

U P C O M I N G E V E N T S

April 14, 2011

Florida Utility Technical Symposium
Tampa, Florida
Hilton Garden Inn (Ybor Historic District)

May 12, 2011

Northeast Utility Technical Symposium
Baltimore, Maryland

June 2, 2011

Texas Utility Technical Symposium
Austin, Texas
Embassy Suites

June 21-22, 2011

Peak Measure/NovaTech Substation Automation
& Utility Symposium
Moses Lake, Washington
Best Western Lake Front Hotel

July 21, 2011

Midwest Utility Technical Symposium
Overland Park West, Kansas
Holiday Inn Hotel & Suites

NovaTech invites you to attend one of our complimentary technical symposiums which include comprehensive training and information workshops. Topics to be covered include (but are not limited to):

- Email SEL® Event Reports and Alarm Messages
- Ethernet in Substations
- Meeting PRC-002 NERC Requirements for Disturbance Recording
- Meeting NERC BAL .001Hz Requirements
- Complete Enterprise Cyber Security with Orion
- Lower Cost Web-Based SCADA – Eliminate Software Licensing and Maintenance Fees
- Direct Video – Reduce Costs and Eliminate Security Concerns for Substation HMIs

Please check www.novatechweb.com for details on the technical symposium in your area.

L A T E S T S O F T W A R E

Orion5/5r Firmware Version: 1.41.0

OrionLX Firmware Version: 6.4

Orion NCD3 Version: 3.12

Bitronics 70 Series Firmware and Configurator: 3.05

Bitronics 50 Series Firmware: 2.01

BiView: 3.00



NovaTech, LLC

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Low-Cost Orion WEBserver SCADA for Smaller Utilities

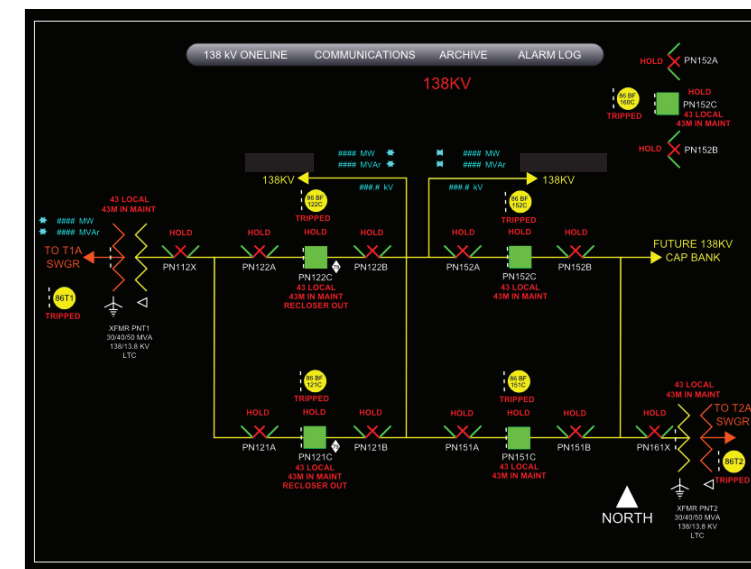
The elimination of PC-based SCADA software and SCADA licensing fees, along with simpler engineering and commissioning, are enabling a growing number of smaller utilities to economically justify SCADA for the first time. This lower-cost approach to SCADA uses Scalable Vector Graphic (SVG) webpages - designed with open-source graphics package Inkscape - which are served from the OrionLX and viewed by authorized utility personnel using a standard browser.

After installing Inkscape and updating NCD, users can draw screens from scratch or adapt existing templates. These screens are then associated with outputs and inputs from an XML Slave file configured in Orion, then uploaded to Orion for viewing. No PC-based HMI software or licensing fees are required.

An Orion WEBserver SCADA system can be set up two ways: 1) Configure each Orion RTU in the substation to serve out pages to browsing PCs, or 2) Set up one Orion at the enterprise to serve out pages with data consolidated from multiple Orion RTUs. The approach used depends upon the number of substations, preferences for how data is viewed, and the types of communication to the substation.

The Orion WEBserver SCADA system typically includes the following screens: One-line diagram, breaker zoom and control, animated IED faceplates, communications diagnostics, Alarm Annunciator, Sequence of Events and Trending. The OrionLX expanded memory (1GB or 4GB) provides archival of points in a SQL database. Transfer of archived data to the enterprise is simplified through the use of standard calls and protocols.

In each of the Orion WEBserver SCADA projects to date, the NovaTech Systems and Services group teamed up with a local engineering firm to get the project implemented quickly. For project details and references, please contact your NovaTech representative.



Example SVG screens drawn in Inkscape and integrated with XML outputs from Orion allow a wide range of SCADA HMI functions.



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New Applications for OrionLX Advanced Math and Logic



File I/O operations now supported in Orion Advanced Math and Logic

```
local mf = io.open("/Template_132KV_Sub.csv")
if mf then
  template_filename = mf:read() -- reads the file name in the default file
  orion.PrintLog("default.csv Read. Template Filename = " .. template_filename)
else
```

A	B	C	D	E	F	G
	0:00	0:15	0:30	0:45	1:00	1:
Summer_Wknd	4.17	4.09	4.03	4.03	4.06	3.
Summer_Wday	4.95	4.88	4.83	4.83	4.81	4.
Fall_Wknd	3.01	2.99	2.97	2.95	2.92	2.
Fall_Wday	4.23	4.22	4.15	4.09	4.16	4.
Spring_Wknd	3.44	3.38	3.33	3.32	3.27	3.
Spring_Wday	5	4.9	4.88	4.83	4.86	4
Winter_Wknd	4.06	4.06	4.07	3.96	3.9	3.
Winter_Wday	4.57	4.6	4.55	4.58	4.49	4

New Poll Modification Application

This application changes the interval in which Orion polls an IED from the value configured in the NCD program. This feature will be used in a DA application to reduce the poll rate if the primary power source to a pole-mounted device is lost – preserving the battery.

New Poll Disable Application

In another application, a “Master” Orion configuration – the same for all substations and representing a fully built out superset of what could appear in the substation – will be loaded into all Orions. A simple one-page spreadsheet listing all IEDs

in a fully built sub will be manually modified (checking off IEDs present in a specific sub) and also loaded into Orion. On boot-up, Orion will read the spreadsheet and disable poll of devices absent from that sub, without absent devices reporting “comm fail”. Absent devices will also be either to be placed “online” or “offline” per user preference. Having the same NCD configuration in each sub, and manually modifying the spreadsheet – a one minute affair – will enable this utility to reduce engineering hours and simplify technician training.

Accessing Data from Files for DA Application

The “File I/O” feature in Advanced Math

and Logic is proving helpful in making DA more intelligent. Utility feeder load profiles are loaded into Orion and called up in real time to check maximum historical loads prior to switching. This is superior to the previous technique of only looking at prefault loads.

Advanced Math and Logic can be ordered on any new OrionLX or added to any field OrionLX (option #99). All math and logic functions provided in standard Math and Logic are also provided in Advanced Math and Logic. This datasheet is available in our Documentation Library (www.novatechweb.com/ftp/).

Bitronics® Update

50 Series IP Address Identity Tool

A new utility program for 50 series meters requests the IP address for a specific MAC address on an Ethernet network. The program, available on the 50 Series page of our website, uses the Inverse Address Recognition Protocol (InARP) to perform the lookup, and can also scan an Ethernet network for a range of MAC addresses, printing the IP address for any devices which respond. The utility requires the WinPcap and Packet libraries which are bundled in the WinPcap "Installer for Windows," downloadable from www.winpcap.org. Installation requires Administrator privileges.

All 50 Series Models Available

All varieties of the M651, M650 and M350 can be ordered. Firmware v2.01 is now shipping which adds support for configurable DNP3 point and Modbus register lists. All units shipping can be upgraded easily in the field.

M650 Demo Online

Enter <http://72.44.181.54:1700/> into your browser to see the easy-to-use web

pages served out by an M650 for configuration and data display.

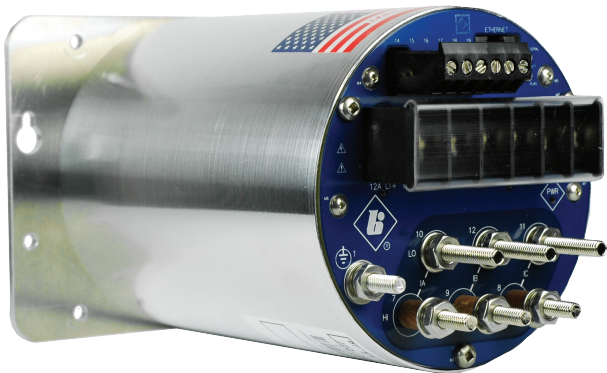
50 Series Manuals

Operating manuals for the M350, M650, and M651, as well as 50 Series DNP3 and Modbus protocol manuals, have been updated and are in the premium section of the Documentation Library on our website, and are also available in the Manuals CD version 10.

New 70 Series Release

The new firmware version, v3.05, includes the following features:

- IEEE C37.232-2007 Long File Naming Convention – needed for PRC-002-2 compliance
- New signal input options for M572 and M872 with different peak current ratings for each bus. There is a 5A nominal 20A/100A peak version (S16 for M872, S56 for M572) and 1A nominal 4A/20A peak version (S17 for M872, S57 for M572). There is no change in price relative to other



M651 Transducer

signal input options for M872 and M572

- Periodic based triggering / recording – allows for continuous recording below 1 minute needed for PRC-002-2 compliance
- Increase in the number of buffered reports from two to four in IEC 61850

New Surface Mount Line

To meet the growing demand for surface mount boards used in 70 Series, 50 Series, and all Orion products, a second surface mount line has been installed in Bethlehem, PA.

Coming Soon to Orion

Customers who visited our booth at 2011 DistribuTECH in San Diego, CA got a sneak peak at these features slated for release this year:

Direct HMI Video

- OrionLX runs its own browser and sends pages out a VGA Port on the rear panel of OrionLX
- PC based page browsing remains possible
- Rear OrionLX USB ports activated for use with USB keyboard and mouse

IEC 61131

- Four logic editors to be offered: Ladder Diagram (LD), Function Block Diagram (FBD), Structured Text (ST), and Sequential Function Chart (SFC)
- View logic flow online
- Fully incorporated into NCD

Please contact your local NovaTech representative if you would like to evaluate an early release of these new products.

New Utility Literature Available:

Bitronics Application Documents describe Peak Fault Current, NERC BAL-005-0.1.b and NERC PRC-002-2 compliance, and Identifying Power System Problems using the 70 Series.

Orion Interface Document (CrossBow™ Integration) describes how NovaTech and RuggedCom® have engineered an interface between the CrossBow Secure Access Manager from RuggedCom and Orion.

Updated List of Utility Customer Application Presentations and Papers is now available in PDF format.

PLEASE NOTE: These are Premium Content items - registration/login required.

Documentation Library: www.novatechweb.com/ftp