SURPASS hiT 7070
Multi-Service Provisioning Platform

Your Customers

get customized bandwidth on demand, tailored service level agreements and benefit from fast and flexible provisioning or upgrading of bandwidth and services.

Your Business

can now cover new market segments (data as well as voice), profit from new applications and services like bandwidth on demand. Realize flexible enterprise Virtual Private Networks, and benefit from customized service level agreements.

Your Network

will be enhanced, gaining in functionality due to the convergence of voice and data. It makes optimal use of available bandwidth capacity and is much simpler to operate. As less equipment is needed, you save investment and operational cost.

SURPASS hiT 7070 improves your market competitiveness through higher service flexibility and faster service provisioning, reduces OPEX/CAPEX compared to legacy SDH solutions, and protects investments too.

Highlights at a glance

SURPASS hiT 7070 enables true multi-service provisioning and meets the needs of tomorrow 's converged networks. It is a cost-effective platform that covers the whole range of network applications required for the regional and metro core. SURPASS hiT has been optimized for both packet and traditional TDM traffic. Features include:

- Non-blocking 160G@VC-4 and nx10G@VC-12 switching granularity
- Integrated packet fabrics (RPR, MPLS)
- Multi-service platform: 2M, 155M, STM-1/4/16/64, 40G, 10/100BT, GbE, 10 GbE, SAN interfaces (FICON, Fiber Channel)
- GFP mapping and LCAS for optimal scalability of Ethernet Services
- Support of concatenated services (VC-4-4c, VC-4-16c, VC-4-64c)
- A variety of STM-64 interfaces, including WDM variants
- Extensive protection mechanisms (SNCP, MSP, BSHR, hardware) including RPR traffic steering

Using this powerful multi-service platform has four major benefits for carriers:

- Increased revenue from new services
- Significant OPEX and CAPEX reductions
- Seamless integration into the existing network infrastructure
- Full integration into Siemens' best-in-class network management system (TNMS)

Increased revenues from new services

SURPASS hiT 7070 helps operators achieve an optimum balance between new data services and traditional revenue-generating leased-line services. SURPASS hiT 7070 gives carriers a unique competitive advantage by transporting flexible Ethernet services from business customers using reliable SDH technology. Furthermore, the Ethernet services provided Quality of Service (Carrier-grade Ethernet), thus offering customized Service Level Agreements. In addition, the support of transparent services like SAN (FICON, Fiber Channel) opens the door to new end-customers. SURPASS hiT 7070, therefore, not only maximizes the revenue to be gained from existing capacity, but also opens new revenue streams while keeping investments low.

Significant investment and operational cost reductions

SURPASS hiT 7070 is highly scalable: It allows the operator to start with a basic configuration at lowest price and cost-efficiently upgrade the system in-service step by step. Not only is the bandwidth is scalable, but also the number and type of services, bringing all the flexibility the carriers need in today's telecommunication market. It therefore prepares the operator's networks for future requirements, allows business driven growth and assures early time to market of new services.

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OPEX and CAPEX reductions as well as optimum use of existing resources are the main benefits of SURPASS hiT 7070:

- ■ Convergence of data and voice combined with increased functionality and high integration density significantly reduces the amount of equipment. Considerable lower investment, installation, operational and maintenance costs are the consequence.

- ■ Equipment modularity and flexibility is based on a common pool of all types of interface cards. Furthermore, this common card pool reduces the number of spare parts operators need to stock.

- ■ Optimized bandwidth utilization is guaranteed by Generic Framing Procedure (GFP) and Link Capacity Adjustment Scheme (LCAS).

- ■ The integrated Layer-2 Switch module, RPR and MPLS provide switching and overbooking with customer separation without the need of additional platforms and technologies. The carrier is in the position to offer Ethernet services with different service qualities: carrier-grade Ethernet for business customers and best-effort Ethernet for a large amount of additional customers, e.g. residential customers.

- ■ The small form factor pluggable (SFP) optical modules are customized port features which allow "under-equipping" of interface cards to support different applications cost-effectively. Long-haul and short-haul interfaces can be mixed on one card.

Seamless integration into the existing network infrastructure

SURPASS hiT 7070 protects the installed SDH investment and maintains the operator's TDM services and revenue.

Full integration into Siemens TNMS

SURPASS hiT 7070 is fully integrated into Siemens' best-in-class TNMS network management system, which provides end-to-end administration and performance monitoring for the converged next generation SDH Network. It also improves operating efficiency, reduces costs for service delivery, and simplifies network operations.

Technological advantages

The main network segment for which SURPASS hiT 7070 is employed is the metro access and metro core area, when networks have to be prepared for high-bandwidth traffic growth and unpredictable demand for voice or data services. SURPASS hiT 7070 can be deployed as a UHC feeder, a terminal multiplexer (TMX), an add-drop multiplexer (ADMX), a local cross-connect (LXC) or a multiring terminal (MRT) in point-to-point, chain and ring topologies and ring interconnections. SURPASS hiT 7070 offers:

- ■ Flexible and scalable point-to-point links through use of the (GFP) and LCAS

- ■ Point-to-multipoint connections and aggregation via an integrated Layer-2 switch to build VLAN's

- ■ RPR for metro access where ring topologies dominate and MPLS for high-end requirements in meshed networks

The wide range of applications and services enabled by SURPASS hit 7070 includes:

- ■ Bandwidth on demand via GFP mapping and LCAS for Ethernet point-to-point links

- ■ Cost-efficient metro WDM and DWDM backbone feeding

- ■ Interconnection of corporate networks

- ■ Carrier services that can be offered via Ethernet, leased lines, SDH, VLAN, VPN application, SAN and clear channel
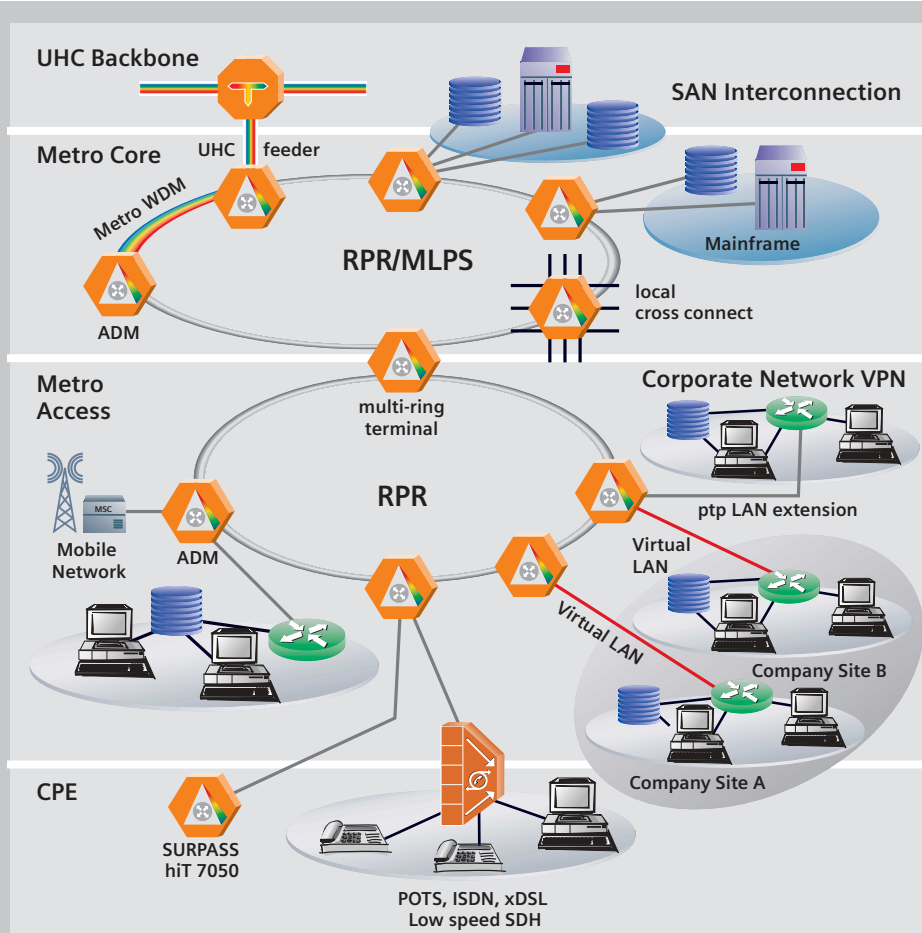
Designed with the future in mind

Siemens closely follows international standards when designing and manufacturing its SURPASS hiT service provisioning platforms (e.g. GFP ITU-T G.7041, MPLS Martini Internet draft, etc). The flexible architecture of SURPASS hiT 7070 is future-oriented technology: it allows carriers to scale into the future by upgrading their switching matrix capacity and line rates (STM-256). Moreover, it features transparent service support with integrated metro DWDM technology.

SURPASS hiT 7070 helps carriers significantly cut costs, increase revenue through more efficient and new service delivery, and quickly adapt to customers' demands. This makes SURPASS hiT 7070 a key investment for profitable and future-proof metropolitan networks.

Key abbreviations used

BSHR   Bidirectional Self-healing Ring
GFP   Generic Framing Procedure
MPLS   Multi-protocol Label Switching
MSP   Multiplex Section Protection
RPR   Resilient Packet Ring
SLA   Service Level Agreement
SNCP   Subnetwork Section Protection

Please contact us to learn more

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UHC Backbone
SAN Interconnection
Metro Core
UHC   feeder
Metro WDM
RPR/MLPS
Mainframe
ADM
local cross connect
Metro Access
multi-ring terminal
Corporate Network VPN
RPR
ptp LAN extension
Mobile Network
ADM
Virtual LAN
Virtual LAN
Company Site B
MSC
Company Site A
CPE
SURPASS hiT 7050
POTS, ISDN, xDSL Low speed SDH