

# Updates in Vis / UI

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Geant4 collaboration meeting, vis session, 25 Sept 2017

# Updates

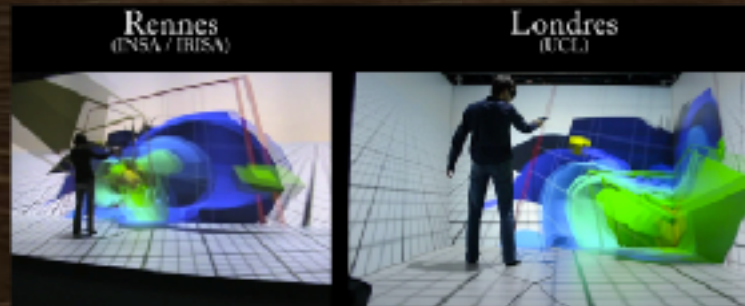
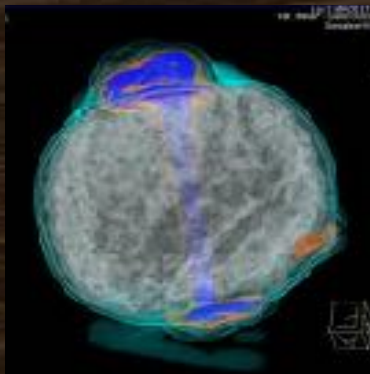
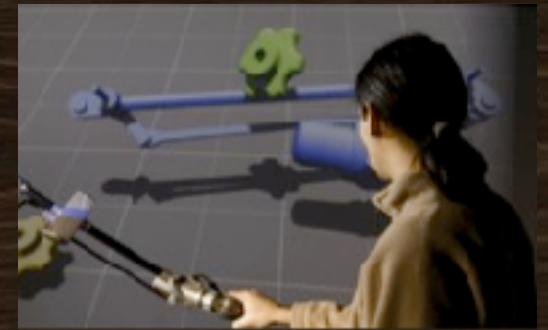
Laurent moved to a new lab



**IRISA** (Research Institut of Informatics and its appliances) is a part of the CNRS and INRIA (National Institut of Research in Informatics and Automatism)

[Immersia Team](#) :

- Virtual reality plateforme
- Augmented reality
- Lot of interactions with
  - Archéologie ( representation of 3 scenes, ...)
  - Medicine (Surgery training help, DICOM images, ...)
  - Entertainment (sport movement detection, ...)



# Updates in Vis

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## Bug fixes

- **Qt Driver:**
  - Crash when launching a stand alone application
  - Fix segmentation fault when you click on default icons
  - Fix a problem « /run/beamOn I ».The parameter was not taken in account in the icon toolbar
- **RayTracer:** Fixed a bug whereby the jpeg was always 600x600.
- **All OpenGL drivers:** (Mac Retina display) Picking was not working
- **OpenGL Stored:** Fix a colour problem with transparent volumes in DrawDisplayLists
- **All OpenGL drivers:** glClear () and GL\_INVALID\_FRAMEBUFFER\_OPERATION



# Improvements in Vis

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- **Improved arrow drawing.** Reduced default **lineSegmentsPerCircle** to 6 for rapid yet adequate drawing.
  - Similar improvement to **magnetic field drawing.**
  - Default can be changed with new command:  
**/vis/set/arrow3DLineSegmentsPerCircle**
- **/vis/viewer/interpolate**
  - Now works for WIN32
  - Now ok for DAWN and Raytracer
- Added **/vis/scene/add/gps** command for visualisation of General Particle Source
- Implement **/vis/drawOnlyKeptEvents.** To draw selected events the user should set this flag, then in a user action :

```
if ( some criterion ) {  
    G4EventManager::GetEventManager()->KeepTheCurrentEvent();  
}
```

# Improvements in Vis

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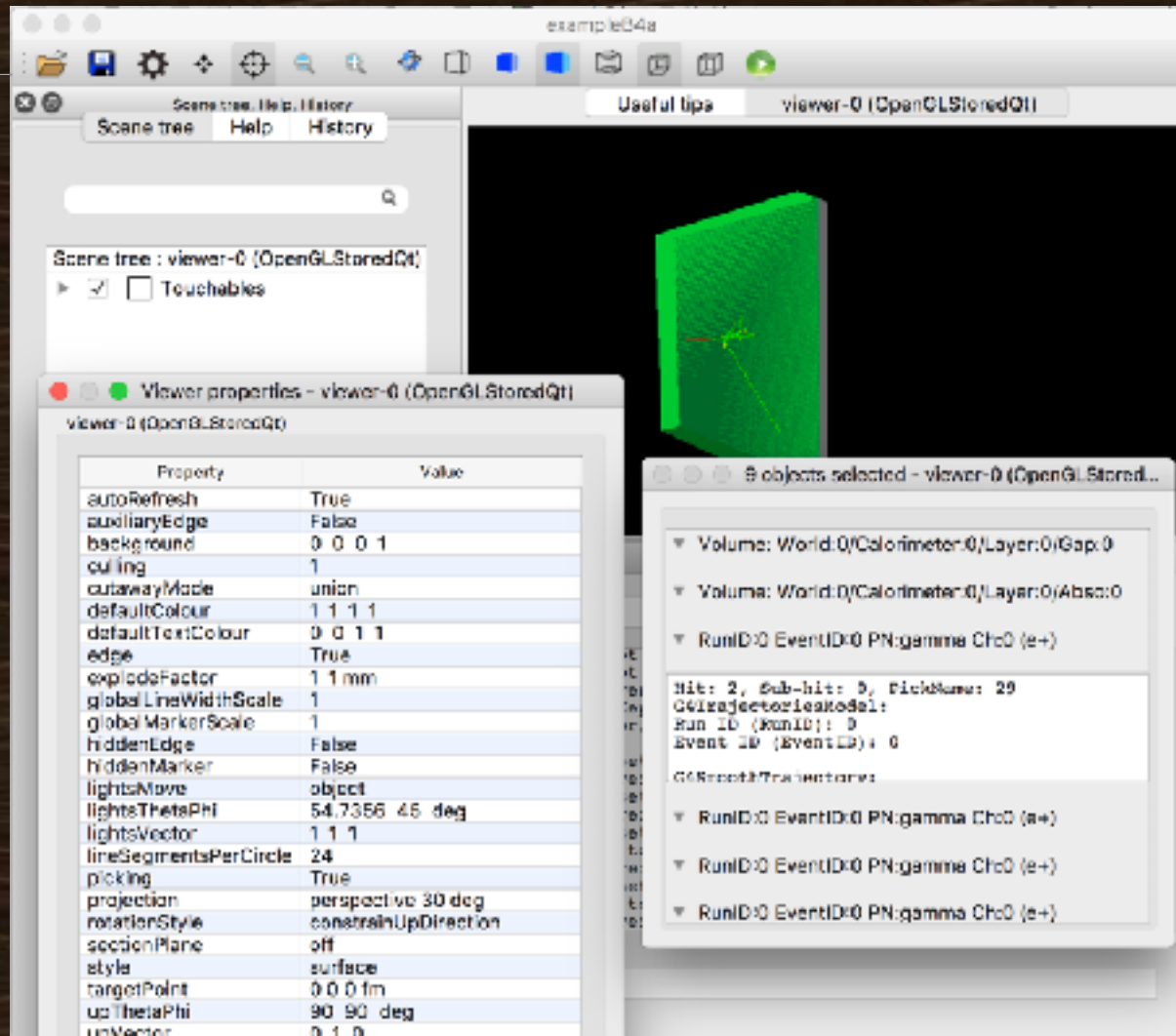
- **Qt Driver**

- Remove (multiple) scene tree from a tab to put it in a single, auto-update widget
- Remove (multiple) viewer properties from a tab to put it in a outside dialog
- Remove (multiple) pick infos from a tab to put it in a outside dialog
- Add a new command /gui/defaultIcons to enable/disable Geant4 default icon toolbar
- Add multiline tooltip on completion widget when typing command

- **Wt Driver**

- Laurent is actually rewriting the Wt viewer but it's not finish...

# Qt driver 2017



# Updates in UI

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## Bug fixes

- **G4VBasicShell:** Fix `std::out_of_range` exception in `ModifyPath()` when typing `ls` command at the top dir
- Fix a bug on Qt5.7 with an extra whitespace
  - at the end of "search" in help tree
  - at the end a the command line



# Reminder

## **/vis/ogl/flushAt**

[ endOfEvent | endOfRun | eachPrimitive | NthPrimitive | NthEvent | never ] <N>

Command **/vis/ogl/flushAt**

Guidance :

Controls the rate at which graphics primitives are flushed to screen. Flushing to screen is an expensive operation so to speed drawing choose an action suitable for your application. Note that detectors are flushed to screen anyway at end of drawing, and events are flushed to screen anyway depending on **/vis/scene/endOfEventAction** and **endOfRunAction**. For **NthPrimitive** and **NthEvent** the second parameter **N** is operative. For "never", detectors and events are still flushed as described above.

Parameter : **action**

Parameter type : **s**  
Omittable : **True**  
Default value : **NthEvent**  
Candidates : **endOfEvent endOfRun eachPrimitive NthPrimitive NthEvent never**

Parameter : **N**

Parameter type : **i**  
Omittable : **True**  
Default value : **100**

# Question ?

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