Chapter II Background

Publisher/Subscriber Model

The publisher Subscriber model is a messaging pattern where the publishers (senders) publish messages into the communication infrastructure and the receivers/subscribers express interest in a particular message category. This is very different form the synchronous request-response model and is a much more scalable solution due to no limitation surrounding centralized data. Within the IEC 61850 framework, GOOSE messages and messages transmitting sampled values (SV) are the main types of messages that require indirect asynchronous delivery. In particular the publisher subscriber model can take advantage of Multicast messaging which allow sends to send a single copy which will be replicated and passed on through routers and forwarded to subscribers that have previously signalled interest. The communication infrastructure is responsible for delivery off the messages and maintains the information about subscriptions.

{<https://ieeexplore.ieee.org/document/4265711>}

Generic Object Oriented Substation Event

Generic object oriented substation event (GOOSE) supports the exchange of a wide range of possible common data organized by a DATA-SET. GOOSE messages are used to replace the hard wired control signal exchange between IEDs for interlocking, protection purposes, sensitive missions, time critical and highly reliability.

SMV

MMs

Existing Works