Impacts from CMake on "X"

- Build options/compiler

- CMake "developer API" vs Architecture

- Retirement of GNUmake

- Documentation

Build Options Checklist

➡ Sequential OR MT, vs, Sequential AND MT?

➡ "libG4global.so", "libG4global-mt.so"?

➡ Compiler flags?

➡ Portable Platform/Compiler support?

➡ Linux + Mac OS X + Windows 7

➡ External dependencies with MT?

➡ Core (toolkit), and non-core (examples)

Please contact Software Management* A.S.A.P if you have requirements for, or find bugs in, build

*Ideally contact me, but if not, all requests **must** come up to me or to a Bugzilla entry **ASAP**

Geant4 CMake System

➡ "G4GNUmake" ceases for **toolkit**

➡ Will be upgrades to "sources.cmake" API

➡ Evolution, not revolution, so familiarise yourselves with current API

➡ Is the "Developer Guide" required?

➡ Transition is an "implementation detail" for user => "X"-beta or special reference tag

➡ There will be "full disclosure" of progress

CMake vs Architecture

➡️ Parallel 3b highlighted several areas where code updates can help build interface:

➡️ **Forward declarations** (implementation hiding)

➡️ What classes/functions in your module are for use by a **client** of your module?

➡️ Which are only used **within** the module?

➡️ Decouple each module as far as possible.

Modularisation* of libraries is a top priority for "X". We need a better structure, and we must work together to find a good solution.

*Neither global nor granular, but one single structure. Qt, ITK, Boost toolkits have faced this.

Retiring "G4GNUmake"

➡ Discussed in Parallel 3b, workplan agreed

   ➡ **"Retired" in "X"-beta for user apps**

➡ **For 9.6**

   ➡ "Geant4Config.cmake" and "geant4-config" become main build interfaces

➡ **For "X": Dec/Jan - May**

   ➡ B1 GNUmakefile with "geant4-config" and/or **back-compatible** layer.

Documentation

➡ Major Release => Major Doc Updates

➡ Documentation SVN not "synced" with Code SVN

    ➡ If interfaces are changed, no mechanism for "tagging" that docs have been correspondingly updated

➡ Merge repos? Use svn:externals? Other ideas?

Data Rationalization

➡ Use "X" to tidy data library naming scheme

➡ Currently an inordinately confusing and inconsistent mapping between

　➡ tar.gz filename

　➡ Unpacked directory name

　➡ Environment variable used to point to data

➡ Also think about how to deal with the fact that Geant4 version => specific data versions

Over to you...