Elegant Migration from TDM to a modern Packet Network

Operators transform their networks to all packet in order to optimize for data traffic and to streamline their operations, taking advantage of a single unified packet network. Transport of legacy TDM services such as T1/E1 or SONET/SDH over a packet network typically require upgrade of systems with a dedicated TDM over Packet card or even installation of new equipment. These are costly operations, that involve detailed planning, truck rolls, allocation of rack space, and power for the equipment.

AimValley delivers various services and solutions based on FPGA IP cores, system designs and Smart SFPs to enable a smooth transition towards a unified packet network.

The case for Network Migration

It is estimated that about half a million SONET/SDH rings are in operational use worldwide. While the majority is installed by Telecom network operators, these reliable and versatile TDM networks are also popular in other industries, such as power utilities, broadcast, transportation, mining, and governmental networks.

A trend across the industry is that data and video are the significant traffic type on their networks.

This forces operators to transform their networks to all packet, streamlining their operations on a single network to reduce both capital and operational expenditures.

In addition, these network migration initiatives can generate cost optimizations in other areas such as: reducing the amount of Telco buildings, freeing up and selling off high valued real estate in downtown locations, or re-purposing Telco offices as data-centers.

These are all very clear and sound business drivers and transformation to packet is a necessary step for all network owners. However, some client traffic remains TDM based, forcing operators to maintain a TDM transport capability on their packet networks:

- applications require TDM signal format, e.g.: 3G/4G base stations using T1/E1 for backhaul
- legacy enterprise voice equipment with PABX, or point of sale systems relying on T1/E1
- operators prefer to prolong the revenue stream from high-valued TDM leased lines
- wholesale SONET/SDH transport
- clients require highest reliability and mission-critical SLAs for their TDM circuits
- services that are legally obliged to be offered via TDM, e.g.: governmental services

Delivering Solutions for a Connected World

AimValley

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AimValley TDM to Packet Expertise

Development of TDM to Packet equipment requires an intimate understanding of Telecom network and equipment design, combined with knowledge of standards, protocols and interfaces. AimValley has a long history in the design and realization of carrier-class solutions for Tier 1 Network Equipment Manufacturers.

AimValley provides a wide range of expertise on TDM Network Migration solutions:

- TDM and synchronization expertise, interpretation and knowledge of standards, such as ITU-T series, and IETF RFCs for circuit emulation
- Consultancy and architecture support on TDM, circuit emulation protocols, synchronization and network design
- Design and development at system level, as well as FPGA, PCB and testing, considering signal integrity, PLL bandwidth and hold-over performance
- Customized hardware design including FPGA, PHY, TDM LIU and PLL components
- Software and firmware designs for carrier-class and resilient solutions including network protection, clock recovery, fault and performance management

AimValley Proven Track Record

Our TDM to Packet expertise is successfully deployed in numerous product designs across many customers and equipment. Millions of pseudowires are installed in Telecom networks worldwide using our TDM Smart SFP solutions. These are offered in easy to install plug-and-play configurations, or provided as fully managed and tightly integrated ports in customer network equipment.

'The TDM Network Migration SFPs greatly reduce system and network complexity, offer lower carbon footprint while generating CAPEX and OPEX savings.'

Our integration and verification test teams use a wide array of test and measurement equipment for TDM protocols, synchronization and jitter/wander performance and packet network impairment generators to ensure compliance with Telecom, synchronization, and packet network standards.
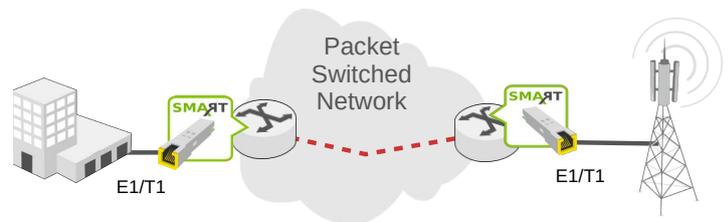
Plug-and play E1/T1 transport over Packet

Why AimValley?

AimValley is a reliable provider of packet switching technology since 2003, delivering solutions for:

- High speed data processing applications
- Complex FPGA-based accelerated systems
- High speed, low power hardware equipment
- Robust embedded software
- Early adopter of Acceleration Technology

AimValley understands the full complexities as well as the subtle nuances of designing great edge solutions. We excel in building complex systems that are part of your product in the fields of Industry 4.0, Big Data, Healthcare and Transportation markets. Our combined skills represent all the important aspects required for the development of end-to-end systems.

Our customers enjoy the benefits of working with a strong team with more than 2 000 years engineering experience. AimValley is a trusted partner of Tier 1 customers in Telecom and Industrial markets and has shipped more than 100 000 products.

Quality Focus
- Outstanding track record of on-time delivery
- Best in Class Designs – Time, Budget & Quality
- ISO9001, ISO140001, Ecovadis Platinum CSR

Delivering Solutions for a Connected World