LArSoft minutes, 28-Oct-2010. -- Eric Church

LArSoft minutes appear at https://cdcvs.fnal.gov/ redmine/projects/activity/larsoftsvn. (The location presumably at which you found these!) For further details of matters reported here drill-down into the wiki, etc, at that redmine site. Everyone is welcome to attend the bi-weekly meetings. Next meeting is11/11/2010, 9am CST.

There are pdfs on the documents link of the redmine site for today's presentations by Ben Morgan and by Roxanne Guenette. We give the overviews of their presentations after the following run-down of what-all LArSoft people are doing. But first some operational minutae:

- Eric did not say this in the meeting, but if you have a weirdo boost crash, check that your $FW_SEARCH_PATH environment variable has 3 contributions!! Ping him with questions on this.
- Brian R reminds everyone that code for the ART framework is at FW_HOME. Try drilling down from there to source/FWCore/framework/src, e.g.

Now for individual reports:

- Brian Rebel and Mark Messier are going to meet this wk to begin to port the FMWK Event Display to ART. Mark knows a lot about the FMWK evd, Brian knows ART. After that Mitch stands ready to help Brian R with the LArSoft-specific porting that will be required. Mitch will be at FNAL the next two months, and working on the evd is a priority for him in that time.

- Roxanne is still working on the ShowerFinder pkg, though she needs a lot of stuff upstream to really make it run. Those upstream things are close to being ready. Her code compiles and is svn ci'd.

- Brian Page has checked in one filter in the Filters package. He will next dive into the EDFilter class of ART to see if that's the proper route we should go to employee our event filters.

- Josh is mid-way through porting the VertexFinder package and ClusterFinder/ HoughLineFinder module. The Seg Fault caused by a problem in DBcluster has been fixed, and he's now moving forward and will compare ART-v-FMWK for HoughLineFinder soon, we hope.

- Eric and Kinga are furiously porting and correcting bugs on much of the ClusterFinder code. Kinga's also nearly got T962-MergeData working, which is an ArgoNeuT package.

- Georgia's working on DetSim for uBooNE. She will make it its own module, and ArgoNeuT's its own module.

- Adam continues on uBooNE gdml.

- Brian Rebel's package in ART to run through the ArgoNeuT data has been exercised at some level by Mitch. It appears to work. Josh has a script to run on the full dataset and stands at the ready to push the button to do that. Perhaps Mitch will weigh in on the progress of that effort next meeting.

- Saima's not porting so much as actually being a consumer of ported ART code. Yay. She's working on her strange baryon analysis.

Ben Morgan gave a presentation on installing ART on external sites, Imperial College for example. Ben uses Open SUSE linux 11.3 and gcc 4.5.0. Not surprisingly, the so-called relocatable ups'es don't work out of the box, as those ups FNAL/CD binaries were built for 32,64 big SLF 4 and 5. So, relocatable only to a point. Ben and Brian R will see if the appropriate CD person will agree to shipping Ben the .gz source tarball and a script to do whatever it is gets done for the SLF4,5 builds, then he can build natively on his SUSE system. This is the preferred solution by a mile (1.6 kilometres) compared to having poor Ben and other brave souls pull down all the myriad of externals we need and build separately, and repeat that nightmarish process each time one of the externals changes. Ben will pursue this as his next order of LArSoft business. There are on the order of 15-25 externals, so one can imagine the pain of the independent build solution. Ben separately proposes running Unit Tests on the LArSoft code, as we mature and grow the code base. Eric thinks this is a great idea; Brian R won't stand in the way. Any serious software shop, of which we may or may not be one, does this all the time. All agree simple go/no-go execution tests are a good place to start, and more careful "value" checks can wait for time/refinement. Ben also announced some expertise with CMake, which we're happy to hear about. We hope Ben will give us a high level CMake talk with an eye towards how well it compares to SRT and SCons. (We remind the reader we're running happily and stably with SRT right now). However, we could all stand to benefit from an education on how to use a build tool that may well be easier to use than autoconfig/Make. We are eager to hear from Bill S about his experience at Nevis, which at last report was stalled in zsh.

Roxanne and Georgia discussed their uBooNE MC work. Questions arose about the meaning of maxEvents wrt # spills (they're equal for the flux file runs), and other matters of normalization and potential multi-event issues. We discussed a hist vs ntuple input flux format. They raised many questions about the input parameters in GENIE and the py jobs and whether they all were being properly used/set. We hope Roxanne and Georgia will return with a report down the road with answers solutions to all the questions they raised.

Please keep up the good work on the ports. Definitely, progress is good and accelerating. Hit Eric and Brian up with your questions.

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