Installing Geant4 Visualization and Analysis Tools using the Workshop CD

Geant4 Workshop
SLAC - February 2002
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What’s on the CD?

- **Welcome.html** <- Start here
  - `/Geant4.4.0`
    - Files for installing Geant4
  - `/Documentation`
    - Geant4 Users Guide, Installation Instructions
    - Tutorial Overview - Quick guide to running visualization and analysis software
- `/AdditionalSoftware`
  - Some additional software for analysis, visualization
- Each directory on CD has a **README.html**.
- CD is meant to be self-explanatory
Installing Geant4 from the CD

Two methods:

- Normal G4 install from source
  - Beware:
    - Need to apply all patches yourself
    - Takes 1-n hours to compile Geant4 from scratch

- Pre-Compiled G4
  - Patches all applied for you
  - Code is precompiled to avoid need to wait
    - All source code is included, so still possible to modify flags and recompile/link as necessary
Install G4 from source

You need:

- clhep 1.7.0
- geant4.4.0.tar.gz
- geant4.4.0.p01.tar.gz
- geant4_4_0_p01_VC.zip
  - additional patch for windows, beware strange internal directory structure
- G4HepRep.tar.gz
  - Patch for visualization with HepRep
- T01.tar.gz
  - Workshop tutorial
- JAIDA-G4.tar.gz
  - Analysis software

All of these files are on the CD. Most in Geant4.4.0/install/ directory. See README.html in that directory for location of CLHEP and AIDA.

I advise applying all patches before initial “make”
Install Pre-Built Geant4

Three versions available

- Windows (95/98/Me/Nt/2000/XP)
  - self-extracting .exe
- Linux (.tar.gz)
  - egcs-2.91.66
  - gcc 2.95.3
    - These will probably not work if you have a (significantly) different compiler, but you may still want to start from the pre-built version and do a “make clean” followed by “make” to avoid having to apply all the patches.
    - Analysis software does not work with gcc 2.96-98 (default gcc on Redhat 7.x). Use a different compiler if possible.
- In directory Geant4.4.0/pre-built
Getting started with the T01 tutorial

- Once you have installed and compiled Geant4 you can start with the T01 tutorial.
- Follow instructions on CD by clicking on “Workshop Tutorial” from welcome page.
- T01 instructions include examples of using visualization and analysis
  - Intended as a quick way to get started
  - More background information on visualization and analysis during tomorrow’s tutorial.
Visualization - Java and WIRED

- Running the visualization part of T01 tutorial will generate .HepRep files.
- To view files you need to install:
  - Java and WIRED
    - Both are included on the CD, with installation instructions
- See John Allison’s talk for OpenGL instructions
The analysis part of T01 tutorial explains how to use AIDA.

- AIDA is an analysis interface that can be used with several different analysis packages (see tomorrow’s talk)
- CD includes instructions on installing and running JAIDA – a simple AIDA implementation, plus JAS for offline analysis of .aida files.
What if I don’t have a CD reader?

- The CD is accessible at:
    - Only use this if you really have to!

- We will post fixes for any problems discovered with the CD at: