

FOR EXTERNAL RELEASE

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Achieving Multi Master SCADA with NOJA Power Recloser Controllers

4 August 2020 – Driven by demands for improved distribution network security, reliability and availability, Switchgear Engineering firm [NOJA Power](#) have confirmed the addition of Multi Master operation all three primary SCADA protocols in their [RC10 and RC15](#) Recloser Controllers. From Firmware version 1.26, Multi Master Configuration is available in:

- DNP3
- [IEC 61850 protocol](#)
- IEC 60870-5-104

Available as a complementary upgrade to the recloser firmware, this update allows users to connect NOJA Power OSM Reclosers to multiple SCADA Master stations.

Why use Multiple Master Stations?

Applying multiple master stations to a SCADA network is a concept similar to n-1 backup protection in a substation environment. Specifically, it's the redundancy of all control and protection equipment.

Multiple master stations allow SCADA engineers to add an additional control and data acquisition source. Therefore, in the event of a failure of either unit, the remaining operational unit can retain control and vision of the power systems asset.

SCADA teams that deploy a multi master architecture enjoy increased reliability of control and resilience to failure of communications channels. These teams have multiple access paths to the same equipment, greatly improving communications reliability for remote devices with tenuous comms coverage.

An Example Multi Master SCADA Architecture

Oftentimes, Multi Master SCADA architectures are implemented where multiple control rooms are connected to the same device. Usually, this delineation is between a central master control room, and localized regional control rooms.

The central master station may have 24 hour operator presence, but delegate local switching duties to the closest regional control center. During emergency periods, the utility is equipped with added reliability to handle communications interruptions on either device.

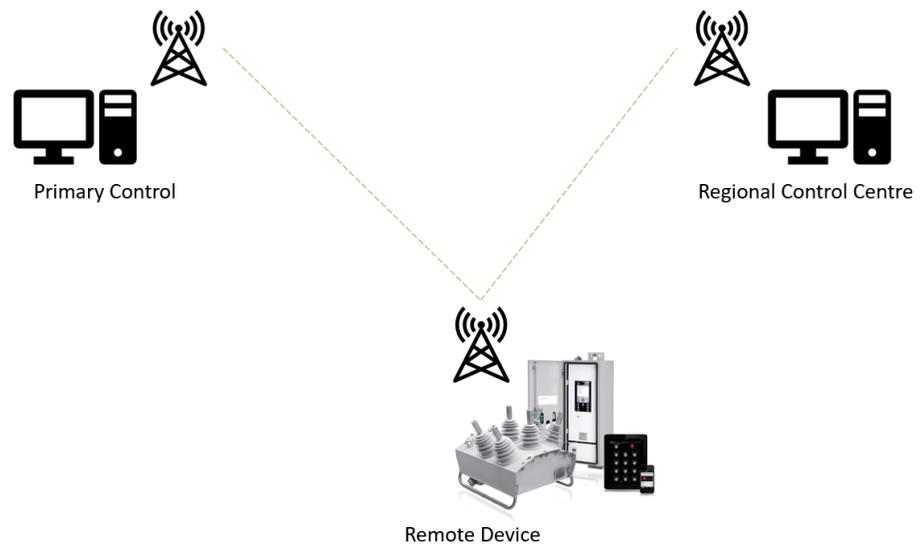


Figure 1 – An example of Multi Master communications architecture

In a climate of disaster recovery and social distancing, SCADA multi-master systems enjoy an added level of redundancy and separation facilitating the reliable operation of the network.

From a cybersecurity perspective, denial of service of SCADA assets also becomes more challenging, as operators are equipped with multiple access ports into the same IED, raising the bar for attacks to cause interruption.

“Increased network security and cyber security programs are on the agenda of many of our electricity utility customers globally,” reports NOJA Power Group Managing Director Neil O’Sullivan. “Operations during COVID19 social distancing restrictions has also reduced our electricity utility customers capacity to work on the network due to reduced switching capacity with social distancing requirements in control centres. Our utility customers are therefore considering multi control centres online simultaneously for their entire network. This facilitates isolation and segregates key control centre operations staff, allowing network operators and switching to be maintained as part of disaster recovery and business continuity planning. We have responded to this customer demand by urgently supporting simultaneous multi master connections from all of our major communications protocols supported.”

Power system security and reliability remains a core driver for technology development in electricity distribution network engineering. The addition of IEC 60870-5-104 multi master to the NOJA Power RC series of controllers for the OSM Recloser system provides electrical engineers with new options to improve distribution network control reliability. For more information, contact your local NOJA Power distributor or visit <https://www.nojapower.com.au/>