

SAND Software W.G. Meeting

Code Sharing: Proposal for github organization

Clark McGrew
Stony Brook Univ.

- Current practices in DUNE
- Options for SAND
- Working proposal



Organizing our effort (Starting off slowly!)

- To work as a group, we need to have a “shared” code base
 - This doesn’t mean that we have a single working environment
 - What we need is transparent interchange of software and information
- First step: Define a location to collect our software
- Second step: Collect everything we are doing into one common location
- Third step: “Profit” [get well understood physics results, quickly]
- Why?
 - We already have a situation where our studies are diverging because we don’t have a shared description of the ECal
 - Not intentional, but “stuff happens” when there isn’t a single reference location
 - A single location allows people to get involved more easily



Current “DUNE” organization

- Existing DUNE github organizations
 - DUNE
 - Mostly contains documents
 - Also contains some far detector study repositories
 - Not used for near detector work
- DUNE near detector github organizations
 - DUNE-ND-LAr repository for the liquid argon
 - The GAr detector is using redmine (at FNAL)
- Discussion with DUNE-ND software group suggests
 - We setup our own code sharing organization
 - In the future, the collaboration can organize everything into a single infrastructure.

Options!

- There are two major options available
- GITLAB
 - ➔ Generally aimed at managing multi-user development
 - ➔ Builtin continuous integration
 - ➔ Well developed (granular) security and permissions model
 - ➔ Open source so you can run your own installation
 - e.g. gitlab@cern used by atlas, lhcb, etc
 - e.g. T2K with git.t2k.org
 - ➔ Easy to have hierarchical repository structure
 - e.g. [sand/simulation/electronics-3dst.git](https://gitlab.com/sand/simulation/electronics-3dst.git)
- GITHUB
 - ➔ It's github...
 - ➔ Pretty much everybody is using it
- I believe GITHUB is the clear choice
 - ➔ Go with the crowd
 - ➔ Discussion? Opinions? Unanimous consent?



First choice: We need a name

- Options:
 - Have a vote
 - Let Matteo and I choose
 - Somebody tells us
- Suggestion (if you “trust” us)
 - DUNE-ND-SAND
 - Alternative: DUNE-ND-SAND-software
- Discussion? Unanimous consent? Alternatives?

Next Steps

(Assuming we agreed)

- Finalize the name (get buy-in from the lofty convenership heights)
- Create a github organization
- Add people (everybody needs a github account)
 - ➔ Several administrators (who can add people with write privilege)
 - ➔ “Everybody” else with write privilege
 - ➔ Repositories are public, so everybody has read privilege
- Collect “forks” for everything into the new organization
 - ➔ See next discussion
- Identify a *responsible person* for each repository
- Slightly unrelated aside to plant an idea (a topic for next meeting)
 - ➔ I suggest that we use a *feature branch then merge* work flow
 - make a branch (fork, &c)
 - make a change
 - make a pull request (possibly to yourself)
 - merge into the main code

Backup Slides