

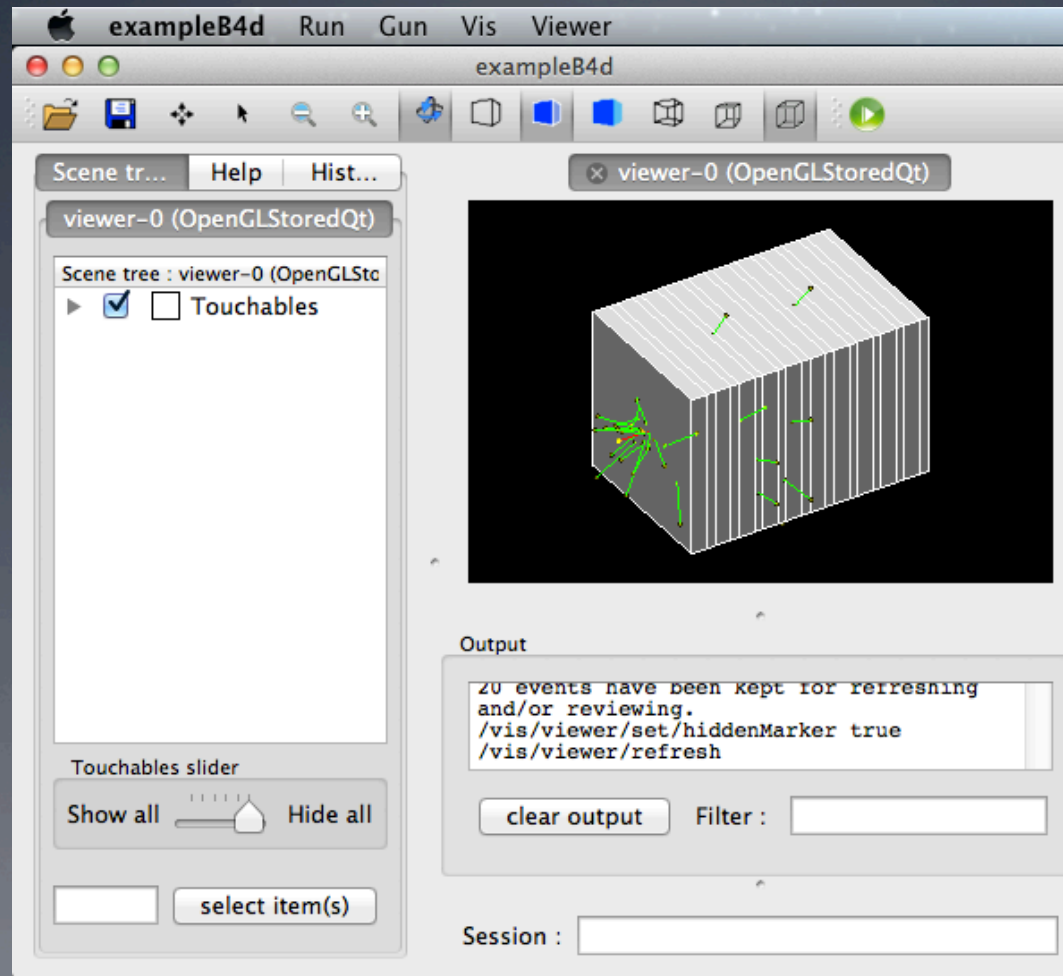
# Qt driver status

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*On behalf of Visualisation and interfaces WG*

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# Qt update since Chartres



# Qt update since Chartres

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- **Qt Visualisation driver**

- Lot of work on the scene tree browser and resolve some transparency problems for this scene tree
- Better margin control and adding a tooltip on scene tree colour item
- Coverity fixes.
- Solves problem of batch v. non-Qt session.

- **User interface**

- Add a field to memorise the last open directory on Icon->Open
  - Change some G4cout messages to be displayed only when verbosity  $\geq 2$
  - Change behaviour on G4err and G4cout :
    - Before on each « G4err » alert box was display, now it appear only if G4State will Abort or Quit the programm
    - All G4err messages are now in red. Previously there were sometimes changing color to black.
  - When entering a command, if this command is multiple line it will now take it in account as multiples commands.
  - Add some tooltips
  - Add application name in the application title bar
  - G4UIXaw is now deprecated
  - Add a "save" command to "save" icon
  - Add a new command /gui/addIcon to be able to add an icon on the toolbar
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# Qt new tutorial

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- Qt driver driver tutorial available :  
<http://geant4.in2p3.fr/spip.php?article84&lang=en>
    - Download Geant4
    - Compilation and Installation
    - Example (B1) compilation
    - Run example
    - Qt interface
    - Making movies
    - Export high quality pictures
    - Save History
    - Add menus
    - Add a button without specify parameters
    - Create your gui.mac file
    - Modify .cc file to load gui.mac
    - Add a toolbar
    - Add a new toolbar icon
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# Qt5 and Geant4

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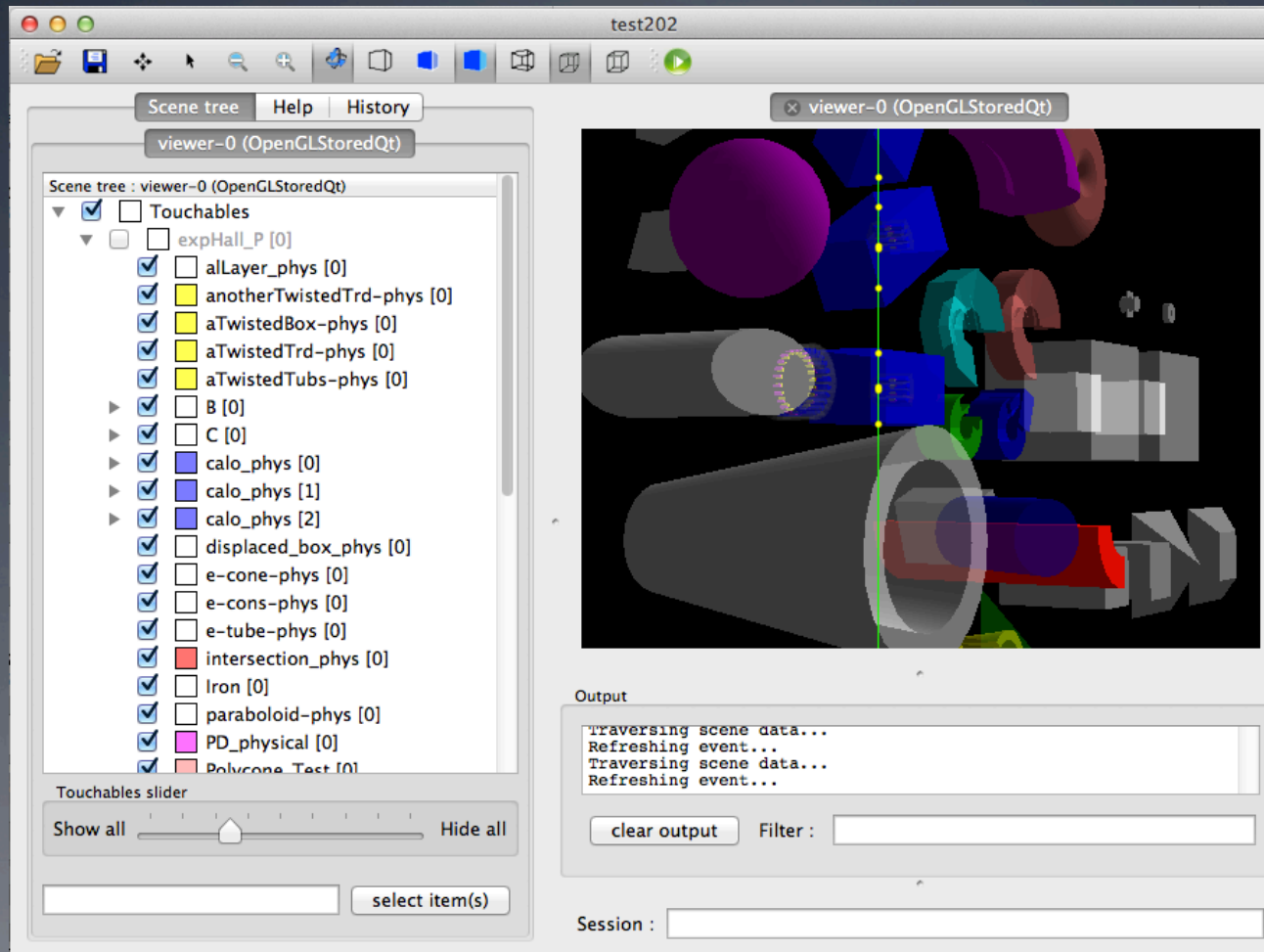
- Qt5 is available since December 2012
- From code point of view, no major update to do, quite all is backward compatible
- From cmake point, we have to deal with two Qt version and not the same library hierarchy

**Geant4 is not ready yet to work with Qt5, please do not upgrade !**

**To download Qt :** <http://qt-project.org/downloads>

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# Qt demo



# Verbosity in Geant4

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- A quick grep give :
    - About 315 times the word « WARNING » into a G4cout
    - About 70 times the word « ERROR » into a G4cerr
    - About 210 time the word « ERROR » into a G4cout (160 in vis)
    - About 28 times the word « WARNING » into a G4cerr (0 in vis)
  - More serious :
    - 381 std::cerr() (12 in vis, 5 in UI)
    - 371 std::cout() (15 in vis, 5 in UI)
    - ....6 abort() statements outside G4Exception
    - ....131 std::exit(), a lot in « Tests » and « Examples »
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# Verbosity in Geant4

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What about G4Exception status « JustWarning » ?  
( This picture has been taken in Qt driver output )

```
----- WWW ----- G4Exception-START ----- WWW -----
*** G4Exception : GeomSolids0002
      issued by : G4Polycone::SetOriginalParameters()
Polycone head
cannot be converted to Polycone with (Rmin,Rmaz,Z) parameters!
*** This is just a warning message. ***
----- WWW ----- G4Exception-END ----- WWW -----
/vis/scene/notifyHandlers
WARNING: Viewpoint direction is very close to the up vector direction.
      Consider setting the up vector to obtain definable behaviour.
```



“JustWarning”  
exception

G4cout



# Qt driver status

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# Questions ?

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