

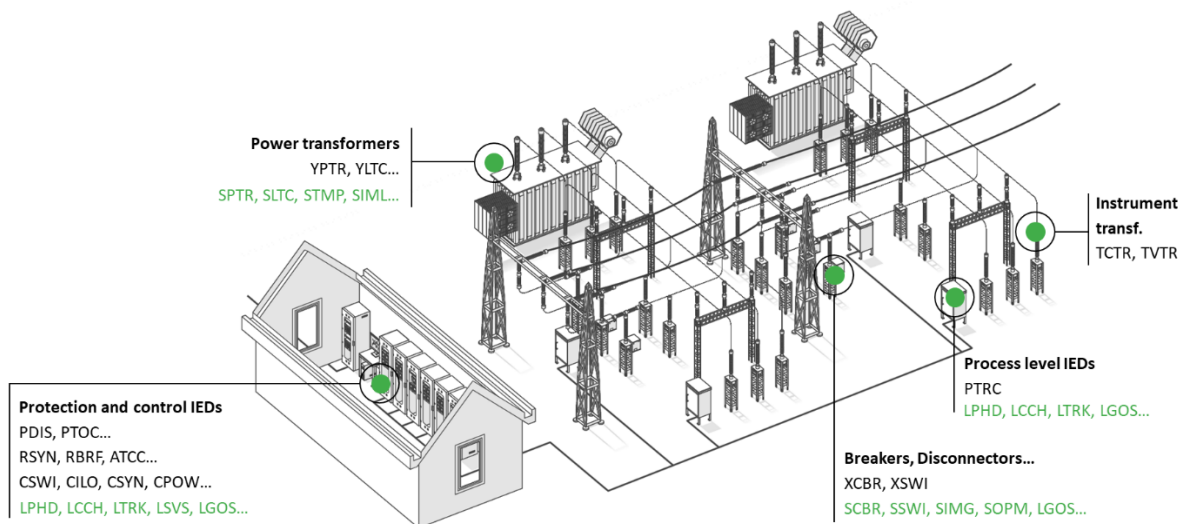
NAME : Stefan MEIER
 COUNTRY : Switzerland
 REGISTRATION NUMBER : 6596

GROUP REF. : B5
 PREF. SUBJECT : PS3
 QUESTION N° : 3.06

Question 3.06: What are your experiences to monitoring of IEC 61850 based PCAS and how you secure the operation of critical infrastructure and respond to the incidents?

Collect data to optimize maintenance schedules

IEC 61850 defines a wide number of logical nodes to supervise primary equipment like power transforms, tap changers, circuit breakers etc. While the information from these logical nodes is used to feed data into asset performance management systems to optimize primary apparatus maintenance, other logical nodes are used to supervise the health of the secondary systems. Important to mention here is the provisioning and collection of name plate information using LPHD logical node, enabling asset management systems for example to gather information about firmware versions and compare them with latest required versions. Reporting of the communication health by the IEDs is achieved by using LCCH for communication channel status and the recently introduced logical nodes LGOS and LSVS for supervision of GOOSE and SV communication status by the receiving IEDs.



Asset performance management system with the capability to create prognoses for different scenarios, based on name plate information, historical product data as well as online monitoring information, enable the users to optimize maintenance schedules by answering questions like:

- When will we reach a critical condition?
- When can we expect a malfunction or failure?
- When will we get an alert or alarm?
- What happens if we take a particular action?