HSF Project Discussion Session

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Outline

- Software Projects in the HSF
- Good practices in setting up a project
- Mainly for new projects - the HSF "starter kit"
- Available Resources
- Discussion

Software Projects

- The essence of the Foundation are the **Software Projects** under its umbrella
  - HSF does not enforce any particular software process, project management or methodology, however packages should conform to some standards to facilitate integration
- In turn the HSF is a place to
  - Make your project known
  - Get help/support
  - Get access to some resources
  - Get your SW built and checked regularly
- For discussion:
  - **What else would you like to see?**

Best practices / Helpful guidelines

- Good practices and appropriate tools can help sharing SW
- There are plenty of things to consider in a project, which are in principle important, but either
  - plain forgotten, or
  - postponed forever.
- These things include points as simple as
  - License
  - Documentation
  - Ease of building
  - Testing
  - Consistency
  - Communication between users and developers

- All of them are important for both developers and users of any software package

Guideline proposals

- To assist, we drafted a list of best practices and relevant information that help both developers and users: https://github.com/HEP-SF/documents/blob/master/HSF-TN/draft-2016-PROJ/draft-HSF-TN-2016-PROJ.md

- **Feedback very welcome - one of the goals of this week would be to turn this first draft into a "final" document.**

HSF Starter Kit

- In a given project best practices need to be mapped onto concrete implementations
- The idea is to develop a **project starter kit** implementing these guidelines and best practices
- Template available at https://github.com/HEP-SF/tools
- To support small projects that do not have a collaboration environment available
- To serve as example for shared projects across collaborations
  - reducing impedance mismatch

hsf_create_project.py

- Builds a CMake based C++ project using the following parameters:
  - Project Name
  - Target Directory
  - Author
  - License
- The project supports
  - Build
  - (Unit) Tests (based on the catchpackage)
  - Install
  - Packaging
  - Exporting of targets for other CMake projects
    (a la `find_package(NewPackage)`)
  - Doxygen
- The created files have *detailed documentation* for how to extend the project further.

Available Resources

- CERN TechLab for special setups to test http://hepsoftwarefoundation.org/services.html
- FNAL offered further development services
  - Suffer from a chicken and egg problem
  - No clients - no service
- Many, many free resources out there (github, travis CI, …) which could be listed on the HEP knowledge base: http://hepsoftware.org/

Summary

- Raised the question - what do you expect from the HSF for your project?
- Compiled a preliminary list of best practices
- Prepared an HSF starter kit
- Listed some of the resources available to projects