# GF4600

IEC61850 Test Software

MODULE 1 - TEST SOFTWARE MODEL

Intelligent substation has widely adopted IEC 61850 standard communication, the standardization of information model is the basis for intelligent substation equipment (or system) to achieve IEC 61850 communication. his module can test if the information model meet the requirements of DL/T860 standard, national network and related model specifications.

It can test and control unit model, protection unit model, econometric model, condition monitoring model. It is selectable to test according to IEC61850-6 SCL grammatical rules, IEC61850-7 logic nodes and common data, the national network model standards and custom models.

According to 61850-10 rules, this software is to confirm whether the tested product meet the standards on consistency requirements.
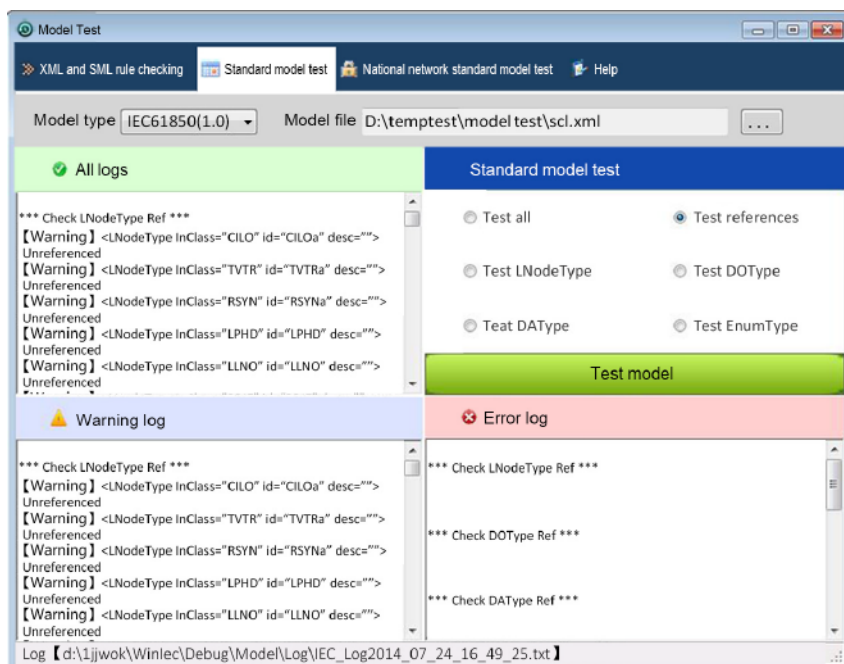
MODULE 2 - IEC61850MMS CLIENT SIMULATION

Simulated client IEC61850, testing intelligent electronic devices IED (the control unit, the protection unit etc.).

Testing the IED directory tree, IED associated equipment, servers, logical devices, logical nodes and data, data sets, replacing, reporting, setting the group control, recording, controlling and other functions.
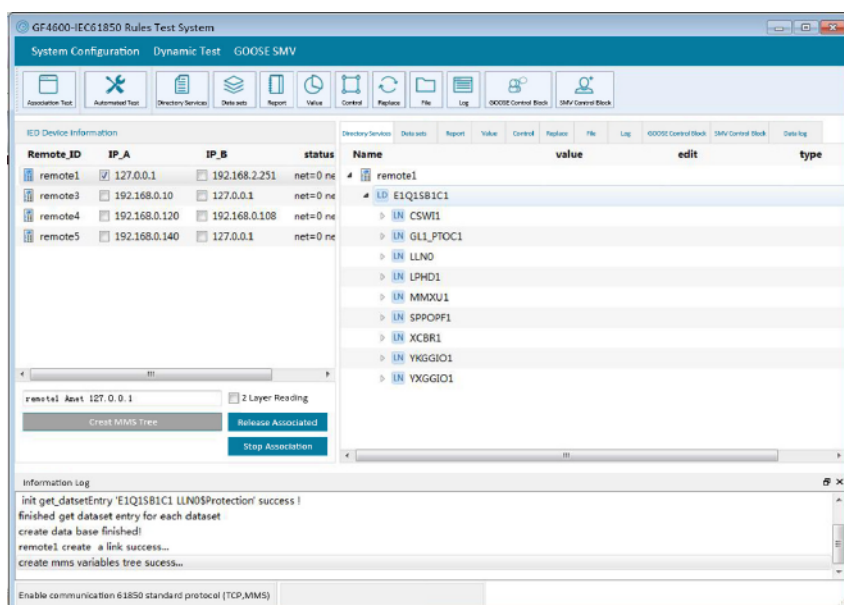
MODULE 3 - IEC61850MMS AUTOMATED TESTING

Simulated client IEC61850, automatic testing intelligent electronic devices IED (the control unit, the protection unit etc.), according to predetermined test (IEC61850-10), exporting the test results to a variety of file formats (word, pdf, html, xml).

Can automated test based on ICD / CID files.
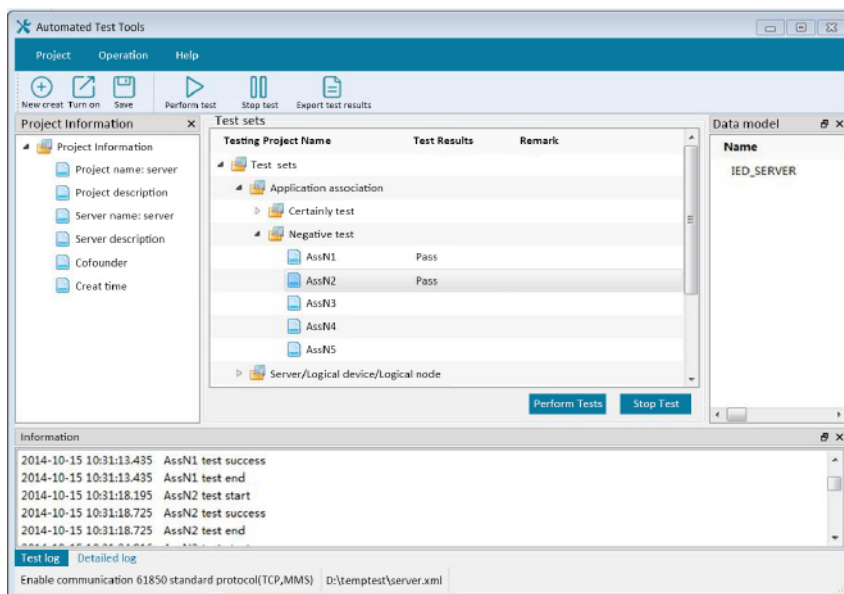
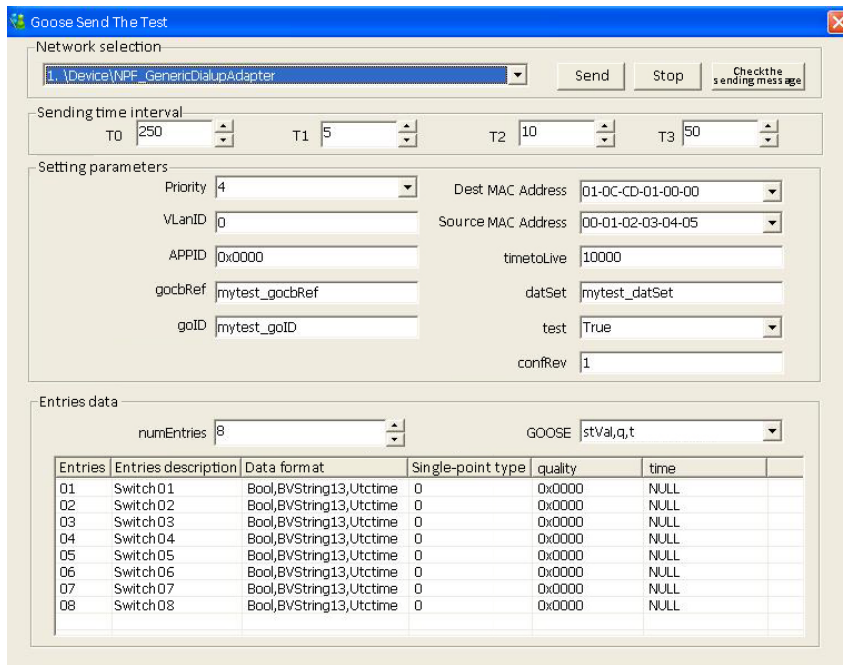# MODULE 4 - SIMULATION TERMINAL (MMS SERVER) EMULATION SOFTWARE

Simulated server IEC61850, testing back-office systems and far motivation systems of intelligent substation.

According IED and ICD files, simulating MMS server to achieve the directory tree, logical devices, logical nodes, data reading and writing, data sets, valuation, reporting, replacing and other functions.
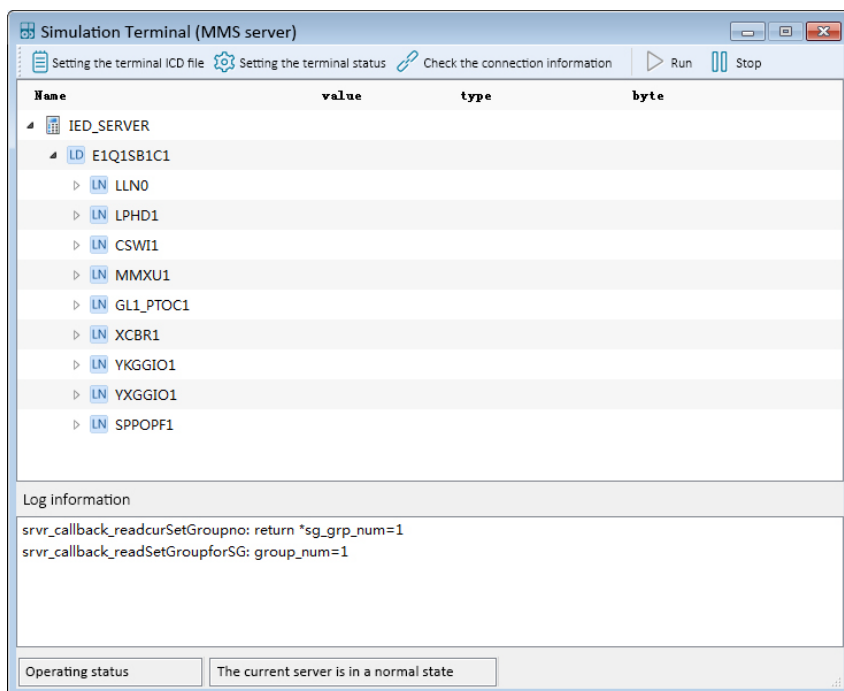
MODULE 5 - GOOSE PUBLISH SIMULATION

Simulation issue event message IEC61850-GOOSE, testing if the operation of the IED is correct. You can configure Priority, Dest MAC Address, VLanID, Source MAC Address, APPID, timetoLive, gocbRef, datSet, goID, test, confRev, numEntries, GOOSE data formats and other parameters.

MODULE 6 - GOOSE SUBSCRIPTION SIMULATION

Simulation receive event message IEC61850-GOOSE, testing if the issued GOOSE of the digital device IED is correct.

Recognition IEC61850-GOOSE message, setting the message format, displaying Goose in graphical data.

MODULE 7 - SMV PUBLISH SIMULATION

Simulation issue sampled value message IEC61850-9-1 or IEC61850-9-2 (LE), testing the digital device IED. You can configure Priority, Dest MAC Address, VLanID, Source MAC Address, APPID, datSet, svID, confRev, SMV data formats and other parameters.

MODULE 8 - SMV SUBSCRIPTION SIMULATION

Simulation receive sampled value message IEC61850-9-1 or IEC61850-9-2 (LE), testing if the issued message of digital merger unit is correct.
Recognition IEC61850-9-2 (LE) message, setting the message format, displaying SMV in graphical data.
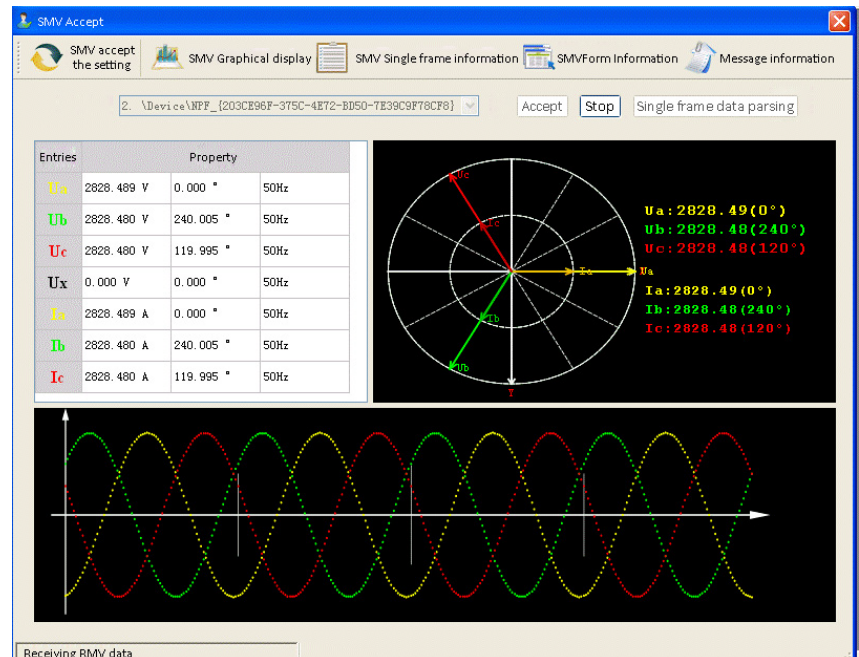
MODULE 9 - MOTION TESTING SOFTWARE MODEL

Software test if the CID / ICD files and intelligent substation IED device implementation model is consistent, simple and flexible, the features are following:

1) Use the XML parser reads and parses the CID / ICD files and extract model information;

2) Import the IP address of MMS server at the interface, use the MMS client mode to communicate with the tested IED device, read layers of the model information of the tested IED device online by ACSI model service

3) Compared the information from 1) and 2), you can check if the CID / ICD files and intelligent substation IED device implementation model is consistent.
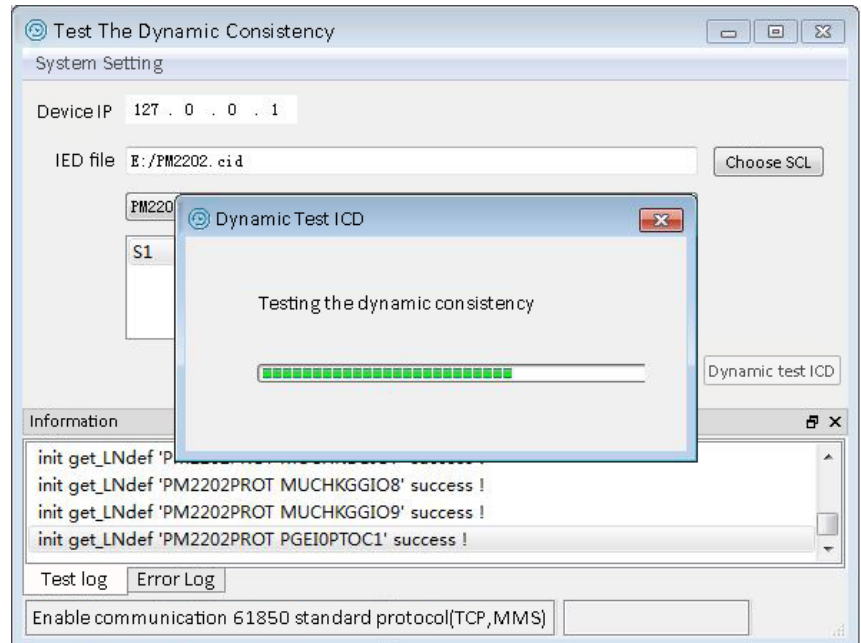
MODULE 10 - NETWORK COMMUNICATION MESSAGE ANALYSIS SOFTWARE

Monitoring network interfaces, in-depth analysis of network protocol message such as MMS, goose, SMV etc., showing the real MMS interaction.

Monitoring substation network, capturing and analyzing IEC 61850 information, and can be used for acceptance testing, interoperability testing, conformance testing, error logs and network performance monitoring, support IEC 61850 products development.
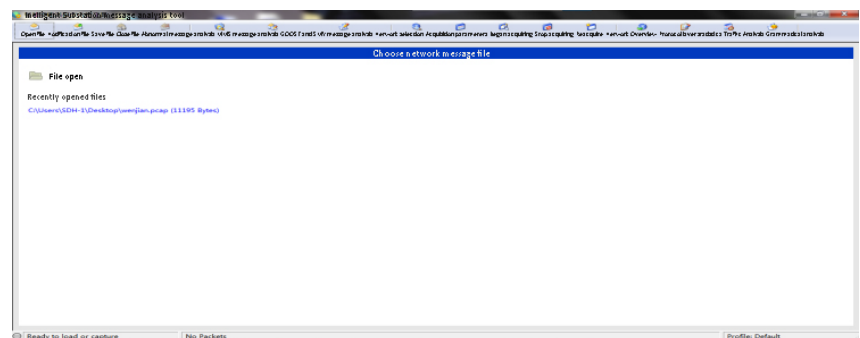
MODULE 11 - Time synchronization SNTP simulation

Testing 61850 time synchronous with SNTP service.