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**ENERGETIKA – STROJARSTVO – INFORMATIKA**

## **SYSTEM FOR REMOTE CONTROL AND MONITORING OF DIESEL GENERATORS**

### **Description**

Remote Control and Monitoring System for Diesel Generators consist of Central Unit Station and Diesel Generators substations. Each Gen-Set Controller is expanded with ethernet module which gives possibility to control and monitor generator set via Web interface or Modbus TCP protocol. Here we assume that each substation has some kind of network infrastructure or additionally we can use GSM/UMTS VPN router for this purpose. Both access methods are secured with access code and for every connection to the gen-set substations it is necessary to enter correct access code.

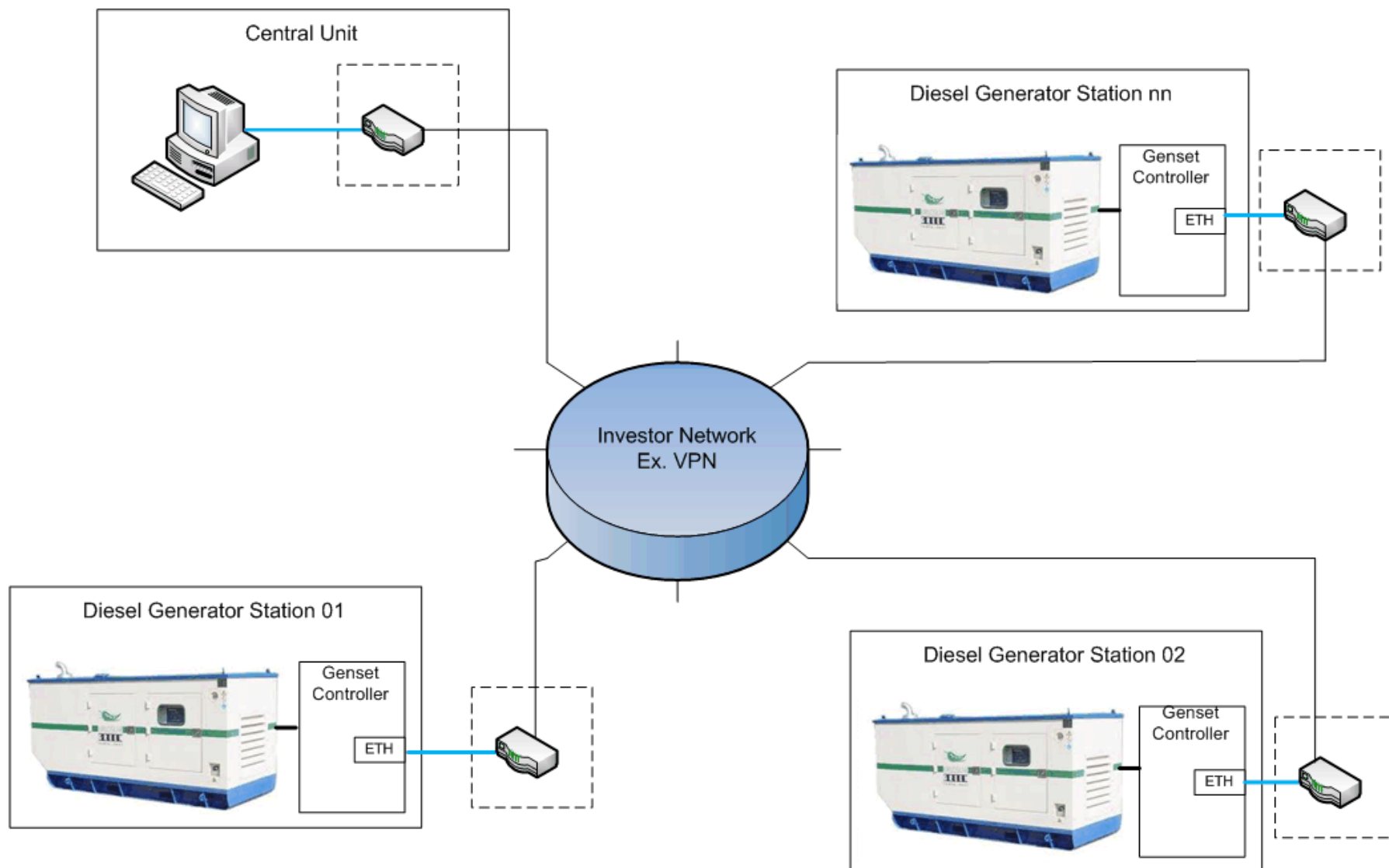
Both protocols can coexist with existing investor network infrastructure and devices (ex. Servers, client PCs, network printers etc).

System capabilities:

- Remote Start/Stop of Diesel Generator
- Change of running modes, OFF/Manual/Automatic
- Monitoring of important gen-set parameters, usually depends on which sensors are installed and connected to gen-set controller (battery voltage, fuel level, circuit breakers status Mains/Generator, Engine Coolant Temperature, Mains and Generator Voltage and Current etc)
- \*Data Logging of measurements during control
- \*Event history
- \*Active Alarms

\*Measurement and parameters can be seen only during active connection with Diesel Generator Substation, system is not connected all the time to the substations





Picture 1. Block Schematic of System for Remote Control and Monitoring of diesel generators





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## Benefits

Remote Control and Monitoring system is developed according to some investors demands. Idea was to save money and to have Gen-sets under control all the time. Some of the benefits :

- Facility Managers have control of gensets all the time, no more worries about battery health and voltage, fuel levels –everything can be seen and tested with just few mouse clicks
- Maintenance of dislocated Gen-Sets is simplified
- No need for monthly and/or six month maintenance, everything can be seen from the central station

