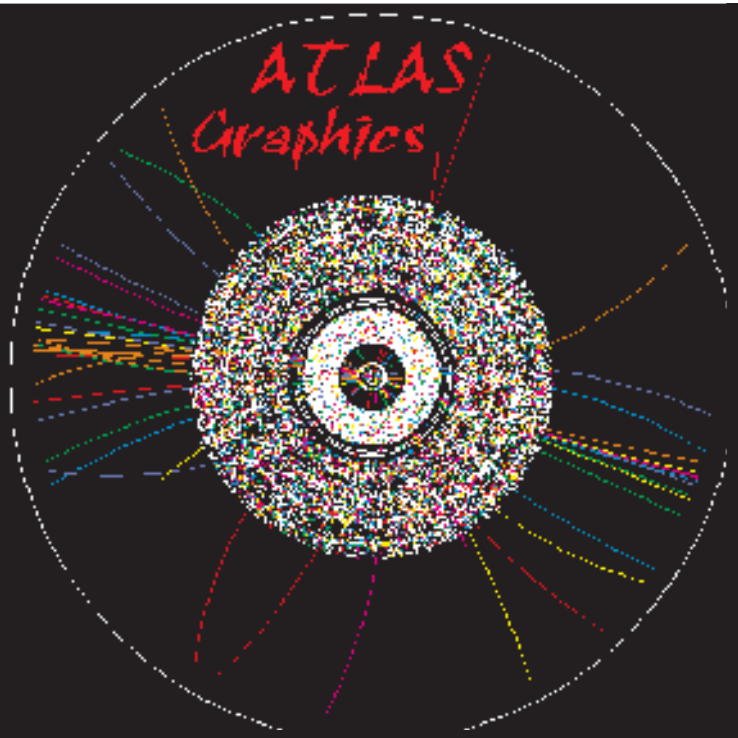


Atlas Graphics Meeting
1Mar'01,CERN

- Atlantis Evaluation (N.Konstantinidis)
- Java Atlantis (G.Taylor)
- FreeHEP/WIRED/JACO/JAS (M.Donzselmann)
- WIRED & JAS in BaBar (M.Ronan)
- Status/GraXML/HEP3D/ObjectBrowser (J.Hrivnac)
- Physical Design of Reps (R.Candlin)

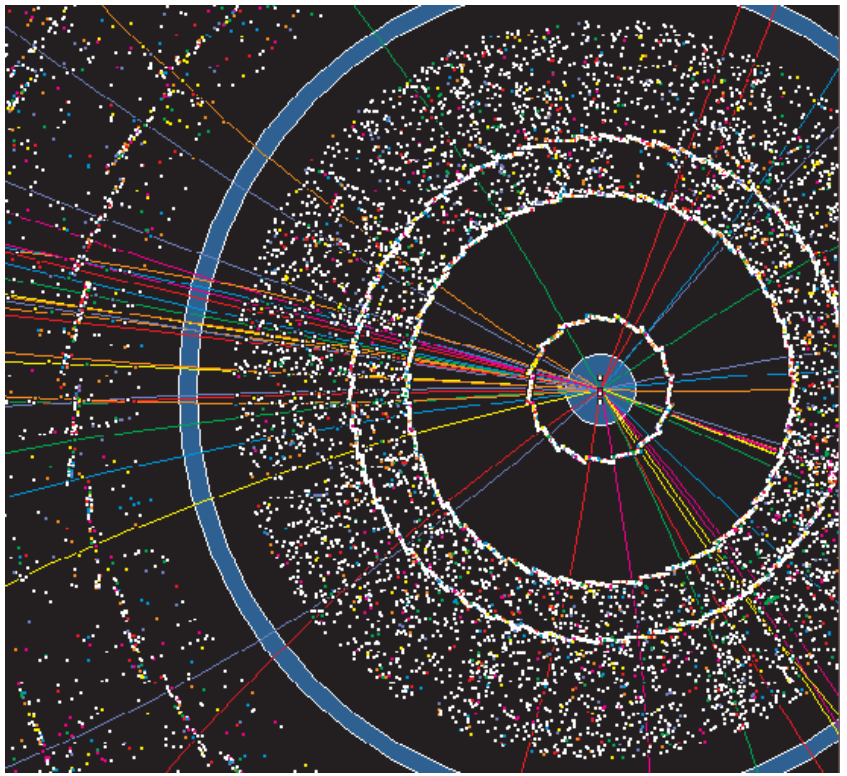
Atlantis Evaluation

(N. Konstantinidis)

- Atlantis used in Trigger to study Tracking
- Atlantis files from cTrig
- using V-plot, picking, display of hits, simulated and reconstructed tracks

Java Atlantis

(G. Taylor)



- Atlantis rewritten in Java
- 100% Java (no wrapped Fortran)
- very fast
- multiple views a'la Fortran Atlantis
- rubber band
- coherent views
- picking
- in Atlas CVS (not yet in release)

FreeHEP

(M.Donszelmann)

- HEP library in Java
  - about 750 class (compilation < 2 minutes)
- AIDA 2.0 (Abstract Interfaces for Data Analysis)
  - interoperation with Anaphe/Lizard, Open Scientist,...
- JACO (Java <-> C++)
  - typedefs, multiple inheritance, operator overloading supported
  - templates parsed
- HepRep (Generic Interface for Event Display)
- Root DIM (for Root 3.0)
  - uses StreamInfo => can read any object (incl. TTree) from any Root file
  - in JAS
- Graphics2/3D
- ...

http://java.freehep.org

http://jaco.freehep.org

http://heprep.freehep.org

JAS

(M. Donszelmann)

- 2.2.2 (in CVS):
  - 3D Lego/Surface
  - normalization
  - improved fitting
- 3.0 (in summer)
  - FreeHEP HEP Studio
  - Histograms/Ntuples/Clouds/Fitting
  - scripting in Python/Java

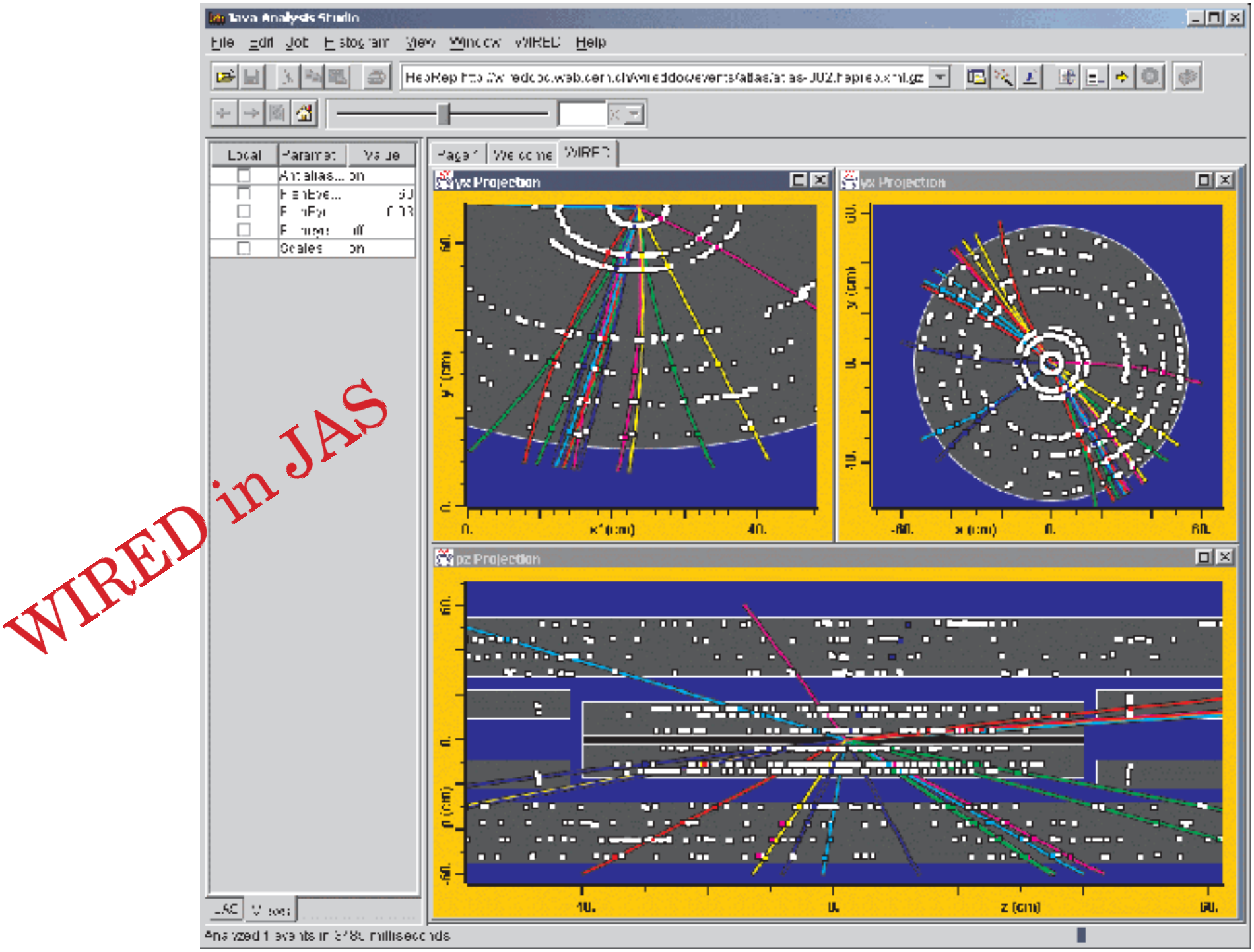
http://jas.freehep.org

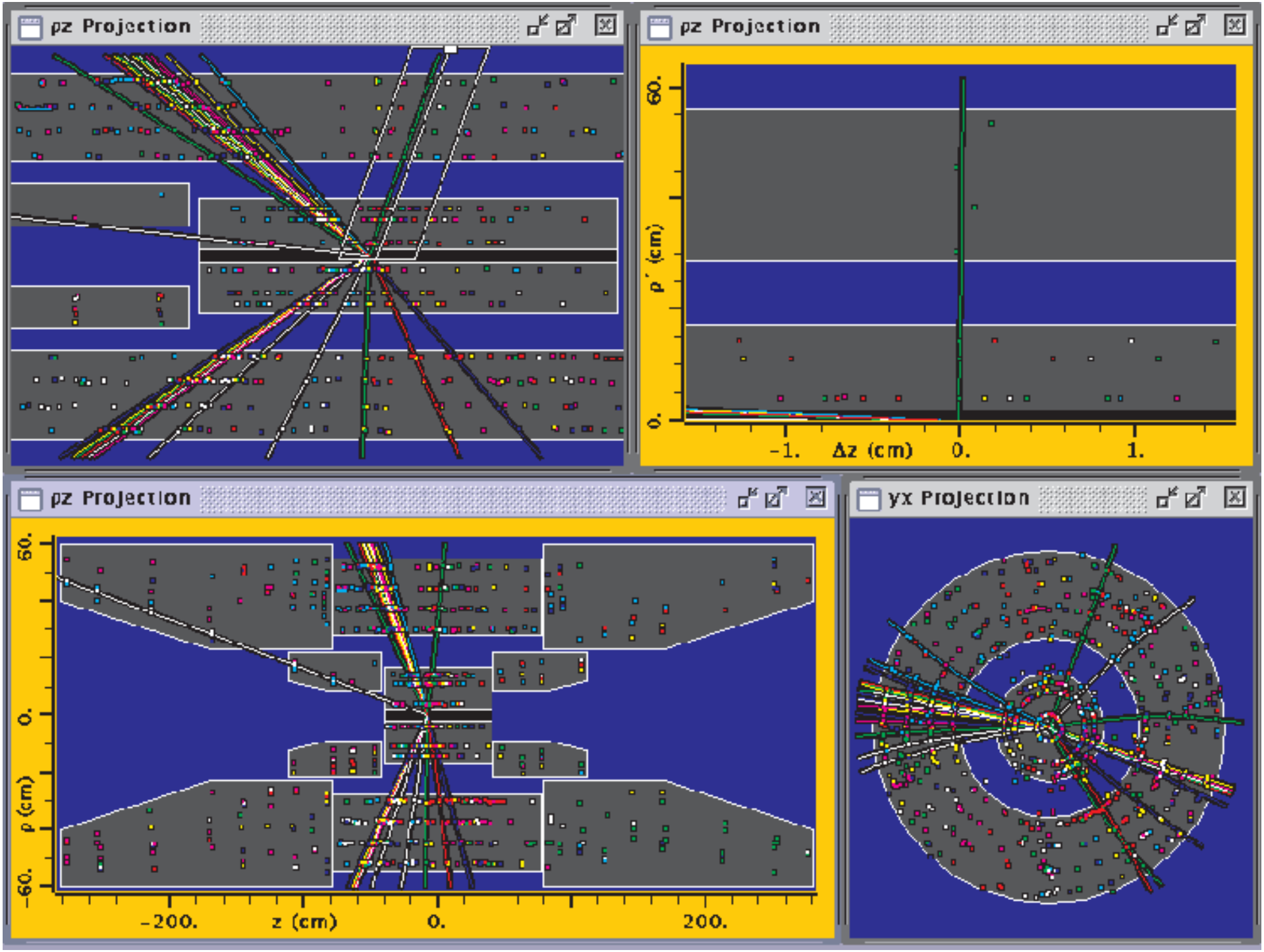
WIRED

(M. Donszelmann)

- 2.0 (installed):
  - as plugin in JAS
  - HepRep XML
  - Z-finder
- 2.0.1 (9/3/01):
  - fixes
- 2.1 (30/3/01):
  - data filtering
  - 3D
  - picking

http://wired.cern.ch


WIRED in JAS
Java Analysis Studio
File Edit Job Histogram View Window WIRED Help
Local Parameter Value
Page 1 Welcome WIRED
yx Projection
zx Projection
zy Projection
y (cm)
x (cm)
z (cm)
Analyzed 1 events in 3781 milliseconds


pz Projection
pz Projection
60.
ρ´ (cm)
0.
-1.
Δz (cm)
0.
1.
pz Projection
60.
0.
ρ (cm)
-60.
-200.
z (cm)
0.
200.
yx Projection

WIRED in BaBar

(M. Ronan)

- happily used in on/offline

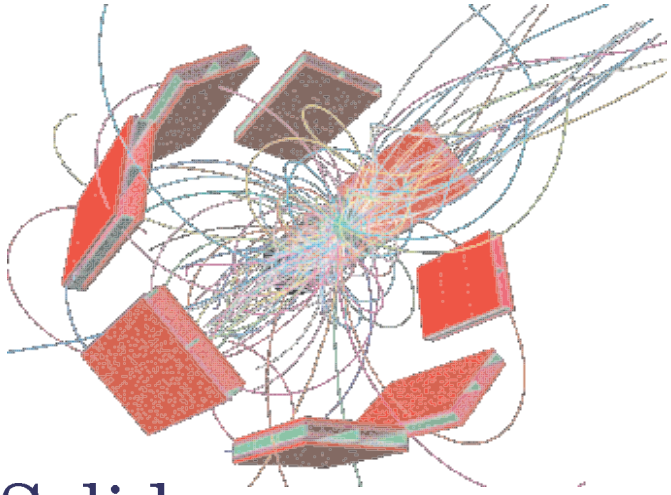
Plottables

(J. Hrivnac)

- TruthTrack
- full ID
- almost full MU
- very little from LAr
- nothing from Tile, but work has started
- ErrorPoint from Moore
- soon reconstructed Track from Moore and iPatRec

GraXML

(J. Hrivnac)



- done:
  - complete coverage of G4 Simple Solids
  - natural transformations
  - support for new Moore Plottables (ErrorPoint, soon Track)
  - bug fixes
- to-do:
  - bug-fixes (look at Web)
  - requested functionality (look at Web)
  - migration into FreeHEP:
    - 3D Objects
    - VRML writer
    - Interacter
    - ...

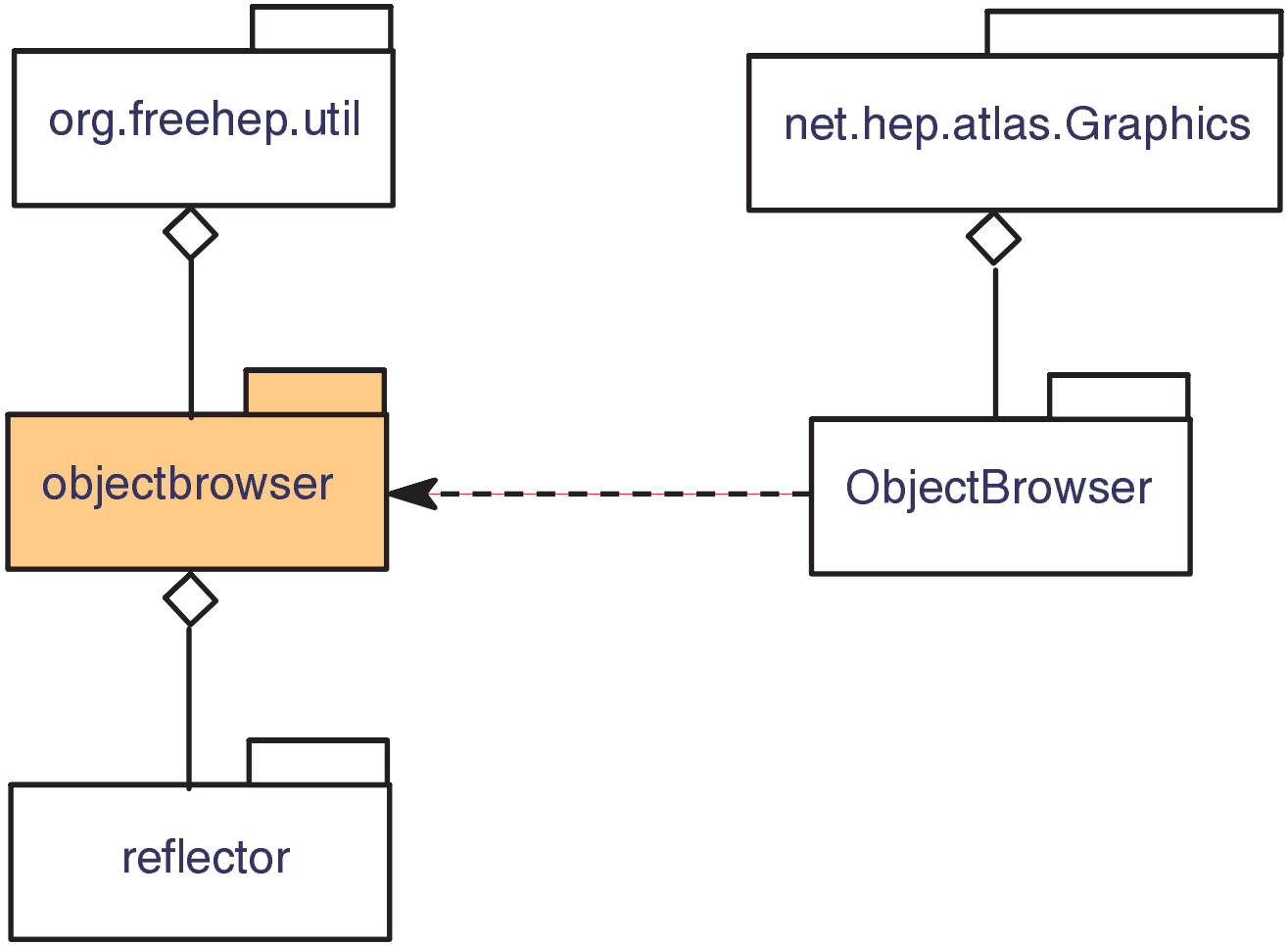
Object Browser

(J. Hrivnac)

- originaly written as a part of the Graphics Design Proposal based on MultiMethods (L.Cunha & L.Tuura)
- ported to new Java Graphics (so it uses Plottables etc.)
- divided into general Object Browser (submitted to FreeHEP) and small Atlas interface to it (this uses Plottables etc.)
- evaluating possibility to use in C++ with ADL/IDL

Object Browser

(J. Hrivnac)



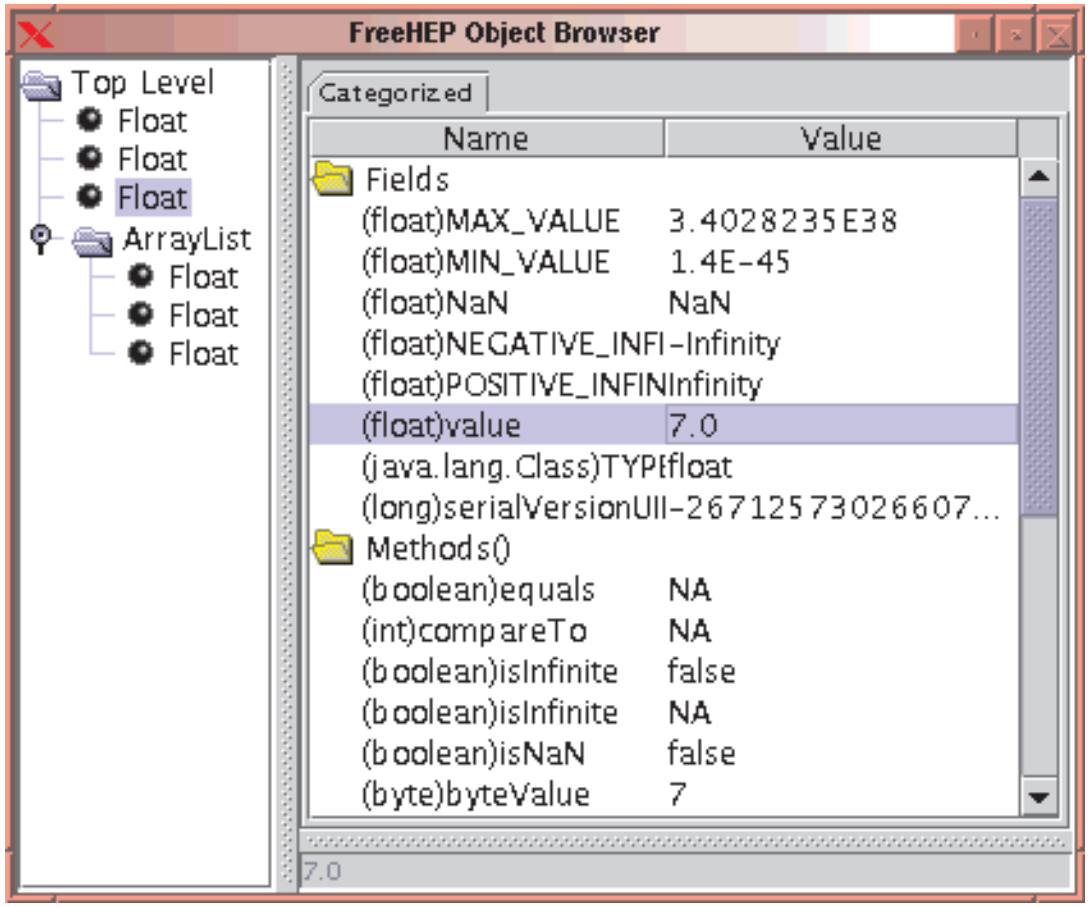
Object Browser

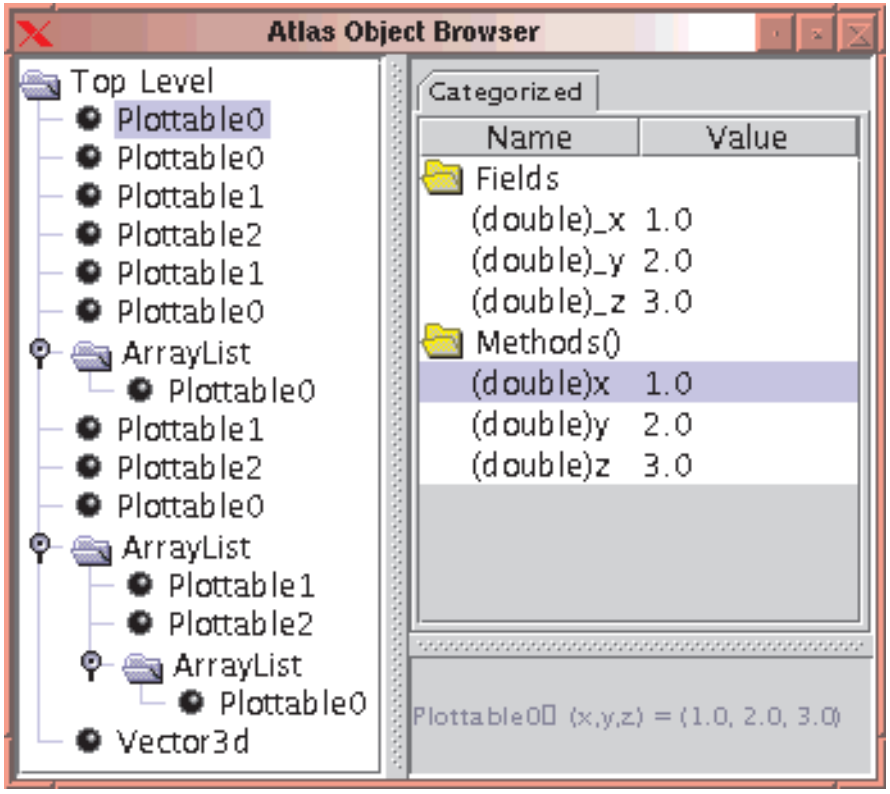
(J. Hrivnac)

- 😐 access
  - ☺ to methods (can be unsafe => can be disabled) or variables
  - ☺ to private/package/protected/public members
  - ☹ inherited members
  - ☹ automatic or on demand (Context Sensitive Actions)
- ☺ automatic expection of standard Collections
- ☺ possibility to use either default behaviour (using Reflection) or defined Representations
- ☹ Drag-&-Drop with other Scenes

Object Browser

(J. Hrivnac)





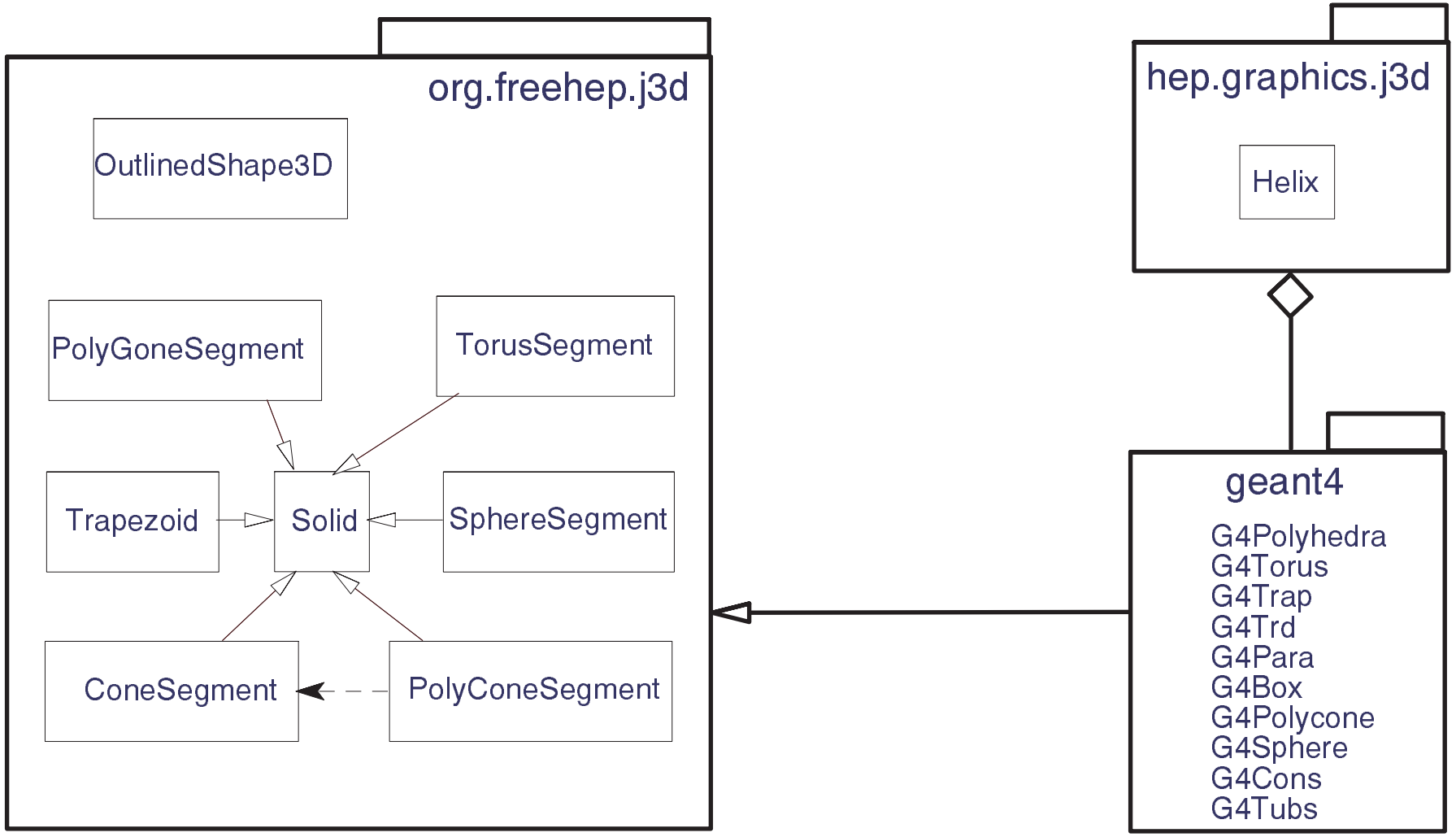
HEP3D

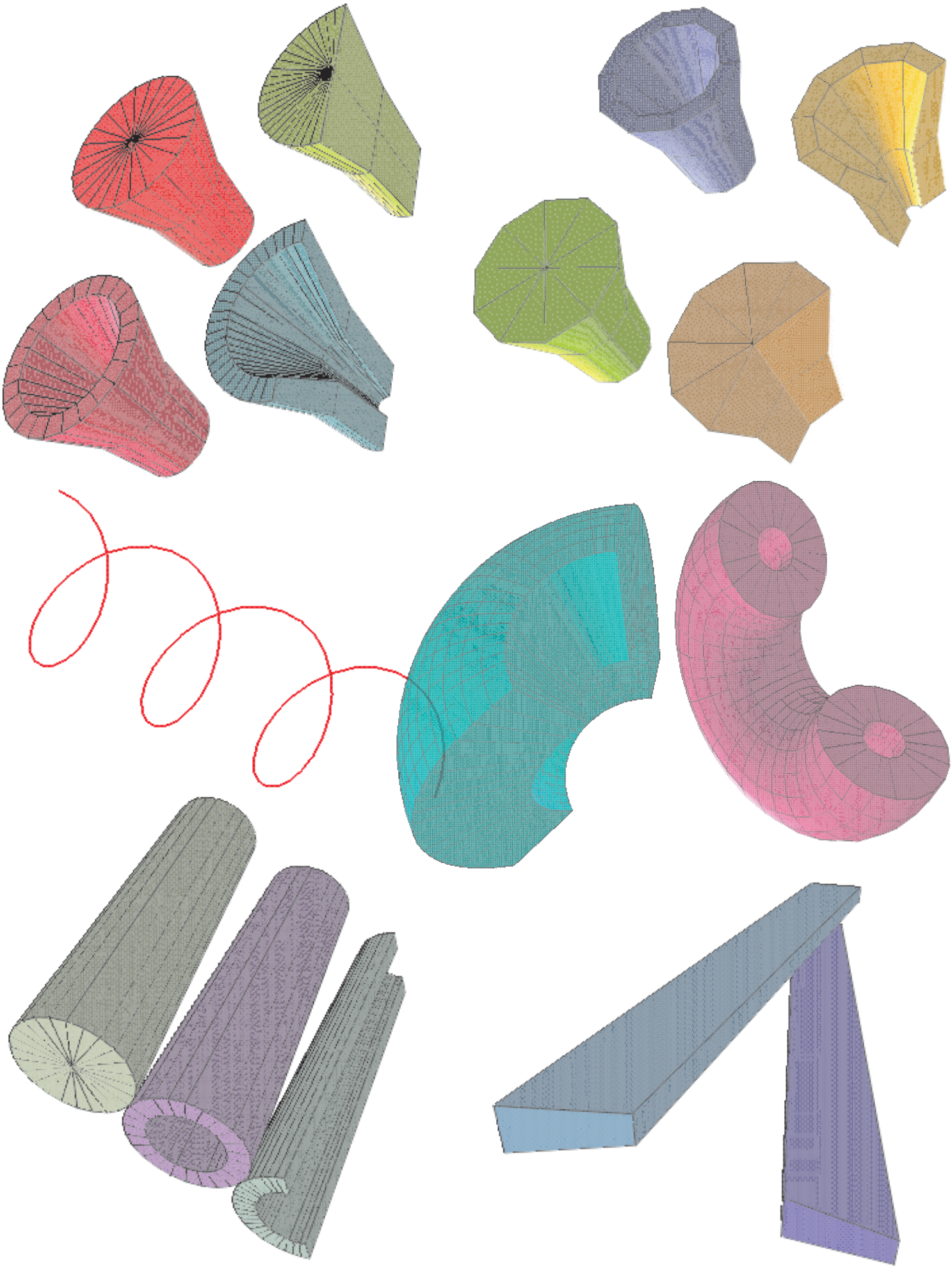
(J. Hrivnac)

- originaly written as a part of the GraXML
- extended to support all Simple G4 Solids (and some others)
- divided into general 3D, Geant4-like 3D and special 3D (all included in FreeHEP)

HEP3D

(J. Hrivnac)





Physical Design of Reps

(R. Candlin)

- many Reps already exist:
  - newly Track from Moore and iPatRec
- finer granularity in directory structure needed
- overall Graphics Framework should be refactored:
  - using ADL/IDL will help to remove coupling
  - using JACO interface to Java will move problems into Java side, where they disappear