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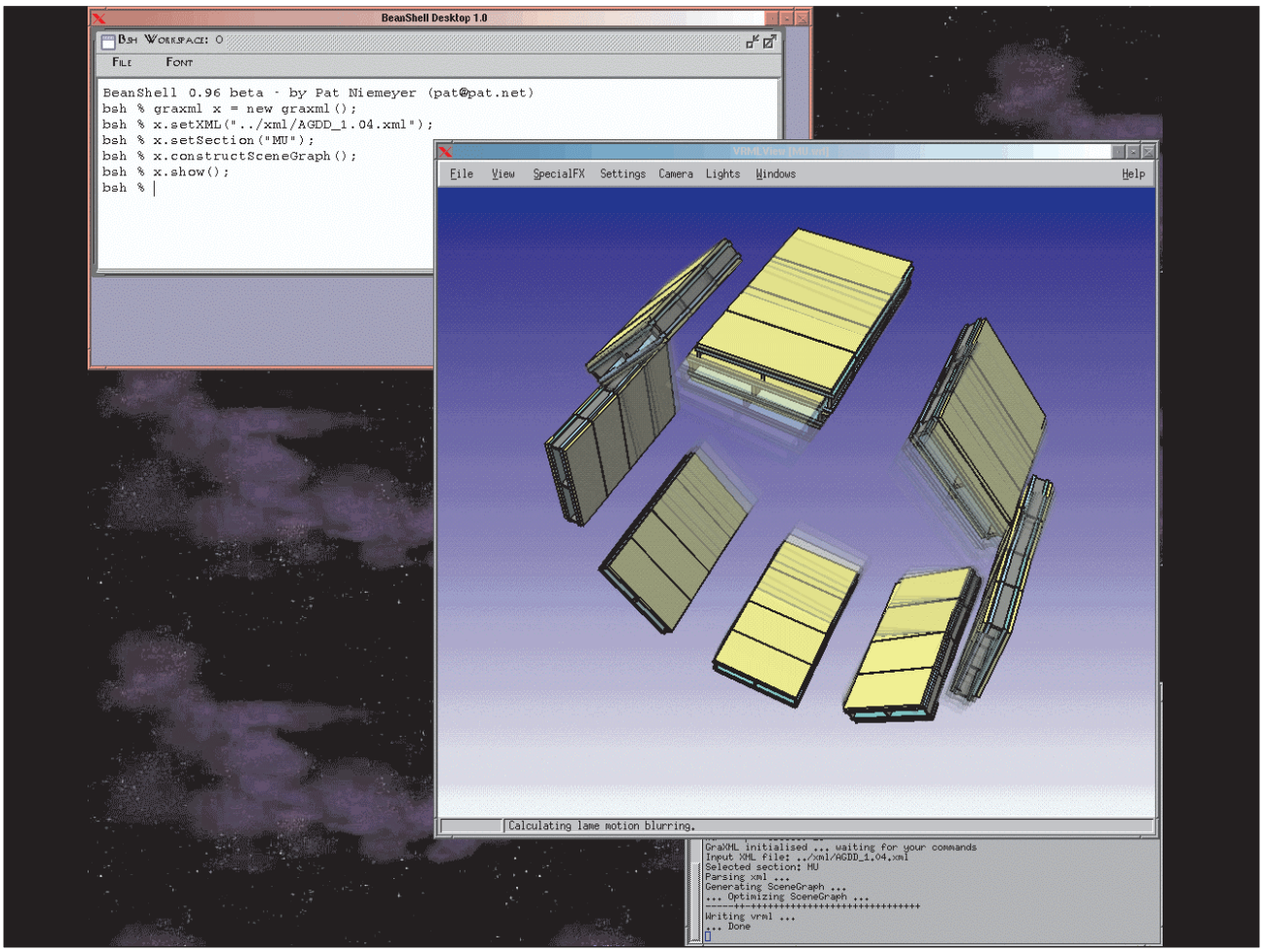
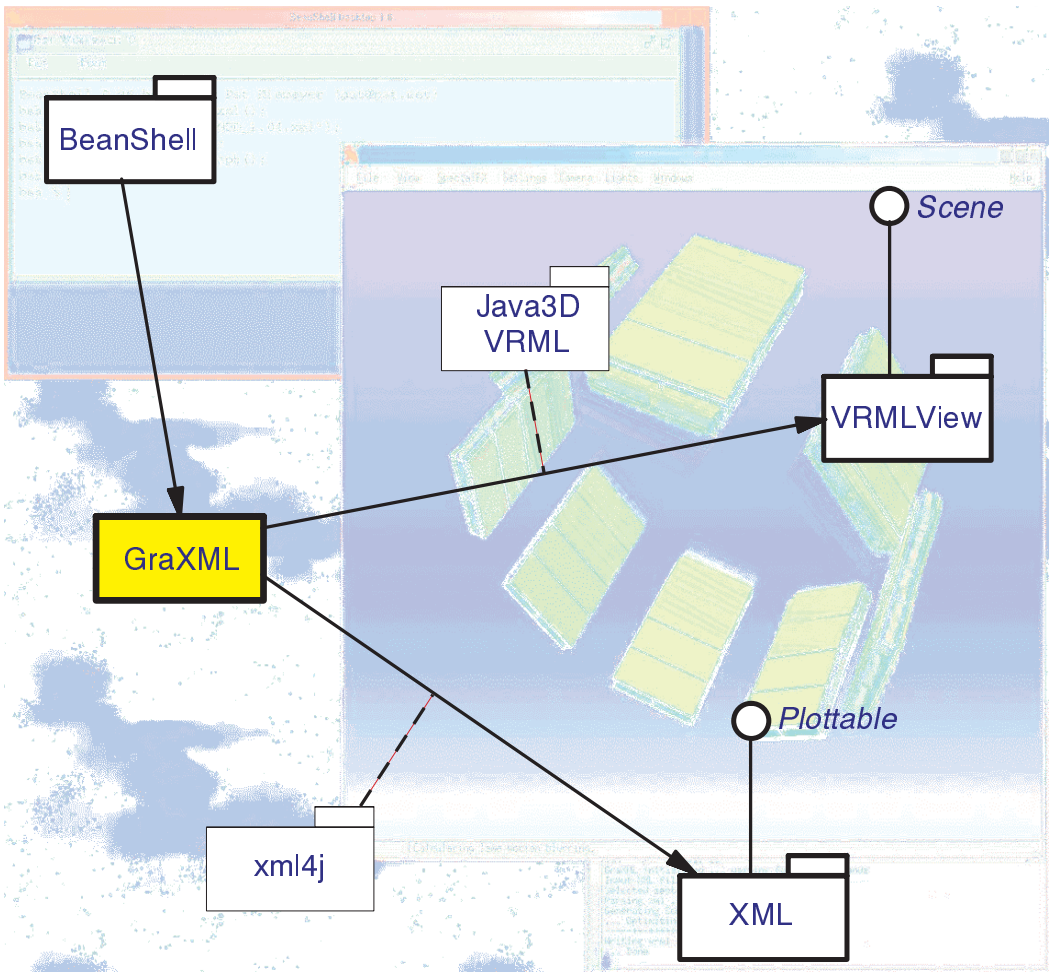
work has started cca 3 weeks ago
aim:
* standalone independent Detector Display
* evaluation (+ learning) of Java



how it looks:

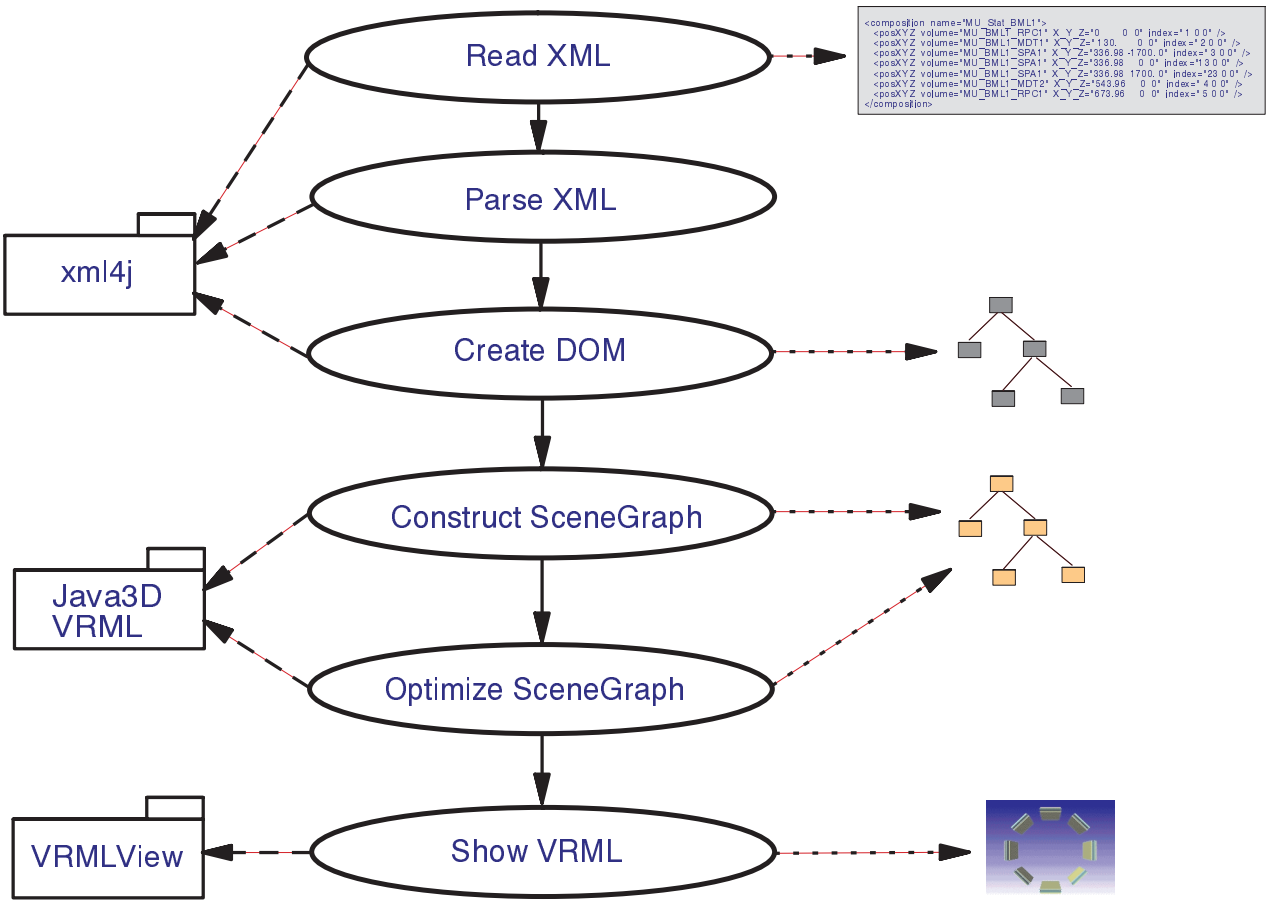
* 3D view with visual operations and rendering options
* script interface (or batch) in 100% Java



reuse as much as possible

* only GraXML is written and it has about 600 loc (mostly geometrical algorithms)
* Bean Shell is 100% Java scripting + command-line interface (a'la Cint, but almost trivial in Java), used by Wired, in Asis - 2 other candidates known
* xml4j is Java version of xml4c - many other candidates known
* Java3D is part of Java 2 (alpha^2 on Linux), VRML can created VRML SceneGraph - other candidates known

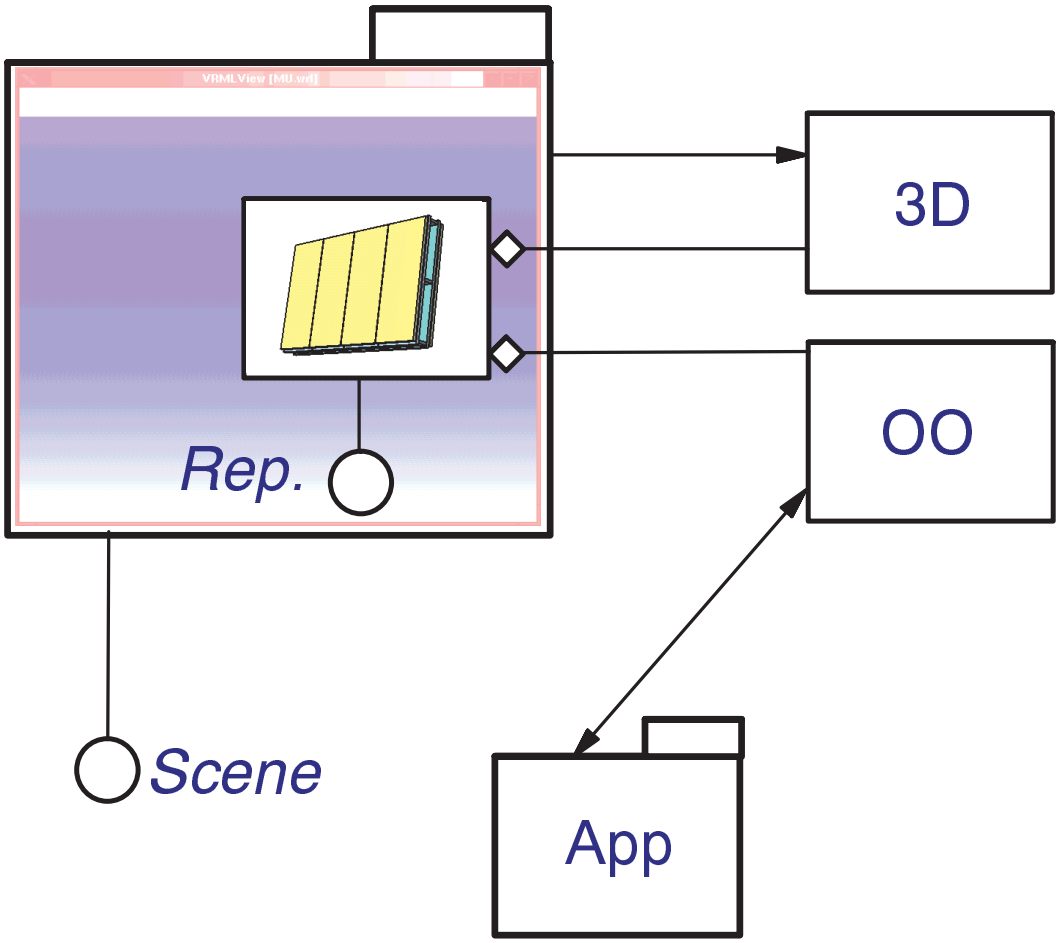
Plottable + Scene is standard Architecture used in Atlas Graphics



data flow diagram is not OO, but usefull

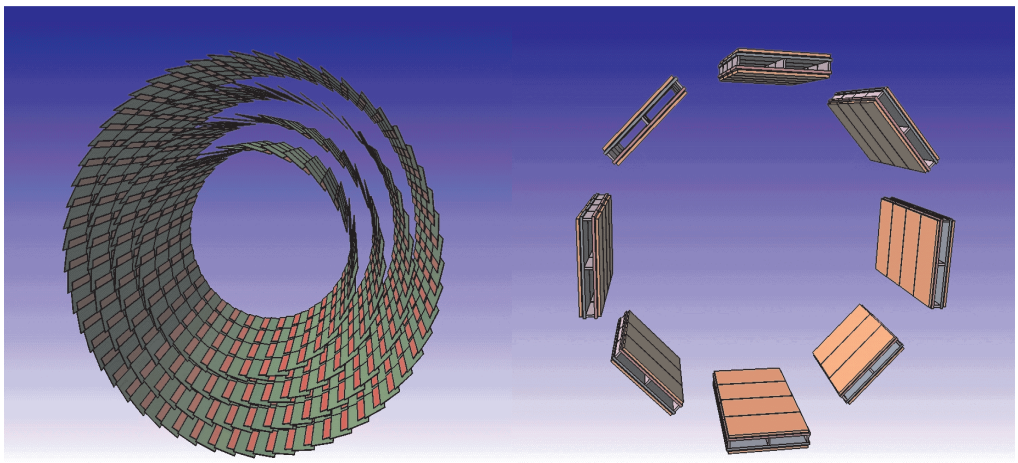
basic philosophy is to create one Tree (XML-DOM) and convert is to another Tree (VRML-SceneGraph)

DOM Tree is unexpanded, so it fits well into memory; by making expansion one looses information about structure, which is needed for SceneGraph optimization

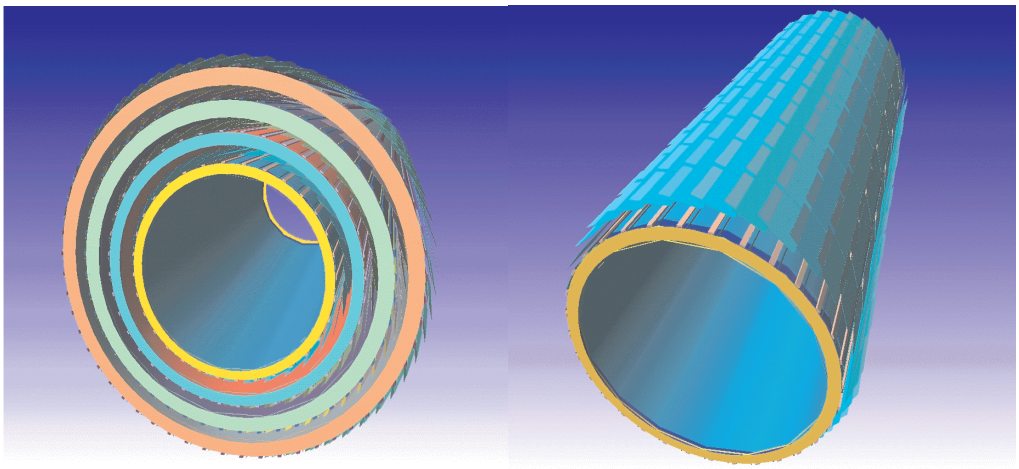


VRML Representation within VRML Scene has two components:

* VRML itself, which talks to the Scene
* Java Object, which has access to VRML attributes and to any other Application - it can give behaviour and interactions



* Java
* Active 3D Objects
* Scripting interface
* Standalone
* Small
* Functional
* Reuse of Modules
* Platform neutral
* Extensible
* Open Source



same pictures as G4 and Persint -> proof of consistency (but some hidden assumptions about geometry in DTD)
different rendering options (hidden lines, wireframe, ...) for different pictures
after one afternoon first pictures, after one equivalent-week functional prototype
implements only what is in XML (implementation on demand)
quite ugly implementation (needs re-design)
very easy task due to the proper choice of technology
it would be possible to do that it C++ (Open Inventor), but cca 10x more complicated
many features are automatic, while in C++ they would make big task (scripting, interaction with outside,...)
source is freely available
executable is 20kB small
future:
    * integrate into Atlas Graphics, add interactivity
    * what about Wired, JAS