Core Project Status

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For the LArSoft Project Team

LArSoft Steering Group Meeting

8 April 2016

- Summary of status of releases, architecture, usability, larlite/larsoft integration, continuous integration.
- June 22/23rd workshop – start advertising

Core Project Area: Releases

- Maintaining separate branches for MicroBooNE and release head.

- Release Candidate based on root6 available. Starting to validate

- Starting to plan for offering continuous integration infrastructure for use by NOvA and other non-LArSoft experiments. Already planned additional deliverables/improvements will be part of that planning.

- Concern whether LarEventDisplay completely works with Root6 – will be discussing capabilities in use and efforts needed to get it working before proceeding.

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Usability

- Work impacted by recent work on addressing memory usage.
- Plan to be presented for feedback and additional prioritization at next week's coordination meeting.
  https://cdcvs.fnal.gov/redmine/projects/larsoft/wiki/Usability_improvements

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Core Project Area: Re-architecture

- Work impacted by recent work on addressing memory usage.

- Reprioritizing short term work.

- Proposal to drop for now making Track3DKalmanHit module usable for DUNE/ProtoDUNE/35ton, LArIAT or other experiments was accepted by s&c coordinators – Tom and Brian - pending their request for using it.

- Saba will work for a month on tools in art and larsoft to make associations much easier to use and more transparent. This will build on existing capabilities, depend on the specific experiment use cases, and is a result of ideas generated by the previous rearchitecture work.

Larlite/LArSoft integration

- Kazu is in touch and starting to test the "wrapper codes" to validate the code repository changes made.

- Project team doing final testing of the instructions for building the demonstrators in preparation for supporting MicroBooNEs use next week. https://cdcvs.fnal.gov/redmine/projects/sketch/wiki/Documentation_of_Demonstrators#Installation . Kazu can then start changes needed for LArLite as identified in the project plan at https://cdcvs.fnal.gov/redmine/projects/sketch/issues?per_page=50

- Goal to complete project – if current design in the end acceptable – by June 1. sending bi-weekly status reports to the MicroBooNE and SCD management.

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Project short term timeline – April Update

- Basic schedule unchanged. Scope and specific deliverables modified in response to changing priorities.

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Project short term timeline — April Update

Target Completion:

- ~~*3/1:*~~ *5/1* *Paraview-based event display prototype:* Jim Kowalkowski: Report on pilot/prototype using Paraview-based event display of LArTPC data from MicroBooNE

- ~~*5/1:*~~ *TBD.(Taking an incremental approach at present) Review of LArSoft:* all:

- ~~*4/1:*~~ 6/1 *Refactoring/Architecture development*: Saba: Complete Track3DKalmanHit refactoring, make recommended changes to art and LArSoft utilities as a result of this work, Herb (owner) acceptance of the outcomes.

  - Phase I deliverables now in use by MIcroBooNE. Phase II priorities reordered as a result of Reconstruction Group review report – Rob K.

- ~~*5/1:*~~ *6/15 LArLite/LArSoft Integration*: Complete and in use at/by MicroBooNE

- 6/22- 6/23 : *LArSoft Workshop*: all: extend to 2 days from 1 to include code analyses

- 7/1: *Performance Improvements*: SCD and Experiment contributors - TBD: Improve selected algorithm efficiency performance based on recommendation reports already written.

  - First phase does as a crisis task force past four weeks. Additional work under discussion.

- 7/1: *Focus on Usability*: Gianluca: planning work to schedule based on current input

Target Start:

- 5/1: *Improvements in event display capabilities*: Saba: Based on more specific requirements: Define/design directions based on report from the Paraview-prototype.

  - Reassessment in progress based on Amir/DUNEs needs and Adam Lyon project plans

- 7/1: *Assess multi-threading needs and impact*: Gianluca: Participate in more general work to design and develop for multi-threading support in art and LArSoft

June Workshop

- Aim to distribute information for registration by end of next week.

  https://indico.fnal.gov/conferenceDisplay.py?confId=11857

- High level summary of goals:
  - to engage the LArSoft community in the outcomes of the past years efforts on Usability (including performance, lowering the barrier to algorithm development) and get input for further work in this area;
  - to introduce ideas for and operate some example code analyses (including some work in smaller groups)
- More detailed information being worked through.

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Comments, Questions

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