

Paris Session 2022



IEC 61850 Principles and Applications to Electric Power System

SC B5 PS2 Question 2.02: Application of Emerging Technology for PACS

Q2.02 What are the expected benefits of using digital substation concepts and how to meet these benefits during industrial application

Nirmal NAIR, New Zealand



UNIVERSITY OF
AUCKLAND
Waipapa Taumata Rau
NEW ZEALAND

IEC 61850 as Digital Substation Enabler

- This contribution based on recently published CIGRE B5 Green Book
- To answer question 2.02, check out the introductory chapters of this green book.
- The Chapter on Applying IEC 61580 beyond substation have details around examples of this technology being adopted and reaching maturity levels in railways traction, hydro generation plants and wind-farm standard PACS design.
- Several emerging applications like HVDC, Electric Vehicle, Batteries etc. still in R&D but reaching maturity through standardization has also been identified.

Group Discussion Meeting



Compact Studies
CIGRE Study Committee B5: Protection and Automation - Peter Bishop - Nirmal-Kumar C. Nair Editors
IEC 61850 Principles and Applications to Electric Power Systems

This book offers a compact guide to IEC 61850 systems, including wide-area implementation, as it has been applied to real substations worldwide. It utilises technical brochures and papers based on existing practice of IEC 61850 systems that give stakeholders from different disciplines an understanding of systems in use, their features, how they are applied and approach for implementation.

The book offers a holistic practical view considering all relevant interfaces and possibilities. It includes the different applications, practical implementation considerations and choices made for IEC 61850 PACS (Protection Automation & Control System) designs. Power system engineers, planners, technicians and researchers will find the book useful for exploring, developing and delivering these systems.

Compact Studies
CIGRE Study Committee B5: Protection and Automation
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