Interactivity and external frameworks

30 September: understanding of requirements
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2nd October: Focus on scripting, relation with gaudi etc.

3rd October: Focus on UI
Understanding of requirements

- External packages and user contributions
  - Hard to find pointers to them,
    - better Web pages to related info,
  - CVS service can be improved?
  - /contrib in the ftp page?
continued

Interactivity
- Runmanager, G4Event, EventAction
- Dynamic loading and memory management; any guideline?
- IGUANA and COBRA are introduced
- Python interface
continued

- Miscellaneous items
  - G4UI Mo compiling
  - VRML sphere size
- Picking
- DTREE
  - Pickable DTREE
  - For debugging
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Python

- Why scripting in addition to C++ API?
- User’s intervention will be easier
- Other project using Python
  - GLAST etc.
- No concrete progress this time but,...
continued

Hot brain-stomping discussion on framework and G4 as a toolkit: only some fragments of phrases are memorized here.

- Bypassing G4’s interfaces; VisManager etc.
- Generic interfaces or common denominator for vis
- Commonality
- Alternative approach
  - External packages and tools
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Focused on runManager

- Present scheme
  - Only a part of it is mandatory
  - User can make his own RunManager
  - Big experiments may need its own RunManager for persistency, event action etc..

- Possible improvement
  - Keep the present RunManager for many users
  - Provide granular service classes which allows experienced users much flexibility and interactivity, while keeping the present scheme -> physics list is modular now.
continued

- G4Event
  - Interplay of G4RunManager with G4Event
  - It was proposed that CMSEvent has G4Event

- G4Track and G4Trajectory
continued

- Notification of states
  - Present notification method is used in VisManager
  - It is not enough for IGUANA
  - Study how to watch the changes in the geometry, physics etc. with the minimum penalty
Summarize if possible

Requirements to “interactivity” are related with several respective categories

- Intercoms and interfaces
  - Python
- Visualization
- Run, event

Some of them are related to intra-categories

- Plugins and dynamic loading
Plugins

Large experiments use dynamically loadable plugins for geometry, physics lists etc.,

- Useful for other users, too
- Examples/advanced
- Memory management
  - User can do it, for example, with his catalogues
Intercoms and interfaces

- We know there are users of scripting language, especially python
- We start to have communication with users who are interested in it
  - Interest group on the Web will be helpful
RunManager

- It is a user class and G4 presents one implementation; G4RunManager
- But it gives false impression that it dominates user interactions
- It was proposed to provide another approach with modularized managers
My Conclusion

- First major encounter on this subject was successful.
- Continued interaction will be important
  - Related with multiple categories, not only traditional vis-gui group.
  - Sharing know-hows will be improved by web tools.