Mu2e Organization Chart

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1

Structure

- Overall Organization, not focused on Experiment
- Experiment:
 - For installation, commissioning, and operation
 - General rule will be to push decision-making down but with a check upwards
 - Try to make every subsystem have the same structure to the extent possible
 - This is NOT supposed to be restrictive; it is about mounting and operating the experiment, and not meant to cut off talking to each other







Operations Scientist



- Coordinates with other Divisions (e.g. AD/PPD/APS-TD)
- Plans longer-term schedules with Spokespersons, calls on Spokes for help with Lab management
- Interface between Run Coordinator (more focused on execution and shorter time scales) and the overall experiment; checks for interferences across the experiment and Project.
- Responsible for managing ORCs
- Has to be resident



- Responsible for "running" the experiment
- For example:
 - Need to rebalance triggers: might be a request from any of those three, who would consult with the other two

7

• Consult/work with Spokes, or ask for help if needed

Run Coordinator

- Day-to-Day Operations of Experiment
- Executes plans
- Coordinates subsystems (for example, two groups want to work in the same place on the same day)
- A "subsystem integrator"
- RunCo has to be resident



Subsystems

- Apparatus: Physical hardware
- DAQ electronics, readout
- Subsystem Coordinator:
 - Coordinates DAQ and Apparatus
 - Triggers Run Coordinator



Internal Subsystems

- Subsystems are free to add/change below the level reported here
- Uniform structure overall, but give them flexibility to manage their own system



Use Case Example I

- CRV subsystem wants to fix a light leak on a module and needs to work in the Hall for a few hours
 - Belongs to CRV Apparatus Manager
 - 1. Calls CRV Coordinator
 - 2. CRV Coordinator contacts RunCo
 - 3. RunCo contacts Exp Manager
 - 4. Operations Scientist checks with Project Installation Manager
 - Decision goes back down the chain, CRV Apparatus Manager gives go-ahead or not to CRV Apparatus Manager; if not immediate, works out a schedule
 - This will be clumsy for a while; after Project is gone, no need to contact; when operations are smooth, with no simultaneous installations, CRV Coordinator just goes ahead with email to RunCo

Use Case Example II

- STM wants to perform HPGe test
 - STM Coordinator contacts RunCo -> Operations Scientist->Project Installation Manager
 - Experiment and Project knows where STM apparatus will be and any safety issues; what you can touch and what you can't, "stay-clear" zones, etc. Agreement on space, power, potential interferences all identified and managed. Do we need written sign-offs?
 - Exp Manager checks ORC is complete (Operations Scientist does ORCs)

Use Case Example III

- Difference Between Subsystem DAQ Coordinator and TDAQ Subsystem
- Problems with subsystem hardware/readout belong to subsystem
 - Problem with Readout on Board attached to Apparatus or Cabling to TDAQ
- Global problems belong to TDAQ
 - Problem with Networking, Event Building, Conditions Downloads, etc.



Use Case Example IV

- Shifter sees a big red alarm in middle of night
- Looks in RunBook
 - If it says what to do, do it
 - If it doesn't say what to do, call RunCo 24/7
 - This will encourage RunCo to have a well-written RunBook

Use Case Example V

- Project Installation Manager sees cable hanging in space in the way of moving solenoid into position
 - Undoubtedly installed by senior experimenters and "left there for just 5 min"
- Project Installation Manager calls Operations Scientist
 - Experiment Manager finds relevant subsystem who fixes problem

Use Case Example VI

- Shifter determines water leak is filling cabling trench from Slow Controls
- Calls RunCo->Operations Scientist, orderly shutdown

Comments

- We need an org chart in place ASAP
 - There was a snafu with the STM that would not have happened had this system been in place. Let's take this as a learning experience.
- Idea is that in the beginning, there will probably be too many emails, calls, and double-checks, but that's when we need them.
 - Goal is to avoid collisions among systems that are trying to install and commission, and have everyone work safely with proper procedures
 - As things become more stable and routine, more decision-making will get pushed down

Questions

- Do we need a slot for special systems?
 - Not instantiating more subsystems, that's "easy"
 - Some things by nature cut across systems:
 - for example, do we need an IFB manager?
 - You do something that involves the IFB, which can affect almost everyone. Should there be a central Point of Contact?

Suggestions?

- Please read and think about this
- Plan to adopt the result by the next Collaboration Meeting and start filling the positions
 - Expect junior people will start lower and move up
 - Hope senior people will come and be resident for a year starting next year