Echos from CHEP

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2012-05-30

Six parallel tracks

- Online computing (14 talks, 51 posters)
- Distributed processing and analysis on grids and clouds (31 talks, 143 posters)
- Event processing (20 talks, 64 posters)
- Computing facilities, production grids and networking (19 talks, 79 posters)
- Software engineering, data stores, and databases (26 talks, 71 posters)
- Collaborative tools (10 talks, 18 posters)

See track-summaries for more details:
http://www.chep2012.org

21 plenary talks

- High Energy Physics and computing (G. Crawford)
- LHC experience and prospects (J. Incandela)
- HEP computing (R. Brun's experience and directions of HEP computing)
- Upgrade of LHC online systems (W. Smith)
- Perspective across the technology landscape (DELL talk)
  - many cores ($\simeq$ 64-100) then wider vector units
- Review of HEP Analysis Strategies (M. Klute)
- New computing models and LHCONE (I. Fisk)
- Current Grid operation and future role of the Grid (O. Smirnova)
- Middleware evolution, from Grids to Clouds (S. Goasguen)
- New software trends - Hadoop and related software (Cloudera)
- Computing Technology Future (L. Johnsson)

21 plenary talks - II

- Moving ROOT forward (F. Rademakers)
  - `CLing/CLang`, `JavaScript I/O`, `iOS` port
- Roadmap for Geant4 (M. Asai)
  - `Geant4MT`, Geant4 vN+1
- Data preservation and long term analysis in HEP (D. South)
- Analysis with extermely large datasets (J. Becla)
- Large storage systems - present & future (A-J. Peters)
- Videoconferencing in HEP - status & perspectives (P. Galvez)
- Computing the Universe (A. Pope)
- Future experiments and their impact on computing (J. Messchendorp)
- A reflection on software engineering in HEP (F. Carminati)
- 100Gbps Networks across the Oceans (A. Barczyk)

Random ramblings: ROOT

- (finally!) CLing interpreter is shaping up
  - real C++ parser, compiler, ... (even C++11)
  - pre-compiled headers $\Rightarrow$ compilation speed-up
  - replaces CINT and Reflex
  - will be the default interpreter in ROOT-6 (Dec. 2012)
    - ★ no Windows support (yet. mid-2013?)
- JavaScript ROOT I/O library:
  - no need to install ROOT to display histograms, trees, ... on a web-server
  - interesting also as a "2nd" technology for reading ROOT files
    - ★ Java hep.io.root isn't alone anymore
- more concrete plans for ROOT and GEANT5
  - ROOT on its way to assimilate Geant4...

Random ramblings: MT and manycores

- not much news nor exciting news since CHEP-2010
  - except perhaps an improved src-2-src program (based on Geant4MT tool) to rewrite code to make it MT-safe
    - ⋆ an LLVM -based tool is also in the works
- everybody is busy developping the next-gen framework(s):
  - art from FNAL, maus from RAL, FAIR from GSI
  - Gaudi seems to be loosing traction
- everybody jumps on the MT and GPGPU bandwagon
  - Intel's TBB, OpenCL, CUDA
  - detailed reports on applicability on various algorithms
- one interesting talk on how to use functional programming language -like feature to do analysis (LINQ+ROOT.NET)
- maus framework (C++/python based) built around MapReduce
- ARM -based servers picking up ?
  - ok for power efficiency, but
  - how do those fare w.r.t math instructions ?