Digital Energy
Gridcom DIP.net: Over Packet Network
Enabling smooth migration from existing network to IP/Ethernet packet transport

TELEPROTECTION MIGRATION FROM CIRCUIT TO PACKET NETWORK

Teleprotection channels have a decisive role in ensuring uninterrupted power supply, requiring to be fast, reliable, dependable and secure. The complexity involved in meeting these targets face the challenge of migrating legacy mission-critical traffic from TDM to Ethernet/IP/MPLS packet-based communication networks

KEY FEATURES AND OUTCOMES

- Ensured low latency for a short end-to-end transfer time (*end-to end for IP packet network depends on providers packet network Quality of Service*)

- Simultaneous command transmission paths using Gridcom DIP.net multi-point signaling approach

- High-burden output contacts for acting directly into circuit breaker tripping circuit

- IEC61850 1A type GOOSE and R-GOOSE trip and MMS messages

- Small size modular architecture

- Conventional & packet network versatile redundant and reliable links

- IEC 6180 2nd edition compliant

- Simultaneous protection signaling acquisition from conventional and IEC61850 protection relays

The design of Gridcom DIP.net connectivity allows gradual migration over long transition periods during which the power utility infrastructure comprises both conventional and packet-based communications

- Conventional TDM based E1/T1, V11, G703.0 64 Kbps, direct Optical fiber, C37.94 and Analog communication link
- SFP modules Fast Ethernet 10/100 Base

## Gridcom DIP.net Application Examples for Packet Network

Customer ETH network (Layer 2)

ETH Switch
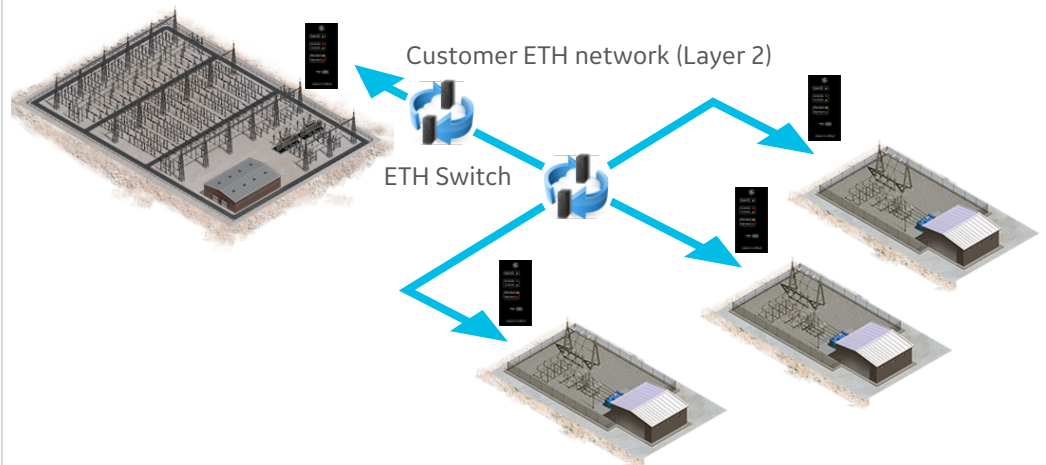
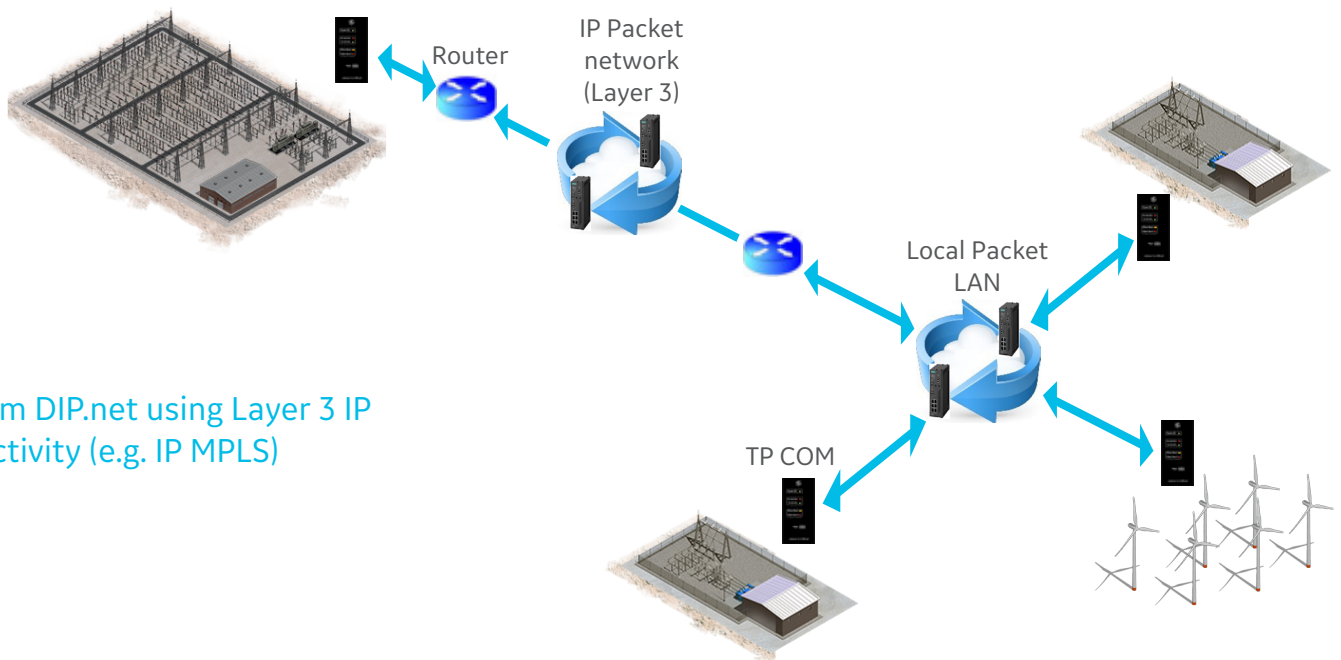## Gridcom DIP.net over Local or Wide area Private Ethernet Network

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Further Application Examples

TP COM

Ethernet Services over SDH/PDH/ MPLS TP

MUX

MUX

MUX

MUX

TP COM (Multiple)
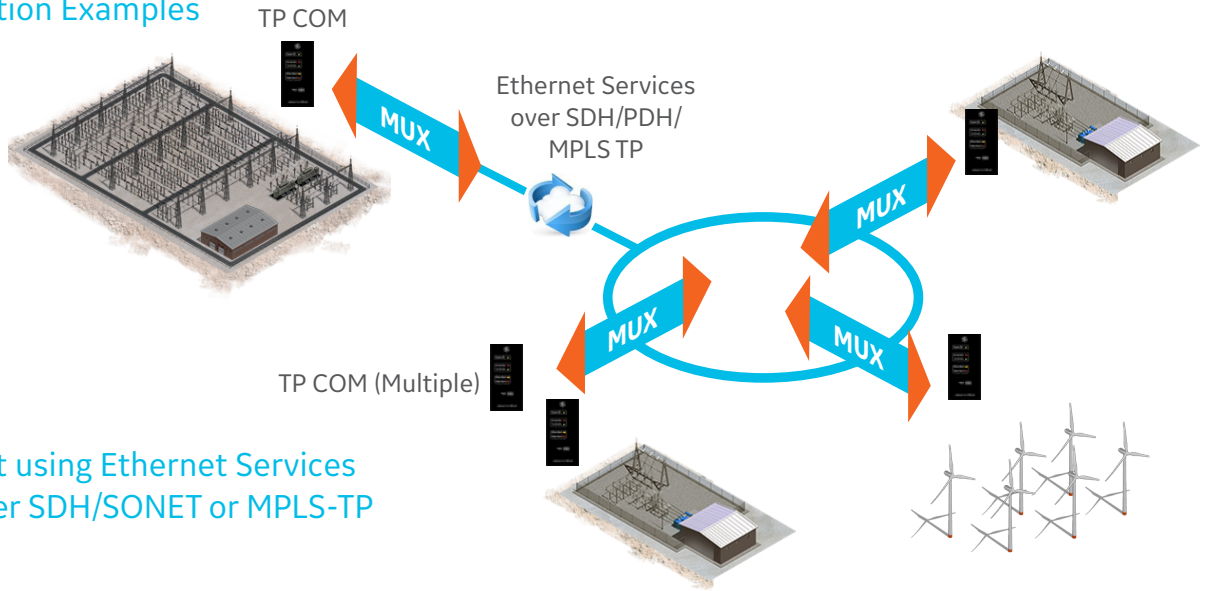
Gridcom DIP.net using Ethernet Services Transported over SDH/SONET or MPLS-TP

IP Packet network (Layer 3)

Router

Local Packet LAN

TP COM

Gridcom DIP.net using Layer 3 IP connectivity (e.g. IP MPLS)

Gridcom DIP.net: Secure & Reliable Transport of Protection Signals

Gridcom DIP.net is a status/command signaling device providing prompt, secure and reliable transport of Protection Relay signaling over different packet-switched communication networks. Gridcom DIP.net is a powerful solution covering encountered situations across the electrical power grid. Its versatility enables Protection and Control engineers to design signaling schemes which remain adequate throughout the transformation of the communications infrastructure adapting to each step of the ongoing network migrations.

Contact Us

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