Introduction: Migrate Geant4 From SVN to Git?

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- **Git Topic Outline:**

  - *Brief overview of issues (Ben)*

  - *Experiences of LHC experiments in migrating to Git (Andrea)*

  - *Discussion (All): Comments, Experiences, Where/What to go/do Next*

Motivations for Migration to Git

- Host for SVN (CERN) will end support for service at end of 2018

  - *Converse: if we stick with SVN, where do we host it?*

- Git is the de facto VCS for modern software due to distributed nature (contributions/collaboration) and powerful/flexible branching model.

- Git hosting solutions (Gitlab/GitHub) offer additional and potentially useful tooling

  - Issue tracking (e.g. direct map between a bug report and commits that fix)

  - Private/Public branches/repos (e.g. Geant4 development branches/ref tags remain private, release branches/tags public)

Issues to Consider (surely incomplete!)

- **Repository structure(s) for source tree**

  - SVN o.k. with large projects, general recommendation with Git appears to be to split large repo into several smaller ones (c.f. Qt5)

- **Does Geant4's development model (commits, branches, tags etc) work directly in Git? Can it with tooling? Use a new model?**

- **What other development tools does Geant4 use (tags database etc), and can they work with Git?**

- **How would build, testing and associated tools work?**

- **Others? Note many of the above are also tightly coupled…**