Issues for the Workshop

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Overview

- Key/hot issues
- Considerations beyond
- Session focused on issues
- How we communicate
- Making the most of the workshop

Key/hot issues

- Validating Geant4 Physics
  - At increasing accuracy for established uses,
  - In new or less widespread application areas.
- Improve computing performance
  - for many applications it is the/a leading constraint of Geant4 use (or results)
    - See Sessions on CPU Perf., Geometry Challenges
- What is available in Physics Lists
  - How to find out/communicate physics performance
- How good/fast is 'good enough'?

CPU Performance

- Approaches using 'toolkit' architecture
  - Substituting limiting component/class
  - Specializing existing 'general' components
    - Special Navigator for voxel geometries
  - Choosing/creating physics models which are 'good enough'

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Looking beyond 'hot issues'

- Experiences creating tools built on Geant4
  - Are there major/common issues not known to G4
- Recognizing the spread and diversity of expertise in utilizing / extending Geant4
  - Need to exchange, pool experiences
    - Opportunity to involve users in different areas
- How to utilize Geant4 reliably and efficiently?
  - Increasing complexity, age of components
    - Are there hidden side-effects of major developments?
    - Are aged designs/implementations adequate/suitable today
  - When there are many ways to do something, which is best (or at least 'very good')

'New' Sessions

Topic-focused sessions

- Geometry challenges

- Tools using Geant4

- Enabling users to assist other users

- CPU Performance

Goals – a different view

- Inform each other
  - Reports on application areas, studies
- Identify key or common issues
  - Problems, challenges, requirements
- Hold discussions (in sessions, or '1-on-1')
  - Investigate some disrepancies
- Meet each other and improve contacts
  - Establish communication, grow 'trust'

Making the most of it

- Must make sure that there is time to discuss issues raised
  - After every talk
  - At the end of every session
- Face to face meetings are key for great communication
  - Take the opportunity to meet us (G4) and each other
- Many times the most lasting effects of workshop are not planned:
  - the personal interactions
  - off-sessions discussions.
- Let's make the most of our sessions and workshop!