Programmable Virtual Communication Hub: Pro-H 1000

Problem Statement: This robust portfolio of programmable routing platforms from the Pro-H X000 series provides industry-leading system capacity, port density, security, and performance.

Uniqueness of the Solution:

- Layer 0 - Layer 4 communication equipment
- Full carrier-grade features for data plane and OAM&P for control plane
- Software-Defined Networking using IIT Bombay's mega label multi-pipelined engine
- Benchmarked for low latency, low power consumption and long-distance ranges
- 50 ms restoration across all layers/ all services
- 1 Gbps, 10 Gbps, 100 Gbps ports; IPv6 compatible, MPLS supporting, MPLS-TP
- BGPv4 compliant
- A unique cloud NMS for worldwide control of your network
- Network analytics embedded in the NMS
- Sub 150 W power consumption and hot-swappable dual power supply
- Sub 10 microsecond port-to-port latency across IPv6
- 1 million addresses, route reflectors, router adjusters for IPv6
- Programmable pipeline to support a combination of Carrier Ethernet, IPv4, IPv6, MPLS, MPLS-TP
- SDN capabilities - flexible to customise scripts for use cases such as bandwidth calendaring, packet analytics, security group creation
- Compatible with third-party applications for implementing SDN
- Zero-touch provisioning - full automation of configuration and management

Current Status of Technology: Pro-H 1000 is a flexible, full-featured 1RU device that provides 360 Gbps full-duplex network bandwidth with 100 Gbps and 10 Gbps and 1 Gbps ports.

Societal Impact: Pro H 1000 SDN router is a paradigm shift in routing and switching and is key to digital transformation for service providers, cloud operators and enterprises.

Patent(s): Nil

Relevant Industries: Telecom, Defence, Security

Faculty: Prof. Ashwin Gumaste, Computer Science & Engineering.