

Custom Displays

Create custom displays to quickly view IED data available from GOOSE, reports, and polling. Data from multiple IEDs can easily be combined into a single display.

Q: Do you have to be an expert to decode these complex IEC 61850 data models?

A: Not necessarily...we build custom displays to visualize data during commissioning and maintenance tests.



61850 Test Suite Pro

Use cases

- Lab Testing - perform ad hoc testing and troubleshooting in the lab
- Commissioning - find and debug issues during configuration and testing of IEDs
- Maintenance - visualize data from multiple IEDs during test set up

Debug and test your system throughout the design, build, and maintenance phases

Services

Full IEC 61850 Services are supported for Client/Server and Publisher/Subscriber:

- | | |
|-----------|-------------------|
| Read | Sampled Values |
| Write | Service Tracking |
| Reporting | Dynamic Data Sets |
| Discovery | Logging |
| Controls | File Transfer |
| GOOSE | Security |

IED Simulation Options

Simulate an IED based on any valid SCL File (SCD, CID, ICD, etc.)

Simulate an IED based on the data model that is read from a real IED

Publish and subscribe GOOSE messages with simulated IED

Generate reports, GOOSE, and logs with simulated data changes



61850 TEST SUITE PRO



TRIANGLEMICROWORKS.COM
SALES@TRIANGLEMICROWORKS.COM
+1 919.870.5101

2840 PLAZA PLACE, SUITE 205 | RALEIGH, NC 27612 USA

Trial version available for download at www.TriangleMicroWorks.com

Overview

61850 Test Suite Pro facilitates testing at different stages all the way from the lab to the field. The complexity of IEC 61850 is presented in a clear way that is relevant to the job at hand. Configuration of the tool is fast and settings can be saved for quick access for a particular substation or test.

Mine Data Across Substation

IED Name	Logi P	LogicalNo Class	Name	Common Data Class	Used in GOOSEControl(s)
T07BPU	QA	PTRC	Tr	ACT	✓
T07BPU	QA	PTRC	Op	ACT	
T07BPU	QA	PTRC	Str	ACD	
L02BPU	QA	PTRC	Tr	ACT	
L02BPU	QA	PTRC	Op	ACT	✓
L02BPU	QA	PTRC	Str	ACD	

The Data Miner allows you to find data across multiple IEDs in a substation. Filters can be customized for each job function. For example, protection data available from GOOSE can be filtered.

Q: Is there an easier way to find the data I need from the right IED?

A: We use the data miner to find the substation data we need.

Browse Multiple IEDs

Search Results

C:\Triangle Micro\Products\DTM\example files\Capstone61850 - v1-2 - Aug 9 2017.scd

L02BCU 10.10.10.20	T07BPU 10.10.10.21	L02BPU 10.10.10.22	L03BCU 10.10.10.23	L03BPU 10.10.10.24	L04BCU 10.10.10.25
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Multiple IEDs in a substation can be browsed to easily find the data you need. Available IEDs can be scanned by IP address range or using configuration from SCL files.

Design and configuration information from SCL files is used to make testing easier and faster.

Large data models for multiple IEDs or an entire substation can be parsed and filtered to show relevant data for your test.

Examples of Functionality

Sniff GOOSE Streams

GOOSE ID	Valid	Is Subscribed To	Num Timeouts	Found in File	Resolved From File	Time Allowed To Live
T07BPULDIInst/LLN0gcb1	True	False	0	True	True	2000
L02BCUQ/LLN0gcb1	True	False	0	True	True	2000
L02BPULDIInst/LLN0gcb1	False	False	1	True	True	2000
L02BPULDIInst/LLN0gcb2	False	False	1	True	True	2000
L02BPULDIInst/LLN0gcb3	False	False	1	True	True	2000
L02BPULDIInst/LLN0gcb4	False	False	1	True	True	2000
L03BPULDIInst/LLN0gcb1	True	True	0	True	True	2000
L03BPULDIInst/LLN0gcb2	True	True	0	True	True	2000

The GOOSE Tracker sniffs GOOSE on the network to identify streams that are valid, mis-configured, simulated, or timed out. The GOOSE Event Viewer shows an event log with time stamps, quality, and data values.

Q: Will investigating all these GOOSE messages on the network take a lot of time?

A: No, we use the GOOSE Tracker to tell which GOOSE streams are mis-configured, timed out, or simulated.

Intuitive Interface

File Home Data Services Controls Report Controls DataSets GOOSE Controls Samp

Choose an IED: L03BCU

Connection: Connect Disconnect

Filter Presets: Save as... Read Enable Report Control Disable Report Control

Tool Selection: Workspace Data Miner Advanced Client Compare Model

Advanced Client

Name	Value
LLN0	
DataSets	
ds_gcb1	

The user interface makes it easy to navigate multiple tools and displays. Learning the new tools is easy with built-in help topics and search.

A variety of tools are included to test different aspects of IEC 61850 systems. The Advanced Client provides access to test all services and view the entire data model.

Check IED Configuration

File	Discovery	Category Type	Error Type	File Value	Discovered Value	Message
L03BPULDIInst	L03BPULDIInst	DataObjects	Value	No Multiplier	y	Value not equal

The Compare Model tool identifies any potential IED mis-configurations. The data model from the IED is compared to SCD or CID configuration files and differences are highlighted.