General introduction of version 10.3 and prospects

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January 11th, 2017

@ Geant4 Technical Forum

Version 10.3

- Released on December 9th, 2016
- Compilation using the C++11 Standard is now mandatory.
- Cmake 3.3 or higher is required.
- Platforms:
  - Linux, gcc-4.8.5.
    - Tested on 64 bit architectures (Intel or AMD) with CERN CentOS Linux 7 (CC7) (based on CentOS Linux 7).
  - MacOSX 10.12 Sierra with clang-3.8 (Apple LLVM/Clang-8.0.0)
  - Windows-10 with Visual C++ 14.0 (Visual Studio 2015)
- More verified and tested configurations (64 bits):
  - Linux, gcc-4.9.3, gcc-5.3.0, gcc-6.2.0, clang-3.9
  - Linux, Intel-icc 16.0
  - MacOSX 10.10 with clang-3.6
  - MacOSX 10.11 with clang-3.7
  - Windows-7 with Visual C++ 14.0 (Visual Studio 2015)
  - Linux for Intel Xeon Phi with Intel-icc 16.0 (gcc-4.9 compatibility layer)
- Note: Windows platforms are supported/verified only for the sequential mode. Multithreading capability is not yet supported on Windows.

Version 10.3

- Refer following presentations for new/enhanced features of 10.3.

- Two minor migrations may be needed.

  - An explicit call to G4SDManager::AddNewDetector() <u>must now be added</u> in order to register a sensitive-detector.

    - The use of G4VUserDetectorConstruction::SetSensitiveDetector() no longer does this implicitly.

  - A new application state G4State_Init is introduced. Geant4 becomes this state during initialization of geometry and physics.

    - Ordinary users who use G4RunManager or G4MTRunManager won't see any difference, and thus no migration is required.

    - For users having their own custom run manager that changes the Geant4 application state, it is required to make sure the state change to G4State_Idle takes place after the initialization of geometry and physics. User's custom run manager does not need to change Geant4 application state to G4State_Init as it is taken care by G4RunManagerKernel.

Recent patch releases

- Dec 5th, 2014 – Geant4 version 10.1 release
  - Feb 5th, 2016 - Geant4 10.1-patch03 release
- Dec 4th, 2015 – Geant4 version 10.2 release
  - Jun 17th, 2016 - Geant4 10.2-patch02 release

- Versions 10.1 and 10.2 will be supported with necessary patches at least for 2017.
  - Version 10.1 is kept compliant with C++98.

Coming events

- Releases
  - Next release : early December 2017 (date t.b.c.)
    - Next beta release : end of June 2017
  - Patch releases for versions 10.1, 10.2 and 10.3 will be made as needed
- Next Technical Forum in March, 2017 (date t.b.c.)
  - Main topic : 2017 work plan
    - Draft 2017 work plan will be publicized in advance for user's feedbacks
  - User's input on requirements is welcome
    - New/improved functionalities, supported platforms, etc.
- Other events
  - 12th Geant4 Space Users Workshop @ Guildford (UK) 10-12, Apr, 2017
  - Future tutorials will be announced through the Geant4 announcement mailing list and also on the collaboration web pages.