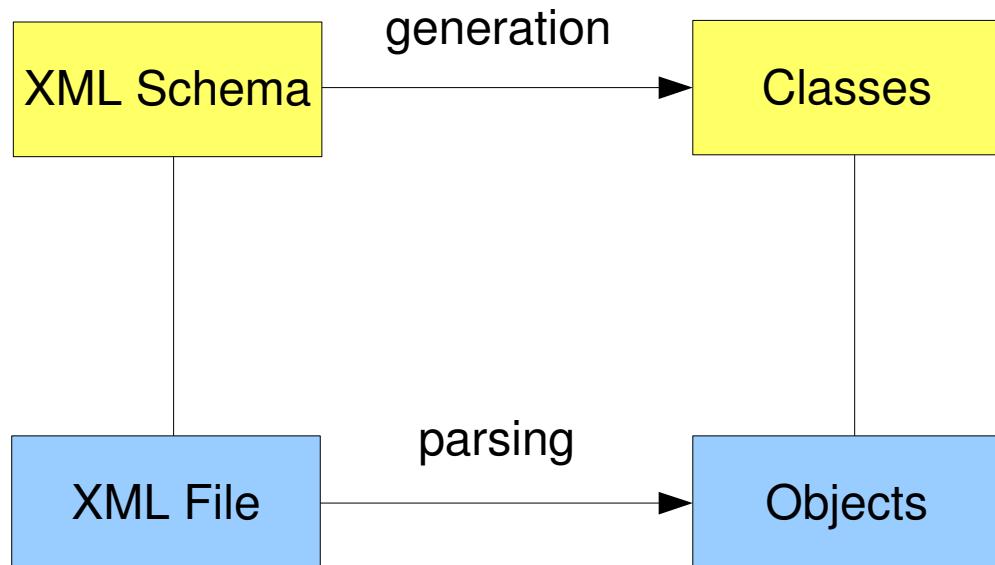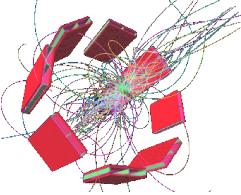
Web Start

➢ Atlantis + GraXML runs on all commonly used platforms (Linux, MS, MacOSX)

➢ Mostly Java, but contains native code (OpenGL, ActiveX)

➢ Installation is done using Web Start

➢ Web Start application is described by JNLP (XML) file

➢ It contains desription of all components and options

➢ It can reference other JNLP files (on other sites) – distributed environment

➢ Atlantis3D references Atlantis, GraXML, Java3D, JAXB

➢ Web Start application can be installed and run by

➢ Simple click on JNLP link in a browser

➢ Calling javaws command on JNLP URL or JNLP file

➢ When Web Start component is updated on the server, users get updates automaticaly when they run application next time

➢ Web Start can be used to distribute native applications

Web Start
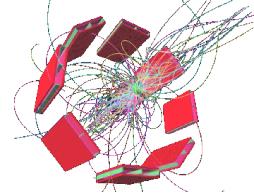
```xml
<?xml version="1.0" encoding="utf-8"?>
<jnlp spec="1.0+" codebase="http://cern.ch/hrivnac/Activities/Packages/WebStart/GraXML" href="GraXML.jnlp" version="3.1.10.1
[06/Feb/2008 at 17:53:50 CET]">
  <information>
    <title>GraXML - 3.1.10.1 [06/Feb/2008 at 17:53:50 CET]</title>
    <vendor>J.Hrivnac</vendor>
    <homepage href="http://cern.ch/hrivnac/Activities/Packages/GraXML"/>
    <description kind="tooltip">Framework for manipulation and visualisation of geometrical objects in space.</description>
    <description kind="one-line">Framework for manipulation and visualisation of geometrical objects in space.</description>
    <description kind="short">Framework for manipulation and visualisation of geometrical objects in space.</description>
    <icon kind="default" href="http://cern.ch/hrivnac/Activities/Packages/WebStart/GraXML/GraXML.gif"/>
    <icon kind="splash"  href="http://cern.ch/hrivnac/Activities/Packages/WebStart/GraXML/GraXML.gif"/>
    <offline-allowed/>
   </information>
  <security>
    <all-permissions/>
     </security>
  <update check="timeout" policy="always"/>
  <resources>
    <j2se max-heap-size="512m" version="1.5+"/>
    <jar href="jars/AGDD.jar"             download="eager"/>
    <jar href="jars/freehep-hep3d.jar"    download="eager"/>
    <jar href="jars/freehep-j3d.jar"      download="eager"/>
    <jar href="jars/GDML.jar"             download="eager"/>
    <jar href="jars/GraXMLDisplay.exe.jar" download="eager"/>
    <jar href="jars/GraXML.jar"           download="eager" main="true"/>
    <jar href="jars/JiveEvent.jar"        download="eager"/>
    <jar href="jars/JiveGeometry.jar"     download="eager"/>
    ...
    <extension href="http://download.java.net/media/java3d/webstart/release/java3d-1.5.1.jnlp"/>
    </resources>
  <resources>
    <j2se version="1.5"/>
    <extension name="JAXB" href="http://cern.ch/hrivnac/Activities/Packages/WebStart/JAXB/jaxb.jnlp"/>
    </resources>
  <application-desc main-class="net.hep.graphics.GraXML.FrontEnd.GraXML"/>
  </jnlp>
```