

Event Processing Frameworks WG Summary

Plan for moving forward (1)

- Make a google group for everyone that wants to participate
- Expecting that everyone will contribute and comment, with the group on the top of the charge putting everything together
- Will meet every two weeks between the milestones (video)
- Key milestone points on the way to July deadline,
 - we will attempt to organize face-to-face meetings.
 - It would be valuable to have one of these be a longer workshop, others could be ½ day.
- Suggested milestone meetings:
 - March 10th (Connecting the Dots, Michel suggested Friday be used for this),
 - May 8th (DSHEP@FNAL),
 - June 4th (workshop at FNAL prior to 50th anniversary activities?)

Plan for moving forward (2)

- Proposed pieces to be complete by the milestones
 - 3/10: vision statements of what using the framework and facilities will be like ten years out, reviewed
 - Collect visions into one/few combined visions
 - Create outline of doc
 - Identify subgroups to fill out subsections of the document, centered around roadmap activities
 - Distribute writing duties
 - 5/8: Collect and review contributions, new assignments for revision and completing the roadmap
 - 6/4: full roadmap complete, draft of entire document complete

Write and agree on the text for a charge ...

- There was a lot already written regarding scope, challenges, and questions.
 - See the charge page for details and what was already written
- Spent much of the time discussing scope, but ended up soliciting many key additions and key questions
 - Need to define terms clearly: framework, application, module, tool, algorithm, service
 - Need to have additional sections that expands on the items listed in the scope.
 - What is the framework? What is in the core parts of the framework?
- Some difference interpretations of what should be in the roadmap
 - From instructions page: “Roadmap for HEP Software and Computing R&D for the 2020s”
 - Details of specific R&D projects to get us to goals along the way
 - Community constructed document about what the world of frameworks should look like 10 years out, and the HEP needs that will be met, with intermediate steps along the way.
 - Use this to derive R&D projects along the way
 - Put demonstrators into the roadmap that we can turn into projects

Some key questions from the session (1)

- What is the granularity of the user functions / user modules that are visible and scheduled by the framework? What are the abstractions in the framework?
- What hardware resources does the framework scheduling? Does it go beyond just main CPU cycles? Are attached GPUs, memories, specialized storage? How do visions of future hardware at facilities influence the framework?
- What steps in the over workflow should be influenced, controlled, or completed within the framework? Trigger? Reconstruction? Analysis?
- Do lines between framework and workflow overlap or become unclear? Do some workflow steps become part of the framework workflow?

Some key questions from the session (2)

- Should the lines between what is traditionally done offline and online be removed? Is the framework still batch oriented?
- Does the framework own the I/O facilities or are interfaces just provided? How does this impact the EDM and data access?
- What are the commonalities and differences between the various groups? Where can sharing or common tools be concentrated? Can demonstrators help produce answers for setting next direction?
- Can we think of creating a new framework or must we evolve the current one?
- What are measurements of success for a framework out ten years?
 - Performance? Commonality? Easy of use? Easy of maintenance? Shared support?
- How does the framework interact with other applications and frameworks, such as machine learning?