



GRID
PROTECTION
ALLIANCE

User's Group

openXDA PQDashboard openSEE
openMIC. TrenDAP miMD
POWER QUALITY Digest SE Browser System Center

openXDA
eXtensible Disturbance Analytics



TrenDAP Phase II Proposed Scope

Phase I Feedback

- Various bugs and minor issues
 - Covered under Phase I Wrap-up
- Simpler UI
 - Simplifying common workflows
 - More descriptive UI
- GIS Displays and Statistical Process Control
 - Topics not covered by other GPA Applications
 - Better interface between TrenDAP and other Applications
 - Better Documentation and example use cases
- Integration with Event Data

Phase II Priorities

- Bug Fixes Based on Phase I Reports
- Tutorials
 - Online Videos
 - On-Site Training
- Additional Features
 - Complex Data Flagging
 - Flag Data Sources
 - Virtual Channels



Improvements to existing Widgets

- Updated display settings
 - Include apply all button
 - Simplify User Interfaces
- Updated channel selection process
- Improved page layout
- Add support for multiple datasets
 - X-Y charts
 - Table widget
 - Statistics widget
- Add options to use custom statistics in statistics widget
 - Nth Percentile
 - Standard Deviation

Tutorial and Training

- GPA will provide a variety of online training resources
 - Documentation for common tasks
 - Online library of videos
- GPA will provide training to participating utilities
 - On site or virtual
 - Multiple sessions to cover XDA Suite of tools
 - TrenDAP specific training
 - GPA is hosting Demo systems for utilities with limited datasets
- Erika Wills will talk about GPA documentation efforts

Complex Data Flagging

- Allow Formulas for Flagging Data
 - Include standard arithmetic (e.g. $Va + Vb < 500$)
 - Include statistical summaries (e.g. $Va < Mean(Va) - 3 * StDev(Va)$)
- Include quick select for standards
 - IEEE 1547 and other relevant standards
- Allow data window selection based on:
 - All Flagged +/- X minutes
 - Combination of flagged (per channel or any)
 - Update Charts to improve displays for “slotted” data

Flag Data Source

- Similarly to trend datasources TrenDAP will pull Flags from systems
- Initial support for
 - openXDA (Alarms, Events)
 - iTOA
 - Custom SQL databases (e.g. HECO Interruption Report)
- Include option to show details on plots
- Include ability to link back to external system (e.g. SEBrowser)

Virtual Channels

- Add “virtual” channels to datasets
 - Simple arithmetic
 - Simple statistics
 - Windowed statistics (e.g. moving average)
 - Simple LTI Filters
 - Simple calculus
- Ability to display virtual channels along “measured” channels
- All widgets will support virtual channels

Thank You



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