

# Paris Session 2022



Contribution to questions raised by Special Reporters on  
*SC B5 Joint PS3 (Joint PS with B3): Integration of intelligence on substations* Question 3.3 What are the emerging requirements for asset performance management systems? What are the preferred hardware and software architectures? Are the planned benefits already recognizable regarding cost reduction for operation and maintenance and increase of reliability?

B. Veer Raju (INDIA)



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Group Discussion Meeting

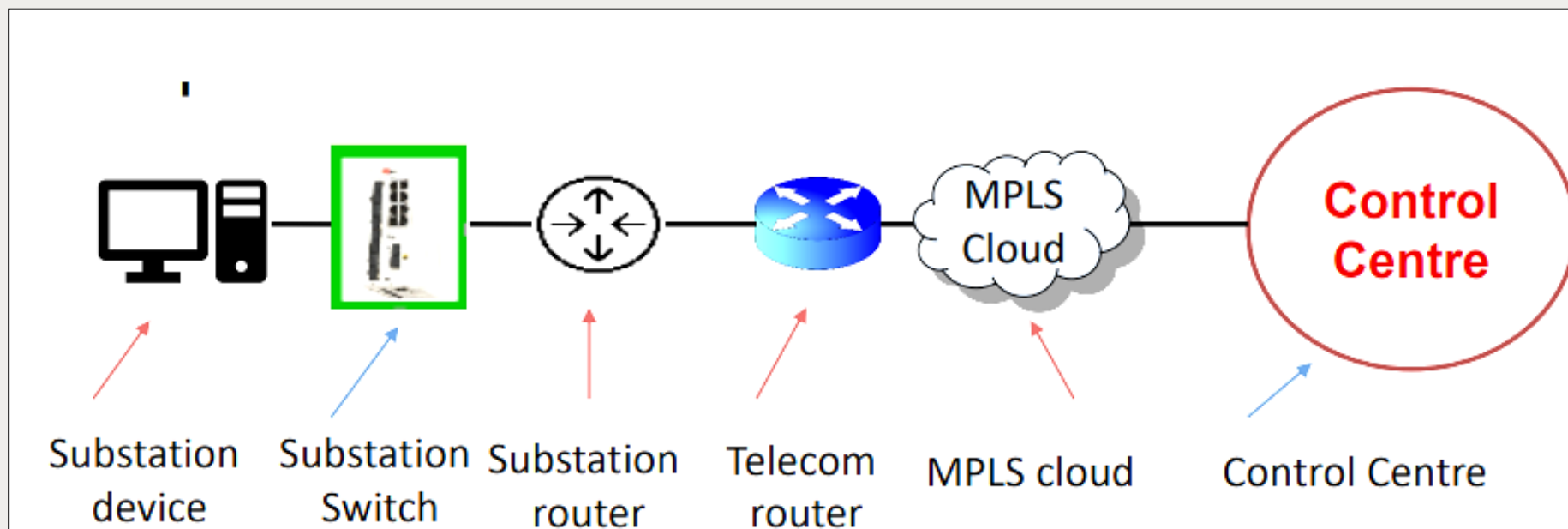
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# Emerging requirements for asset performance management systems?

- *Establishment Remote Control Center for centralised monitoring of system, operations and asset management.*
- Tools assisting remote operations
  - SCADA
  - Other subsystems which aides operators for quick analysis.
  - Tools/applications helping operators identifying problem.
  - Data Analytics
  - Online condition monitoring of assets.

- *Typical architecture for a single substation is as below.*



- Integration of substations to control center requires Gateways, BCU, Switches, RTUs, GPS device, data concentrators, cameras, sensors, transducers, MFTs, level switches, PLC etc. may be required based on category of substation.

Group Discussion Meeting

## Software requirements at control center

- SCADA – Eterra software by GE.
  - RAS – PSES software by Kalkitech.
  - AFAS – MiFAS software by PRDC.
  - VMS – Nice Vision software by Delcom.
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- Other subsystems which aides operators for quick analysis.
  - Tools/applications helping operators identifying problem.
  - Data Analytics
  - Online condition monitoring of assets.

## Are the planned benefits already recognizable regarding cost reduction for operation and maintenance and increase of reliability?

- *Benefits of remote control center establishment are as below:*

- Reduction of operation manpower deployed at each substation for operations as all the substations are operated from a single point by 2-3 operators instead of 2-3 operators per substation.
- Optimised manpower can be diverted for other projects/works.
- Transparency increases as complete data is available at single point.
- Can have eagle eye on system as complete regional data is available at single point.
- Helps in performing Data Analytics.
- Helps in reduction of outage of elements by quickly analysing fault events and early restoration.