EP R&D Software Working Group, Core Team

Jakob Blomer and Graeme Stewart

Currently We Are...

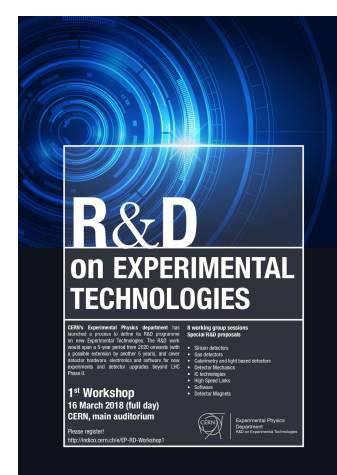|	
Jakob Blomer (Convener)	Danilo Piparo (ROOT, Concurrency)
Graeme Stewart (Convener)	Witek Pokorski (Geant, Generators)
Marco Cattaneo (LHCb)	Radu Popescu (Other languages)
Dirk Duellemann (IT expertise and link)	André Sailer (CLiC, LCD)
Benedikt Hegner (FCC)	Andreas Salzburger (ATLAS, FCC, Tracking)
Mario Lassnig (ATLAS, Data Management)	Niko Neufeld (DAQ, FPGAs)
Maurizio Pierini (CMS, Machine Learning)	David Rohr (ALICE, GPUs)

Thanks to Niko and David for joining us.

Lightning Talks Review

- Gather thoughts on the meeting on Monday
  - As before we'll add this to the notebook in red
- For each of the topics we can ask:
  - Is this really R&D?
  - Is it an important challenge for HEP software and computing?
  - Does it match with CERN EP's strategy and interests?
    - At least in so far as we understand or believe these are/should be
  - Is it a focused achievable project?
  - Can it be developed at reasonable cost?
- Some other considerations to bear in mind:
  - Are there things that are important that are missing?
    - If so, how do we engage with that idea
    - No further large lightning talk session envisaged, but we could have topical sessions

March 16 Meeting

- Group has 45' to present, *including discussion*
- Format suggested by Christian is introduction plus topical talks
- Our take on this was to propose:
  - 15' Introduction to challenges (Graeme/Jakob)
  - 10' x 3 Interesting themes that *may* develop into R&D proposals (this core group)
    - There is no commitment here, but we may already see interesting areas emerging
- Selection of themes and subsequent coalescing is inevitable:
  - ~30 lightning talks (or more)
  - ~2-5 R&D proposals
- Evidently overall discussion time is limited, we will not make so much progress on our themes, but an important aspect is promoting software R&D investment itself

Themes we suggested at the convenors' meeting

- Algorithms and data flow scheduling for highly concurrent and heterogeneous hardware
- Interfaces from software domain to advanced mass storage
- Machine learning – cross-cutting technology with relevant applications in simulation, reconstruction, analysis
- Flexible infrastructures and modular turnkey systems

After Monday how to we see these having developed?

After March

What's next - some ideas:

- Gather 'missing' ideas in some form…
- Coalesce our R&D themes into something more definite…
- Organise topical workshop(s) that explore the R&D topics in more detail…

Need to arrive at fleshed out proposals in advance of the October workshop