

NovaTech Substation Automation Application Note

Customer and Project Scope:

Wisconsin Public Service Co., Green Bay, WI. L'Anse Substation (one of 11 total automated substations)

Dates of Implementation:

Installed December, 2003

Type of Substation Automation Project:

- Smart RTU (connected to IEDs)
- Remote Interface to protective relays
- WEBserver remote interface
- Integration of existing RTU

NovaTech Hardware, Software and Service Products:

- NovaTech Orion5rs with protocols: DNP3.0 (Master and Slave, Serial and Ethernet TCP), SEL Relay Master, PG&E 2179 Master, FTP, HTTP, Modbus (Master and Slave Serial).
- WEBserver
- NovaTech Communications Director (NCD) Configuration Software
- Training

Responsibilities of NovaTech, Other Vendors and Utility:

NovaTech supplied unconfigured Orion5r units to WPS with NCD software and two days of training on site. WPS responsibilities included creation of configuration files, creation of HTML web pages, installation, testing, and commissioning.

Substation Local Area Network(s):

DNP3.0 via Ethernet TCP between Orion5r processors

SCADA Network and Protocol:

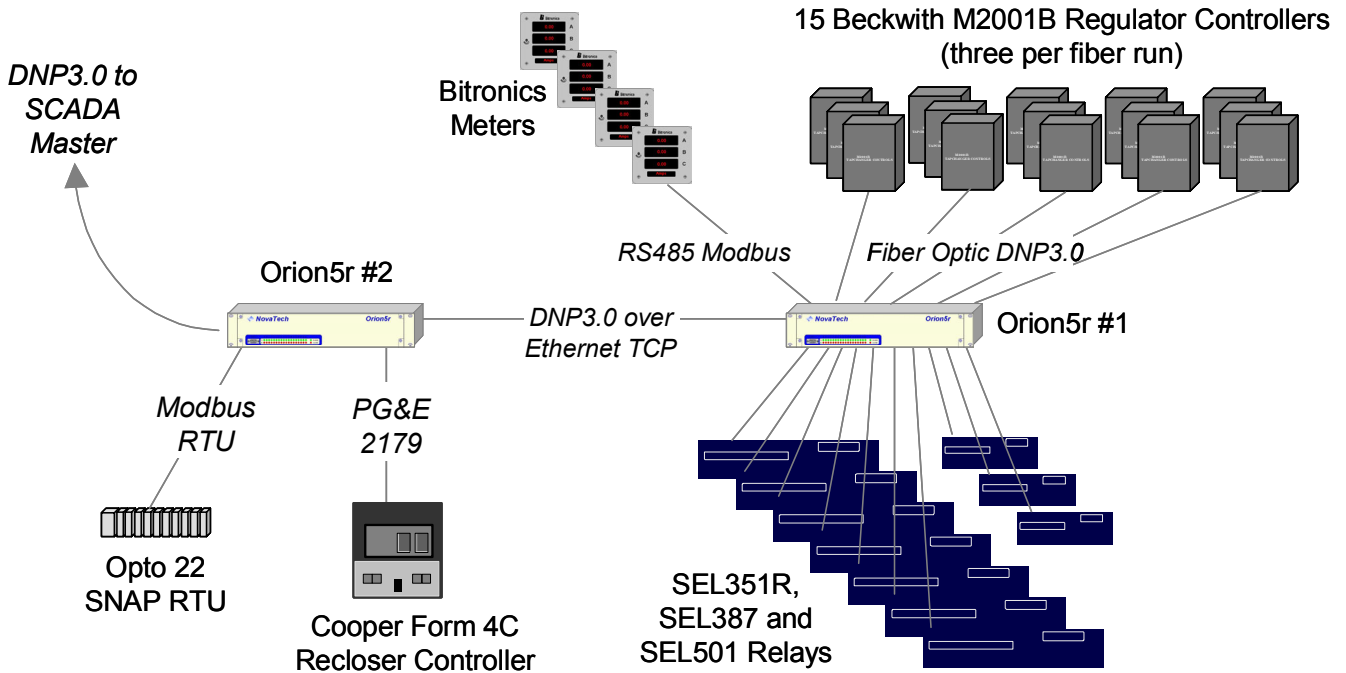
DNP3.0 Serial

IED Interface Details:

IEDs connected to Orion5r #1	Number	Interface Protocol	Data Retrieved	Control through IED?	Other
SEL Relays	10	SEL ASCII/Fast Meter	SCADA Analog Data	No	SEL-351R, 387, and 501
Beckwith M2001B Regulator Controller	15	DNP3.0 Serial	SCADA Status and Analog Data	Yes (tap raise/lower, modify set points)	
Bitronics Meters	4	Modbus RTU Serial	SCADA Analog Data	No	
IEDs connected to Orion5r #2	Number	Interface Protocol	Data Retrieved	Control through IED?	Other
Opto22 SNAP RTU	1	Modbus RTU Serial	SCADA Status and Analog Data	Yes	Two connections; master and Slave
Cooper Form 4C Recloser	1	PG&E 2179	SCADA Status and Analog Data	No	

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