

G4/analysis



Orsay workshop

- Setup a strategy : G4 <--> AIDA <--> jas, OSC, Lizard, ?
- AIDA-1.0 : IHistogram1D, 2D, IHistogramFactory.
- source/analysis/manager/G4AnalysisManager
/analysis/jas, Lab, Lizard
- examples/extended/AnaEx01 “batch”.
- /afs/cern.ch/sw/contrib installation of jas & OpenScientist,
(Lizard under /afs/cern.ch/sw/lhcxx?).
- Released for Geant4-3.0 (december 2000).
- But not sufficient, at least tupling is needed...

ITuple and more...



- Two “blackboard” workshops (Orsay + Boston) :
 - ITuple, ITupleFactory
 - IMasterFactory, ITree, IManagedObject, IStore.
- Work on the implementations....
 - OpenScientist-7.0 (June release) came with huge modifications in the Lab package to introduce the upper interfaces.
- AIDA-2.x (3.0 ?) : quantum jump....

December 2001



- AIDA-x.x : ITuple, ITupleFactory, IMasterFactory, ITree (IManagedObject, IStore).
- examples/extended/AnaEx02 “batch + tuple”.
examples/advanced/xray_telescope,
- Installation under /afs/cern.ch of adequate versions of jas, OpenScientist, Lizard.
- source/analysis/G4AnalysisManager....

Dynamic loading to hook analysis systems ?

- Having the IMasterFactory will open the possibility to use dynamic loading to hook analysis systems at run time.
 - ~~– source/analysis/jas, Lab, Lizard.~~
 - ~~– G4ANALYSIS_BUILD_XXX~~
 - ~~– G4ANALYSIS_USE_XXX~~
- Could remain only the G4AnalysisManager to dynamic load an analysis systems dll, retrieves in the dll an implementation of an IMasterFactory that will permit to get some Itree, ITupleFactory, IHistogramFactory to create tuples and histos.
- At compile time only the AIDA package will be needed ; at link time only some OS “libdld” library.

And the TUnivers...

- OpenScientist/Lab package read/write ROOT files.
- But the Lab/Histograms have not today the same “streamer” than the THx. Have to see what could be done...
- Lab/RootTuple are on Ttree, then no problem here.
- With same histo streamer, the Lab package could be seen also as a ROOT implementation of the AIDA interfaces...

Iceberg ahead...

- LHCb event display, integration of :
 - Gaudi
 - LHCb soft
 - Geant4 (through GiGa Gaudi Geant4 “service”)
 - Analysis
 - OpenScientist
 - Have all that on Windows (which means have DLL for Geant4 !)
- Huge release scheduling problem in perspective.



Then

- December release is going to be a major milestone concerning analysis...