

# NovaTech Substation Automation Application Note

## Customer and Project Scope:

Niagara Mohawk, Buffalo, NY (NMPC). Substation #36

## Dates of Implementation:

Fall 1999 to early 2000

## Type of Substation Automation Project:

- Smart RTU (connected to IEDs)
- Remote Interface to protective relays
- Substation HMI
- High Resolution SER

## NovaTech Hardware, Software and Service Products:

- Wonderware InTouch Substation HMI configured by NovaTech
- NovaMux (BM85 Bridge Mux) with protocols: *DNP3.0, Modbus Plus*
- Monaghan SER System in Modicon PLC with SER PLC loadable software function
- Momentary Change Detect Software Loadable for PLCs ?
- Systems Engineering
- Training

## Responsibilities of NovaTech, Other Vendors and Utility:

NovaTech engineered complete system and provided a factory acceptance test, five days on-site commissioning services and training. NMPC personnel were responsible for installation, commissioning and energization.

## Substation Local Area Network(s):

Modbus Plus

## SCADA Network and Protocol:

DNP3.0

## Other System Functions:

- Sequence of Events capture and retrieval
- Pass-through engineering access to SEL protective relays ?
- Oscillographic file retrieval and dissemination (*could use more description*) ?

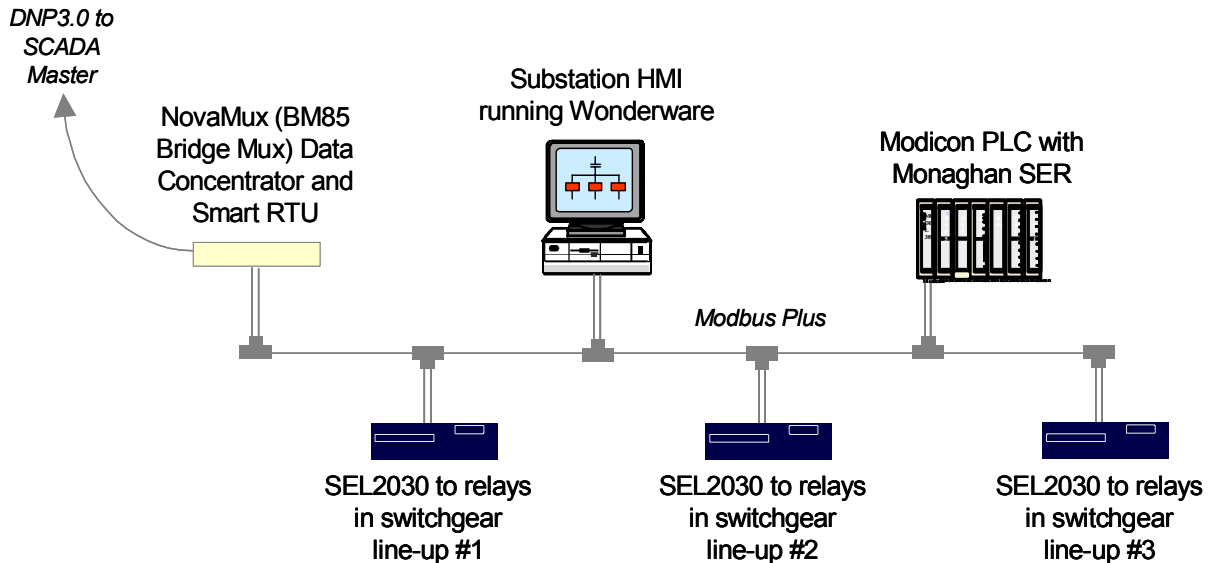
## IED Interface Details:

IED (connected to NovaMux)	Number	Interface Protocol	Data Retrieved	Control through IED?	Other
Modicon PLC with Monaghan SER	1	Modbus Plus	Breaker status, 1mS SER time stamps	Yes, breaker trip/close	
SEL2030	3	Modbus Plus	SCADA analogs and alarms	No	2030 connected to SEL relays

## NovaTech Substation Automation Application Note

- Data Acquisition; protective relay, PLC and SER
- Sequence of Events
- Visual & Audible Alarms
- System & Station One-Line Diagrams
- On-line and Historical Trending
- Customized Reports
- Breaker Trip/Close; Select Before Operate
- Auto Reclosing & Sectionalizing
- Alarm/Event Reporting & Logging
- Report by Exception
- Pseudo-Point Processing
- Multiple Drill-Down Levels
- Dial-up Remote Access
- IED Specific Displays
- Intelligent Alarm Management

### Diagram of Niagara Mohawk Buffalo Substation #36



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