

LArSoft minutes, 2-Sep-2010. -- Eric Church

Usual caveat: For the details of all matters discussed in these minutes we advise drilling down into the usual spot at <https://cdcvs.fnal.gov/redmine/projects/activity/larsoft> (check also the Wiki button there) and attending the bi-weekly meetings. Today's presentations are both accompanied by pdfs. We welcome all interested parties and would-be contributors. Next meeting is 9/16, 8am.

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>>> fnal location: LIBRA - WH9SE

Biagio discussed his ShowerFinder module. So far the module produces showers in each of the two planes. Biagio was urged to generalize the code to N planes, which he was amenable to doing. There was discussion of putting algorithms in the parent class Prong which will convert the 2D showers to 3D and which will also do and store the mips->energy conversion. We remind the reader that Showers and Tracks derive from Prongs, so where appropriate operations and data that are in common to Showers and Tracks should be properly kept in Prong.

Brian Rebel presented the status on the imminent switch/port of frameworks: FMWK -> CDART. (CDART is the name du jour.) Temporary (to be renamed eventually) early-adopter details at <https://cdcvs.fnal.gov/redmine/projects/activity/larsoftsvn>.

Brian reiterates the reason for the switch: (1) other Intensity Frontier experiments -- g-2, mu2e, NOVA -- are using CDART or seriously considering moving to it and so it makes our students and post-docs properly able to be useful in more places going forward and (2) FNAL CD is supporting it for the longterm. This latter reason is huge. It means when any of the 10-ish external pkgs required of FMWK/CDART changes, we get those things built and handed to us in the form of easily swapped-in ups/upd installs. That also should mean off-site installs of CDART are easier, though that remains to be proven. CD support means the build system SRT which is old and cruffy and to be imminently abandoned is replaced by a supported system.

Brian makes a strong argument that the module porting will be trivial. A handful of rules are to be followed, with no real thinking, and that oughta be it. No more TObect derived classes, no more Update() methds, no more TRefArrays, and instead some pretty clear substitutions and additions, and bada-boom-bada-bing, it works. Plug and play. We'll see. Brian's made a lot of progress on Simulation and all that entails and Geometry. He will tackle the EventDisplay next. The above (remember, temporary) link to larsoftsvn wiki has wonderful, explicit documentation. Brian shows that FMWK/CDART sanity checks on electron drift and voxel properties are identical to within statistics and the DetSim response is faithful and identical. And individual wire response in the two frameworks (from slightly different MC muons, fine) from each plane also is a nice sanity check.

Brian purposely held off on walking through building code and running jobs, cuz CD is in flux on those matters. Also, we announce the repository will go from cvs to svn. There will be a cutoff date, right now looks like 7-Oct-2010, where NO MORE cvs checkins will be allowed. This is necessary for code support. The concept of Public Release remains a few months off: infrastructure not yet in place is necessary. So, in the first while we'll all svn -co the whole repository for CDART and our modules and build off that. We must maintain daily discipline to svn ci during this phase.

Already-identified early-adopters will meet and get as much of the upstream modules/packages -- detSim, hitFinding, clusterFinding, trackFinding, vtxFinding, -- ported early. Jump in

now if you wanna be among this group. Eric and Brian are available to help/support/learn alongside the code authors. Then, 7-Oct-2010 we will have an all-LArSoft meeting at FNAL with remote access at which we'll have a lay-users workshop to walk through jobs.