HepML Progress & Plans

Jonathan Butterworth

University College London

on behalf of CEDAR & LCG-Generator group

MC4LHC Meeting

17-26 July CERN

Agreement this meeting

- HepML will be a common project between CEDAR and LCG
- Independent development under separate namespaces
- Effort to agree on common elements and move to a “stable” namespace.
- Mailing list: project-hepml@cern.ch (go to CERN listserver to subscribe.
- Wiki: https://twiki.cern.ch/twiki/bin/view/Main/HepML

CEDAR

HepML priorities for JetWeb

- HepData records (not relevant here)
- Generator schema
  - format to define generator settings needed for JetWeb validation
  - overall structure agreed
  - one-to-one discussions with generator authors on specifics are underway
  - See the wiki pages for developments.

CEDAR

Other HepML Activities

- 3 slides from Sascha

LCG HepML: aims

1. Strategical: Development of XML schemas, documents and API's for the documents for the HEP community.
2. Tactical goals (now: 1st ,2nd; future: 3rd):
    1. ME ->SH part of the full simulation chain. Development of flexible format for event files (XML schemas and examples for different cases and MC codes) and corresponding software (parsers)
    2. Event files ->MCDB interface: development of general API and (needed schemas) for MCDB in order to simplify uploading of event files to the DB.
    3. Models of MC codes: development of XML schemas which will help to unify description of different MC models (physical parameters, processes, etc.)

LCG HepML: status

- Documents:
  - General formal HepML Schema: ready
  - Schema for MCDB: ready
  - LHA-I tag dictionary and schema: ready
  - MC generator description HepML documents: in progress (could be built on CEDAR schema)
  - Example how to realize a flexible format for event files compatible with LHA1 and based on few XML tags.
- Software:
  - Parser API: in progress
  - Writer API: in progress

LCG HepML: a working plan

CEDAR

- Short time-scale (several months):
  - Develop a very light parser of format tags in our LHA2 proposal for the FORTRAN environment (in fact, code is almost ready…)
  - Develop the same parser for the C/C++environment.
  - Further discussions of XML schemas available in CEDAR and LCG (separation of general schemas)
  - A unified (LCG+CEDAR) proposal on HepML (a short preprint -> arxive)
- Long time-scale (1-2 years):
  - Development of API necessary for LCG HepML
  - …

JetWeb Progress & Plans

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CEDAR

HZTool library

- Ready to go into GENSER.
- Rivet/RivetGun wait a while. HZSteer maybe not.

CEDAR

JetWeb

- Test server now running
- Include “standard” tunes (ATLAS, Rick Field,...) using HZTool initially (James Monk).
- Include LEP hadron data using Rivet/Gun (Andy Buckley).
- Within a “couple of months” should start being actually useful as a reference for MC comparisons and validation.

Wish-list for this workshop

- Agree design principles of HepML with authors and MCDB, and work on concrete generator parameter schema. OK
- Agree priority datasets for validation, and start getting the missing ones into JetWeb (HZTool or Rivet). OK
- Determine some key versions and parameter sets from the experiments to start including in JetWeb. OK
- Understand better how we should use GENSER, and maybe get a release of HZTool and HZSteer incorporated. ~MAYBE
- Demonstrate and discuss Rivet and RivetGun and a common generator interface. STARTED