Cigré B5 Protection and Automation

Terugkoppeling e-session augustus 2020
relevante zaken voor NL

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Preferential subjects

- PS1: Human aspects in protection, automation and control systems (PACS)
  - 17 papers

- PS2: Communications networks in protection, automation and control systems (PACS): Experience and challenges
  - 23 papers

General

- PS1: Focus on Protection

- PS2: Focus on Automation

PS1: Human aspects in protection, automation and control systems (PACS)

- Much contributions from Brazil
- B5-103 good insight in statistics

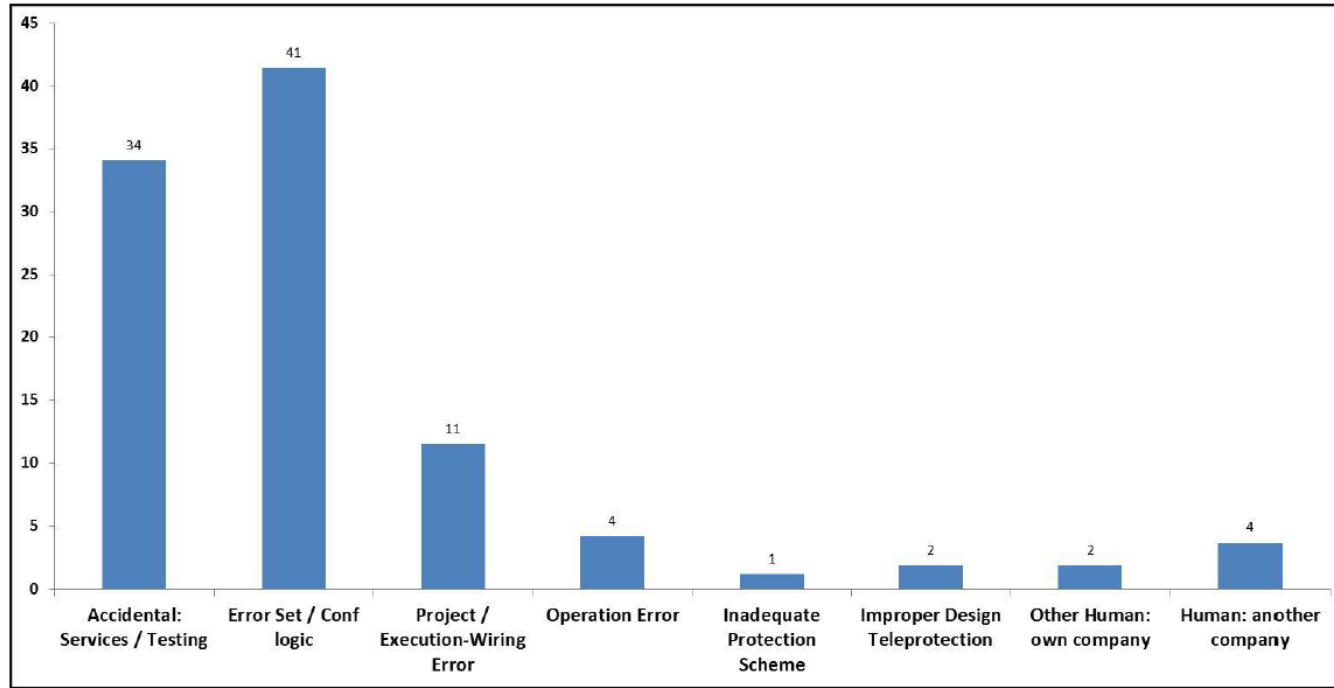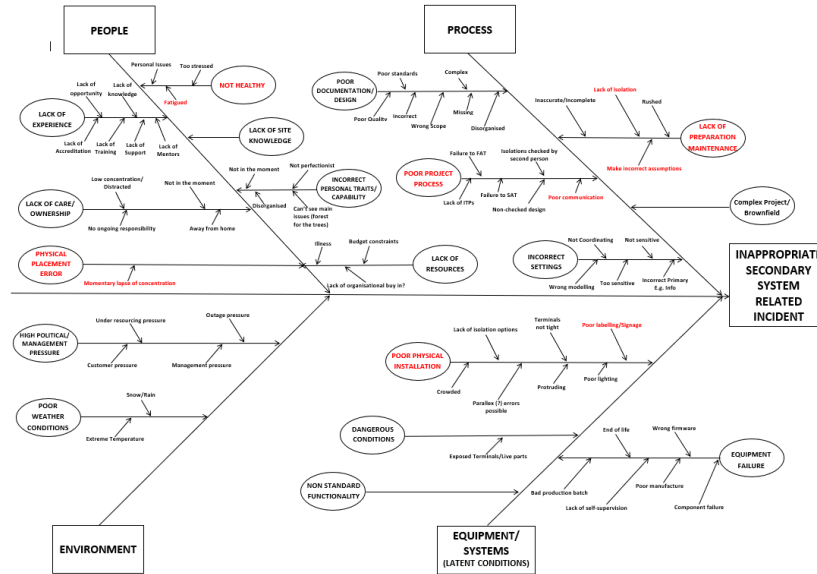# PS1: Human aspects in protection, automation and control systems (PACS)

Figure 04 - Main causes shutdowns secondary origin human group (%) - average 2014-2018

B5-103

PS1: Human aspects in protection, automation and control systems (PACS)

- B5-111 insight in root cause analysis in human aspects in errors/faults
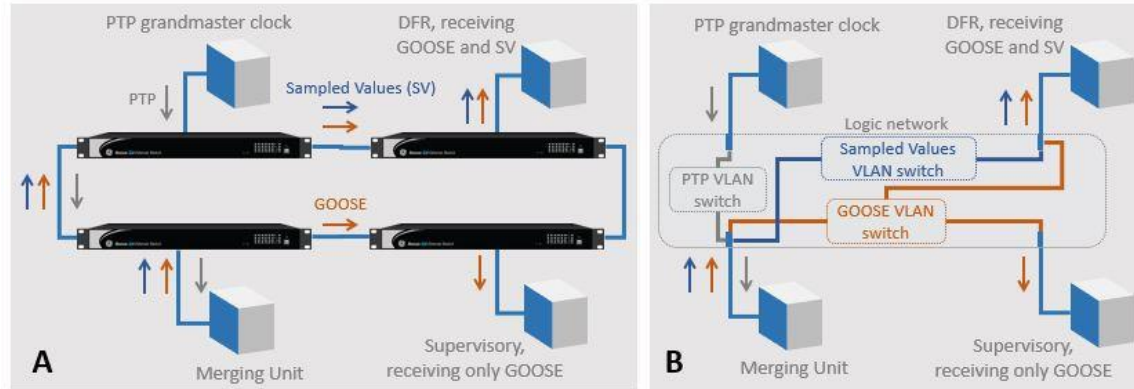
- B5-107, clear vision from Elia (B) to mitigate human mistakes. From cubicle design to feedback reports.

- A lot of Process Bus network architectures. Good overview of possibilities in paper B5-206.
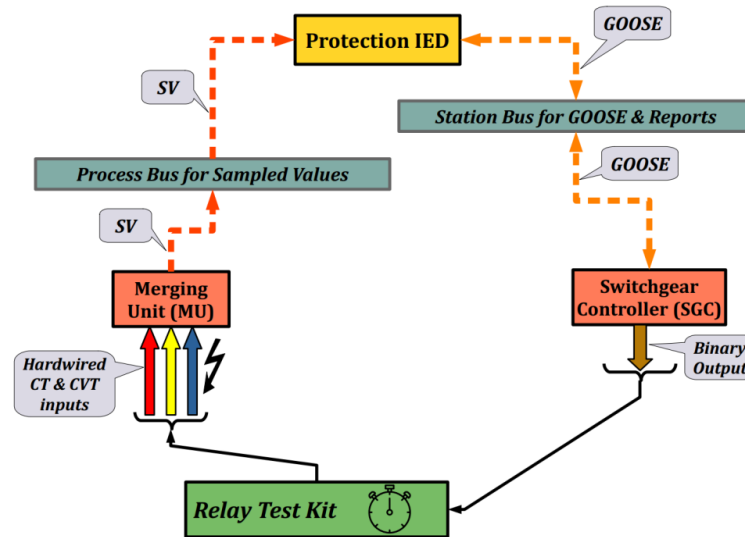- B5-204, introduction to digital substations

- B5-212, good overview of huge (>900) PMU network experiences from Russia.
- B5-215, 5G for smart grid
  - 5G network slicing solution
    - Within strict SLA multiple applications running
    - 10Gbps, millisecond latency, etc.

- B5-218, big full digital substation, challenges and good experiences. Worthful.

- B5-222, Protection over MPLS. Was PS of last year, but still good to read. Again green light for protection over IP

- B5-202, Bonus paper… finding out the limits of the Process Bus. Stronly depends on latency times, in stead of bandwidth