Geant 4

A Short Course on Geant4 Simulation Toolkit

How to learn more?

IEEE NSS/MIC 2003

Portland, 19 October 2003

http://www.ge.infn.it/geant4/events/nss2003/geant4course.html
http://cern.ch/geant4



Main Subject of This Lecture

How can you get more information about Geant4?

- Documentation
- User support



Geant4 Web Home Page

- The main source of information
 - ← All important information can be accessed through this page.
- Address

http://geant4.web.cern.ch/

- You can find
 - Documentation
 - User Forum
 - Support
 - Download



You can I ind note about Grant's

Geant4 in a bookit for the similation of the passage of particles.

A larry Illustrates a selection of Geant 4 results and acolications.

 27 and 260 en - The latest release 5.2 of figure4 is available.
 From the download area, with undated frontal lation Guide and. 19 June 2007 - Board A service I maker reds Hahed on MIM A 586 size 2007 ** . I Day Gearth course at the 2001 TEE MOUNTED

Its application areas include high energy physics and nuclear experiments, sedical, accelerator and space steples studies.

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Geant 4

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- OO Analysis & Design
- News
- Organization



Documentation

Coverage

It covers all the information necessary for newcomers to advanced users, and for those who want to extend functionality of Geant4.

Basic structure

- An introduction document and 5 user manuals.
- Available in html, pdf, ps, ps.gz
- Search engine

Search a key over the entire Geant4 documents

← Very powerful to find a specific topic.



Overview of the User Manuals-1

- Introduction of Geant4
 - Information on the Geant4 collaboration, history, etc.
 - ← You may skip this!
 - Basic information such as
 - required minimal software knowledge
 - computing environment
 - guide line for user supports, etc.
- Installation Guide
 - How to install Geant4 in the user's computing environment
 - Detail instructions for
 - Unix
 - Windows



Overview of the User Manuals-2

- User's Guide: For Application Developers
 - Most important document both for novice & advance users.
 - Step-by-step tutorial for a novice user
 - How to use the toolkit with a lot of example codes
 - ← You should read this first if you are new to G4.
- User's Guide: For Toolkit Developers
 - For a user who wants to extend the functionality
 - For examples, to add a new physics process, a new volume shape, etc.
 - Description of the object-oriented analysis and design
 - Guidance on how to extend specific aspects of the functionality of each class category.
 - ← Document under the construction can skip this!



Overview of the User Manuals-3

- Physics Reference Manual
 - Description of physics interaction models
 - Separation of physics topics from how to use the toolkit.
 - → Dedicated to physics models, theories, etc
- Software Reference Manual
 - Detailed description of classes and their public methods.
 - Automatic generation on demand by the CGI script
 - → No printed version is available, i.e. only on web page.



User Supports: HyperNews User Forum

- Exchange of questions and experiences among users and developers.
- Based on the HyperNew system.
 - Anyone can read
 - Anyone can add messages
 - Anyone can join a membership
- Available main subjects (~ 20 forums available)
 - Control of runs, events, tracks, particles
 - Experimental Setup
 - General matters
 - Interfaces
 - Physics
- **■** To access to this forum:

Geant4 Home Page

→ User Forum



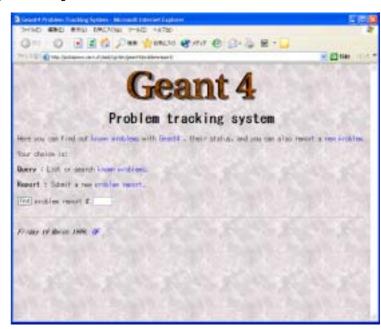


User Supports: Problem Reporting

- You can report a problem you encounter and ask developers to fix it.
 - Anyone can send a report once he/she registers to the problem report system.
 - Problem report will be sent to an expert automatically.
 - History of handling the problem will be recorded
 - You can trace the history of your problem via web.

√ Some notes

- Before making a report, check the list of known problems.
- You can check this on web.
- To access to this system: Geant4 Home Page
 - Support
 - Training Material





User Supports: Training Materials

- The Geant4 collaboration regularly held both international and domestic training courses.
- You can find materials presented in these courses under the following web page:

Geant4 Home Page

- → Support
- Training Material



User Supports: Other Useful Information-1

FAQ

Geant4 Home Page

- Support
- → FAQ
- Cross referenced (LXR) source code browser:

Geant4 Home Page

- **→** Support
- → LXR source code browser
- Educated guess of PhysicsList (for hadronic)

Geant4 Home Page

- → Support
- → Physics Lists



User Supports: Other Useful Information-2

Download the most recent released codes:

Geant4 Home Page

- Download
- A collection of Geant4 reports, results, publications, etc

Geant4 Home Page

- → Results & Publication
- News web archives for the Geant4 mailing list

Geant4 Home Page

→ News



That's all.

Any question?

