Atlas Graphics – Status

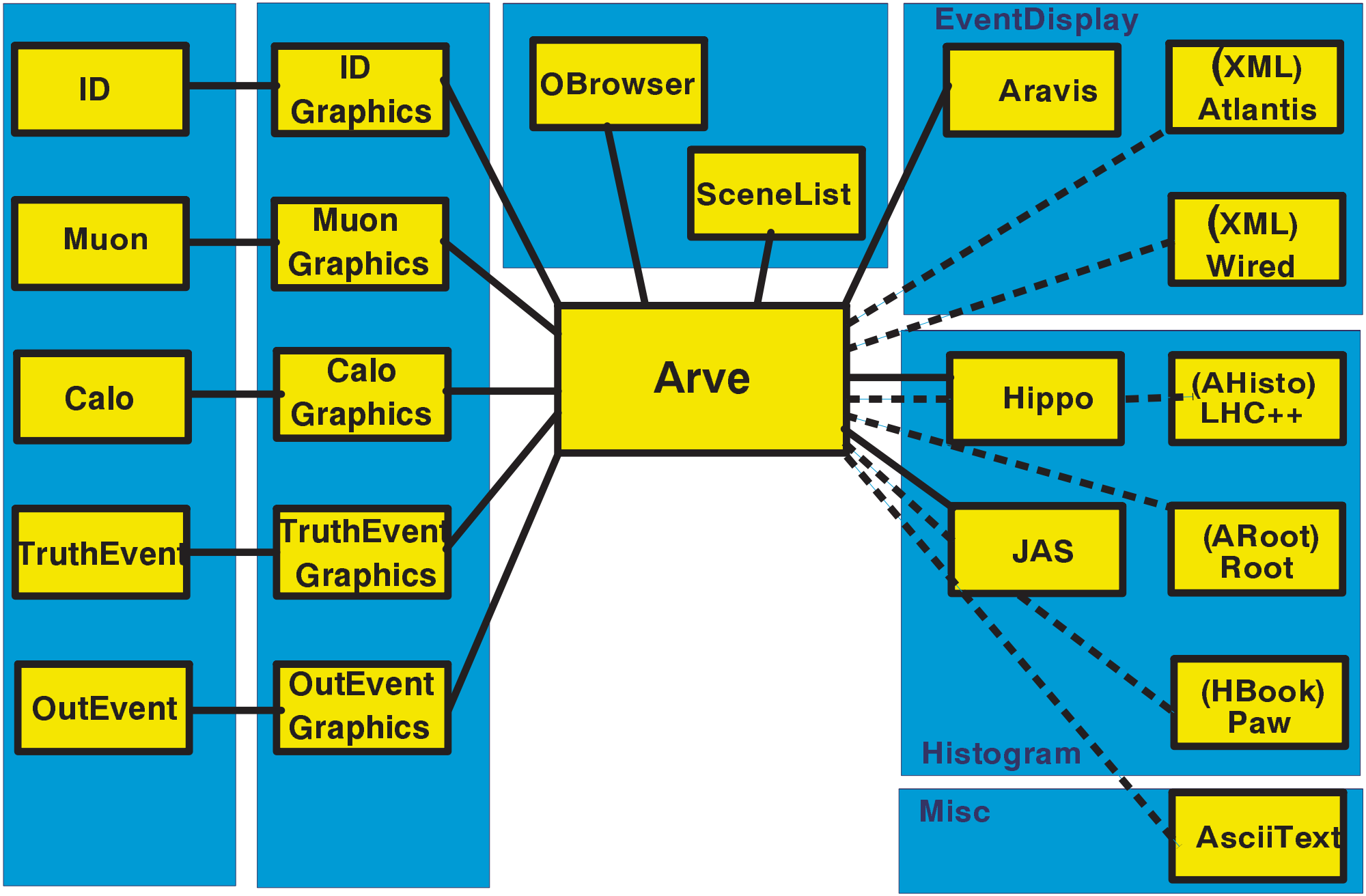
J.Hrivnac/Atlas SW Week – Dec98

- Strategy & Components
- Scenes:
  - Event Display
  - Histogram
  - Misc
- Data
- Control
- Technical support
- Applications

- New Design:
  - Self-similar Structure
  - Two-mode Scene
  - Reverse Operation
  - (G)UI
  - LevelOfDetail
  - UnavailableScenes
  - Names

- Graphics Web -h
  http://atlasinfo.cern.ch/Atlas/GROUPS/GRAPHICS/
- Graphics Meeting -
  Thursday @14:00

Strategy & Components



Scenes Event Display

- StandAlone:
  - Atlantis (H.Drevermann, B.Nilsson,...):
    - installed
    - new Menu
    - XML Files (P.Luthaus)
  - Wired (M.Donszelman):
    - installed soon
  - AVRML:
    - done
  - AtlVis:
    - manpower ?
- Integrated:
  - Aravis (T.Burnett, Candlins):
    - new Design under Review
    - new Code partly prepared

Scenes Histogram

- StandAlone:
  - AHisto/LHC++:
    - works
    - sleeping as depends on LHC++
  - ARoot/Root:
    - proof of existence
    - not implemented as requires design compromises
- Integrated:
  - HippoDraw:
    - will look at it
  - JAS:
    - will look at it

Scenes Misc

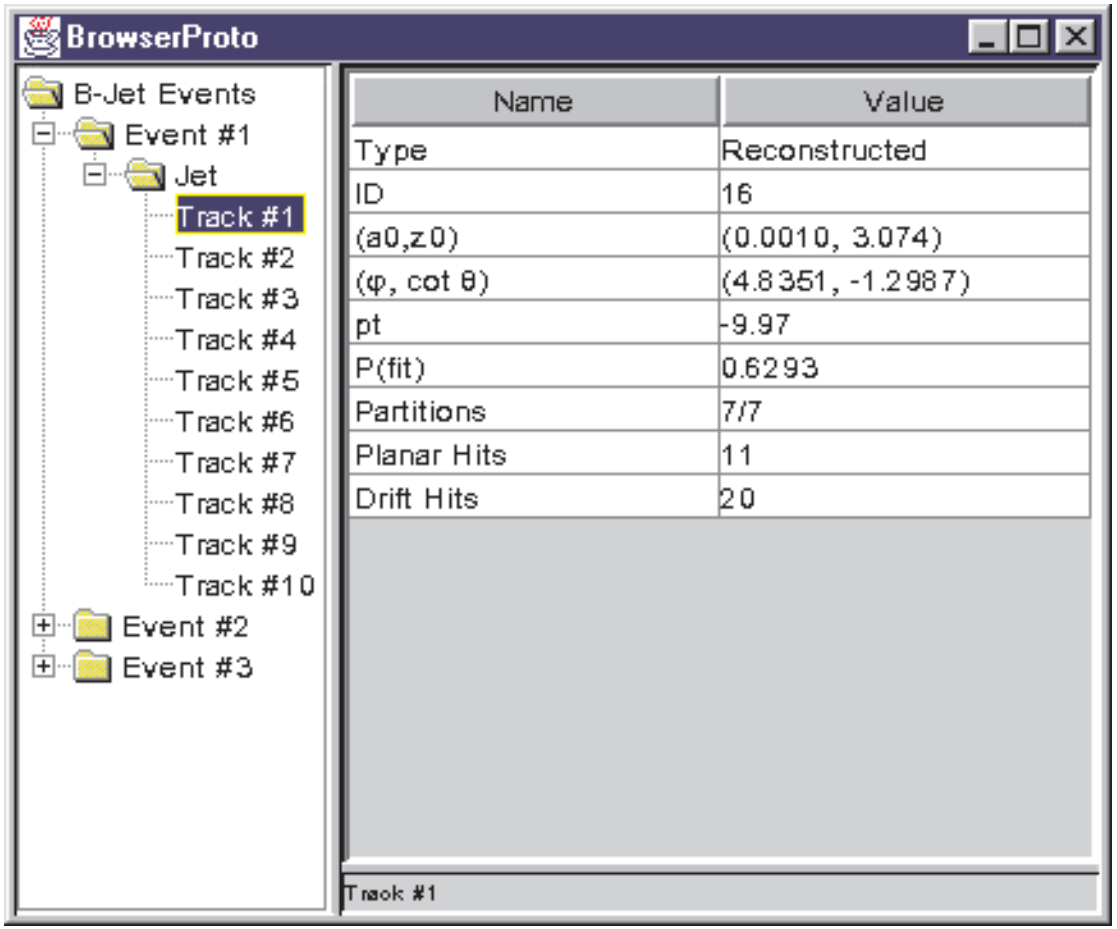
- XMLScene:
  - basic implementation exists
  - better implementation under work (D.Koper)
  - new implementation (T.Burnett)
- AsciiText:
  - done
- JavaScene:
  - prepared (O.Peters)
  - ? manpower

Data

- InnerDetector/InDetEvent,InDetGraphics:
  - done, needs improvement
- Simulation/TruthEvent,TruthEventGraphics:
  - done, needs improvement
- MuonSpectrometer/MuonEvent,MuonGraphics:
  - will be done
- LArCalorimeter/LArEvent,LArGraphics:
  - ? manpower
- Reconstruction/"OutputTrack,SpacePoint,Cluster":
  - will be done
- MagneticField/MagneticFieldGraphics:
  - will be done
- Trigger/OOTrig,OOTrigGraphics:
  - under work

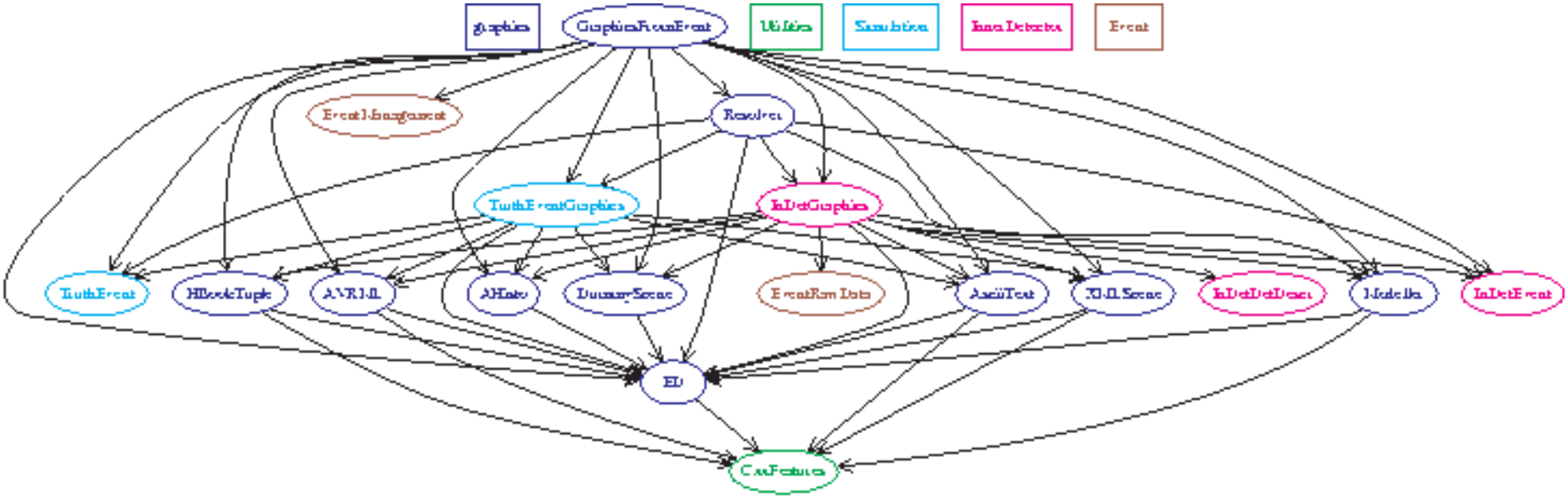
Control

- SceneList:
  - done
- ObjectBrowser (L.Tuura):
  - prototype



Technical Support

- Implementation Guidlines Document
- CreatePlottableModel Script
- DependencyGrapher



Applications

- Atlantis:
  - as executable
  - waiting for *usefull* data
- Wired:
  - as executable (soon)
  - waiting for *usefull* data
- GraphicsFromEvent:
  - graphical representation of any event from tape
  - as executable
  - as WWW page
  - waiting for *usefull* data

New Design
Self-similar Structure

- P.Model, P.Rep *is_a* Plottable
- use:
  - X <--X_Model <-- 3D_X <-- 3D_X_Model <-- VRML_X
  - X <--X_Model <--Histo_X <-- Histo_X_Model <--HistOO_X
- lower-level P.Reps generated automaticaly

New Design
Two-mode Scene

- SceneList::
  - add(Plottable*)
  - show(Plottable*)
- AbstractScene::
  - adopt_add(PlottableRep*)
  - adopt_display(PlottableRep*)
  - display()

New Design
Reverse Operation

- now creation: Plottable --> P.Model --> P.Rep
- also possible: P.Rep --> P.Model --> Plottable
- usefull for files (XML,...)

New Design (G)UI

- Command is_a Plottable
- AbstractScene = (G)UI system
- allows for scripts (together with Reverse Op.)

New Design
Level Of Detail

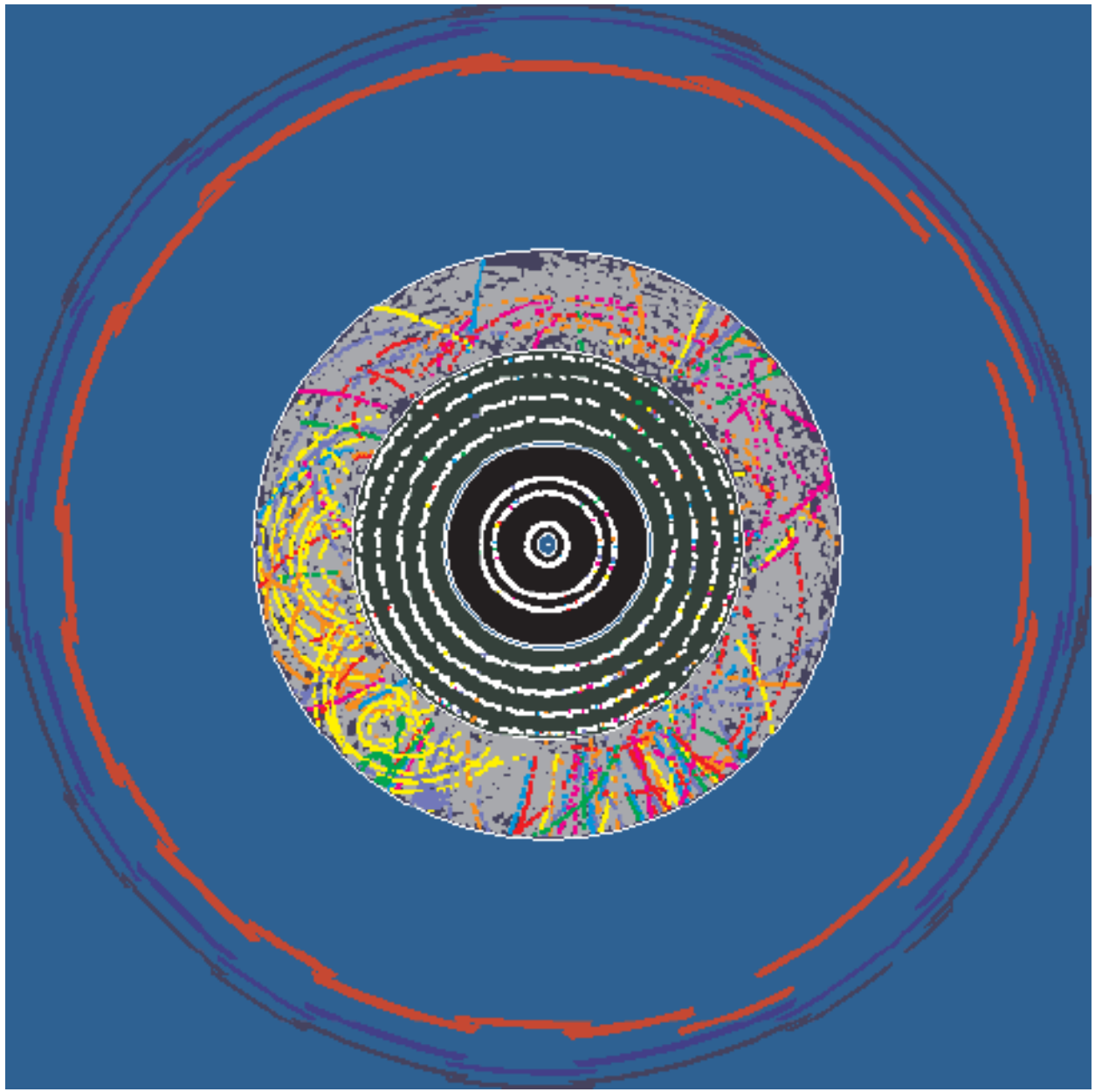
- LOD = 0,1,2,...
- can be defined in various places
- usefull defaults (LOD=1)
- *done*

NewDesign UnavailableScenes

- because some Scenes may be:
  - unavailable on some platform/OS/compiler/...
  - unneeded
- currently: decided at compile time
- in future: decision possible even at run time
- available for:
  - AVRML (uses special c++ STL features)
  - AHisto (requires Objy/LHC++ available/initialised)
- *done*

New Design Names

- AbstractScene --> Scene
- Plottable --> Polymorphic
- PlottableModel --> Model
- PlottableRep --> Rep

See You on Thursday at 14:00

- Graphics Status
- Event Display:
  - Atlantis
  - Wired
  - Aravis
- Histograms:
  - HippoDraw
  - JAS
- XML
- New Design