

DUNE DAQ Software Application Framework Task Force
25-Feb-2020, v1.0

Charge: Design and implement the core elements of the DUNE DAQ Software Application Framework.

Co-conveners: Eric Flumerfelt and Marco Roda

Suggested organizational details:

- Weekly meetings
- Shared documentation to allow for distributed contributions (e.g. sample uses)

Suggested initial membership (others can certainly join): Eric Flumerfelt, Marco Roda, Wes Ketchum, Roland Sipos, Fatih Bay, Phil Rodrigues, Brett Viren, John Freeman, Kurt Biery

Expectations of membership: active participation. This can vary from writing code to contributing use cases and validating that the deliverables from this effort meet the needs of those use cases.

Suggested deliverables (referring to Wes' slides 23-25 from Monday's talk and other notes):

- Initial repository(ies) for software and documentation
- Initial implementation, unit tests, and documentation for a representative set of queues/buffers
- Initial implementation of DAQProcess infrastructure (e.g. base class, command reception functionality, representative state behavior)
- Initial choice and implementation for the techniques and tools used to specify and instantiate UserModules within a DAQProcess
- Initial steps for generalizing the configuration of UserModule internals so that we are not tied to a particular configuration language
- An initial implementation for a plugin loader
- Initial application developer and user manuals
- A representative sample of DAQ applications that demonstrate the use of the Framework in realistic situations
- A set of requirements for the software build and packaging environment

Suggested timeline:

- [the overall goal is to have "the DUNE DAQ Software Application Framework" ready for general use before the 03-Sep-2021 "PDII DAQ/SC ready for operation" project milestone. The exact details of what is included in that Framework may be negotiable, but it must be based on our best understanding of the direct path to what we will use in full DUNE.]
- Overall completion of this Task Force by 30-Jun-2020. The Task Force will specify intermediate goals that demonstrate useful units of progress.
- Plans for next phase of work on the Software Application Framework will be developed in June 2020 based on the results of this Task Force.