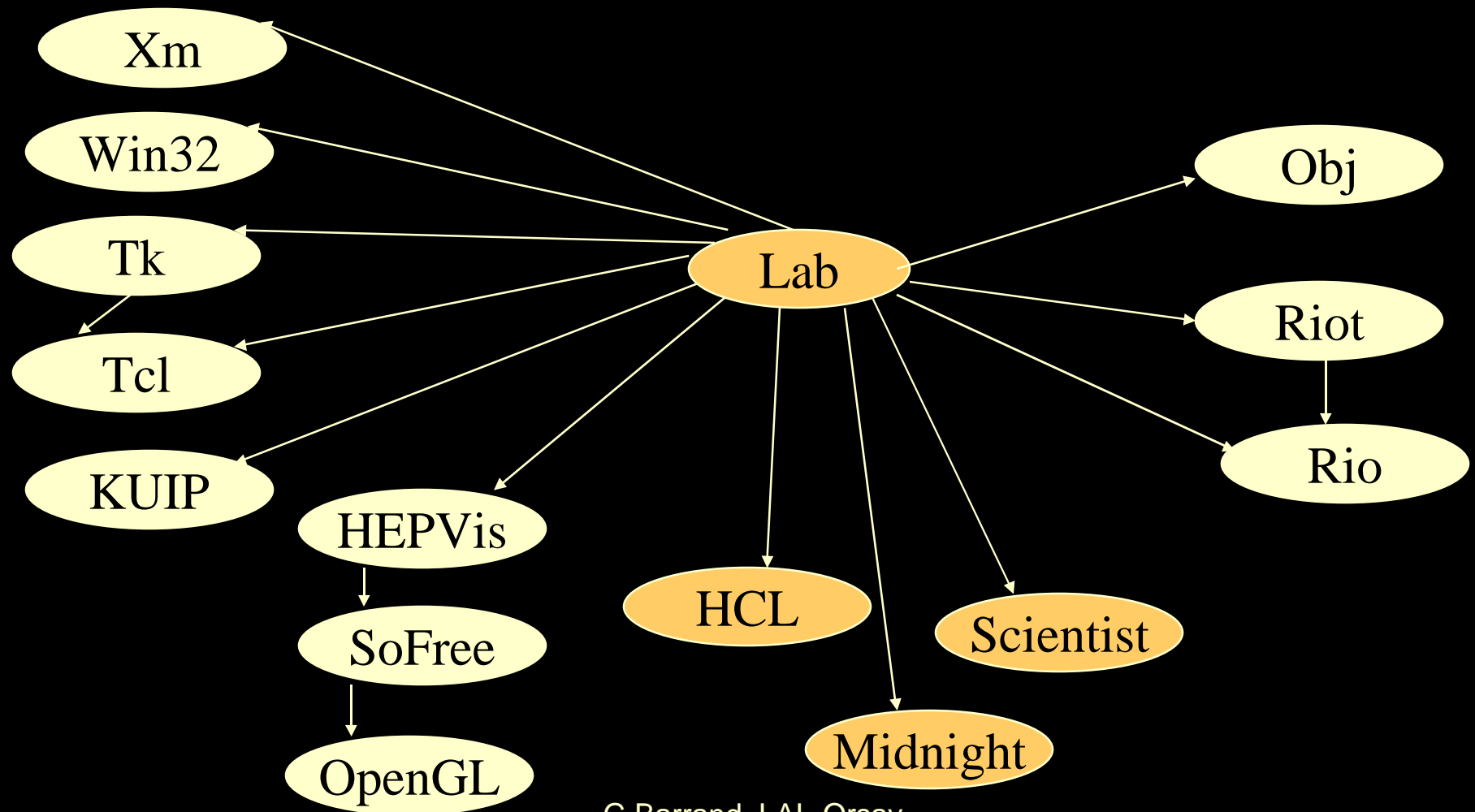


GaudiLab

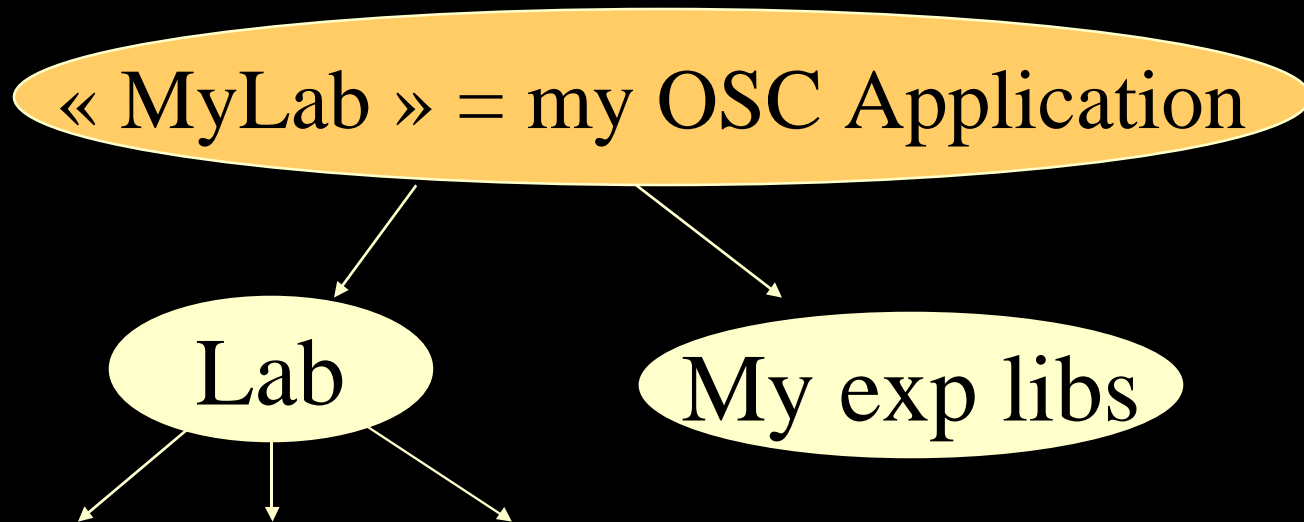
Some news

G.Barrand, LAL-Orsay

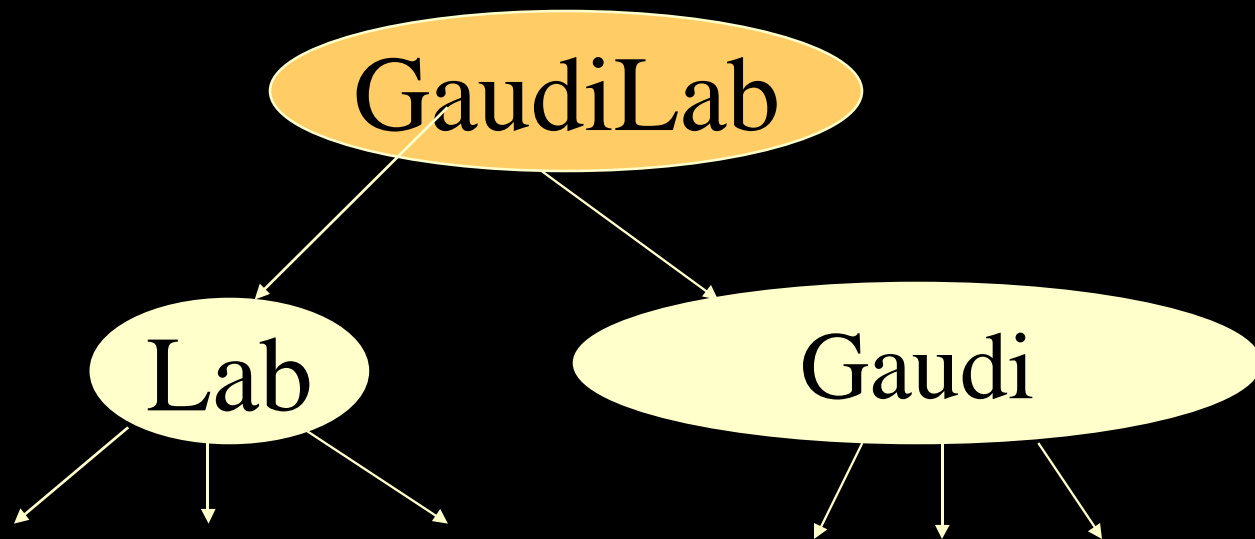
Open Scientist (v5) coherent set



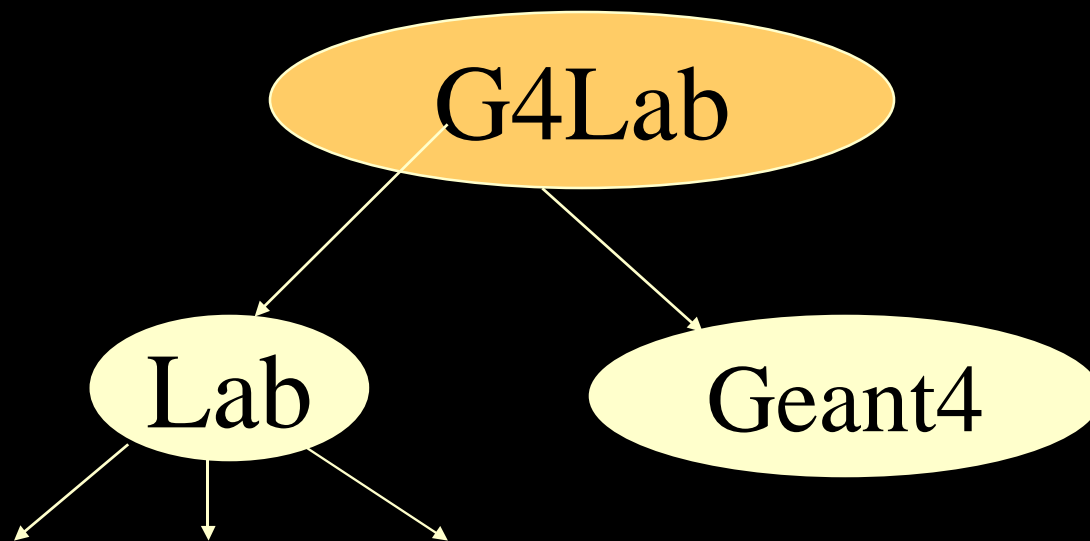
The “Labs”



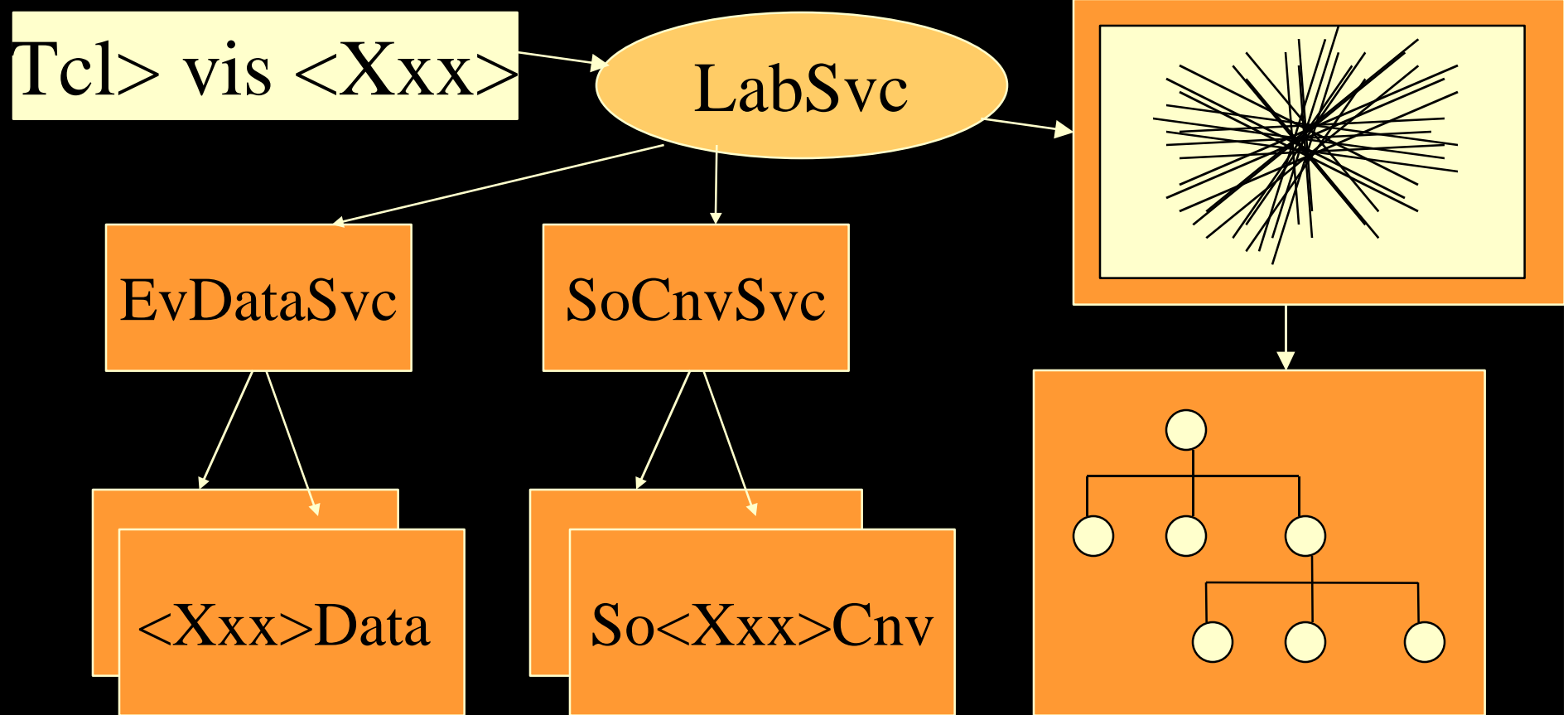
LHCb : GaudiLab



Geant4 : G4Lab



Gaudi point of view



Tcl scripting

- A “GaudiLab” class had been declared to tcl (through the SWIG tool) :
- tcl> GaudiLab gd
tcl> gd visualize /Event/MC/MCParticles
tcl> v set color “1 0 0”
tcl> gd visualize /dd/Structure/LHCb/Muon/Stations
- What of Gaudi are we going to expose to scripting ? Data selection at hand.

So <*x*> *Cnv*

- SoMCTrackCnv (GB)
- SoDetElemCnv (Pere)

Dynamic loading

- The LabSvc and Gaudi are dynamically loaded from “standards” OpenScientist/Lab applications (xmSession.exe on Linux, win32Session.exe on NT).
- UI and actions are scripted (with tcl).
- This means that compiled code concerning UI and visualization handling is not done in Gaudi.

GaudiLab-1.0 ????

- The CMT reconstruction have to be checked on NT.
- The head of the repository is **not** ready for a 1.0 distribution.
 - **Crazy** detector drawing.
 - Unable to visualize MCParticles (**understood** yesterday night at 23 h).
 - **Conflict** with the dynamic loading of libGaudiLab by Lab/xmSession.exe and the Gaudi/DEV logic that wants a “main” linked with some f77 related things.

Demo

- ?

Which GUI toolkit ?

- Open Scientist blocked by the choice of a GUI toolkit ; things are today “keyboard” driven.
- Requirements :
 - Free (needed by OpenScientist)
 - Portable NT & UNIXes (not only Linux)
 - Able to integrate OpenGL windows in GUI panels.
 - Able to have Inventor drawing in the OpenGL window.
- ???

GTK+ ?

- Free : <http://www.gtk.org>
- Portable : check 1.2.1 on DEC, HP, SunOS ; installed on any RedHat (it is the GUI toolkit of the GNOME project !)
- It has been ported on NT in a free way !
- A portable OpenGL widget exists (gtkglarea).
- OIV (TGS and SoFree) is able to draw in this widget.

Others...

- Qt (toolkit of KDE) : **not free** on NT.
- Java/SWING : seem unable to integrate OpenGL windows (it is a problem coming from SWING, not java). OIV ? All this have to be strongly expertised ; the HEP java world don't care of the problem !!!!

Demo

- ?

Conclusions

- Progress, progress...
- The place where the “data representation” is done is sufficiently well isolated of the UI, viewing machinery so that people can enter their own one (if we are able to give birth to GaudiLab-1.0).
- A huge progress had been done concerning the choice of a GUI toolkit : GTK+ is a good candidate (at least for the next year !!!).
- Start to “button drive” the Lab package...