

C38.118 Ideas

1/13/2015

Why care?

- Planned outages predictably remove real equipment from service often with an associated reduction in visibility.
- The tools to handle planned outages often perform important operation functions, like planning and approving outages with system reliability checks.
- The tools to handle planned outages often are significant overhead and are human intensive.

Opportunity for work efficiency...

Planned outage systems can be advanced web interfaces all the way down to human-to-human-to-machine interfaces.

Opportunity for application advancements...

How much better could an EMS handle outage flagged data than a less-specific quality state?

Opportunity for more accurate data quality reporting...
Planned and coordinated outages should count differently than unplanned failures.

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- STAT Bit 15-14 value 10 = PMU in test mode (do not use values) or absent data tags have been inserted (do not use values)
 - *Action:* Planned outage is analogous (and probably more useful) than “test mode”, so reinterpret or clarify accordingly
- Bit 9, Data modified flag
 - PHSCALE first 2 bytes, packed flags to describe modification
 - *Action:* Bit 11-14 are reserved for future assignment, use one as modified for planned outages

Overall scheme should be adaptable to a wide variety of situations and interparty relationships:

- Technician at PMU trigger outage flag (same person doing outage work)
- Transmission Owner engineer trigger outage flag (same person planning outage work)
- Balancing Authority engineer trigger outage flag (same person coordinating outage work)

The outage planning system will be required in addition to in-stream outage flags to the degree that the synchrophasor system in question is critical to operations and sudden outages are not tolerable for downstream data takers.

- Enter future events for coordination, analysis, approval, reporting and stream modification.
- Enter current events for events that (accidentally) started without entry and are in-progress.
- Enter past events only for the reason of more accurate reporting.

Is an out-of-band outage planning system and an in-stream outage flag redundant (in the bad sense of the word)?

- The streamed flags confirms and specifies what was planned
- The streamed flags

- IEEE work for good definition of the outage flags.
- PMU and PDC vendors to develop planned outage triggers for users.
- Phasor applications vendors to develop planned outage handling utilities, that recognize and make use of the outage state of a PMU.