Paris Session 2022

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

B5-PS3

Q3.06

Paulo Junior - Brazil

Q3.06

- ***PACS network*** must incorporate ***monitoring functions*** able to:
  - Detect and point out ***anomalies*** or ***lacking*** of messages, like ***GOOSE*** or ***SV***, or yet ***unforeseen messages***;
  - Detect ***lacking of synchronism*** signal;
  - Verify and point out ***abnormal propagation time***, i.e. ***latency***, and asymmetry or excessive variation, i.e. ***jitter***;
  - Be implemented in a ***independent*** way of protection devices or local teleprotection devices;
  - Resources for ***storing event records*** of ***detected anomalies***.

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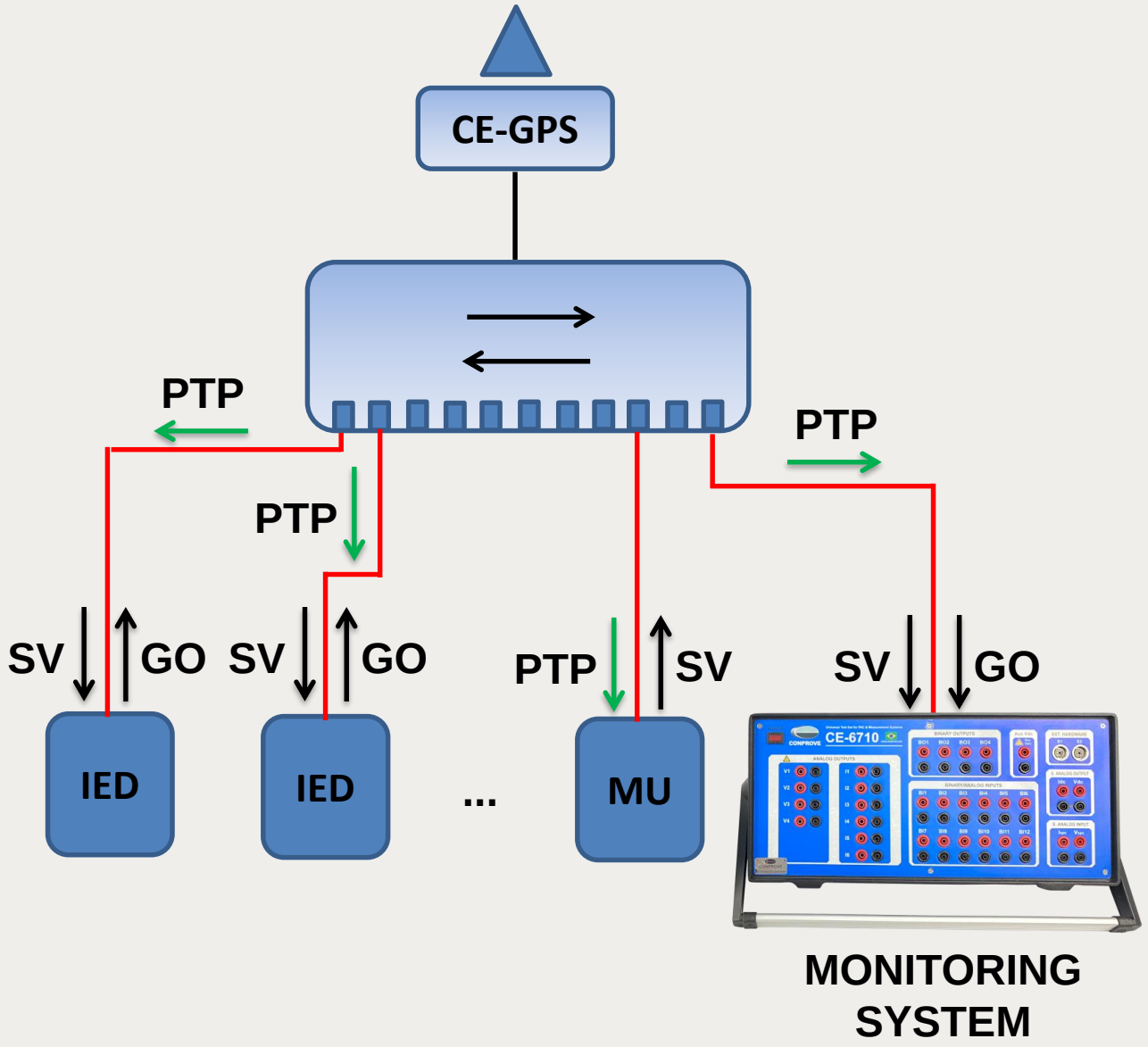
- **Sampled Values**:
  - **Propagation delay;**
  - **Processing time;**
  - **Time between frames;**
  - **Lost and errors;**
  - **Sync flag.**
- **GOOSE**:
  - **Is GOOSE there?**
  - **Retransmission time;**
  - **SqNum and StNum order;**
  - **Transfer Time.**
- **PTP**:
  - **Announce/Sync frames;**
  - **Errors and jitter.**



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- Cybersecurity ***devices*** must be ***configured*** to set an ***alarm*** in case of ***threat***:
  - Alarm configurations ***rules*** must be ***periodically reviewed***;
  - All the alarms must be ***logged*** and sent ***immediately*** to the ***cybersecurity staff***;
  - All the alarms must be ***analyzed and treated*** in the correct ***deadline*** defined by the ***security policy***.

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- ***NIST SP 800 Series***:
  - ***SP 800-61 Rev. 2 – Section 3***: Basic incident handling steps and provides advice for performing incident handling more effectively, particularly incident detection and analysis.