PATAPSCO Communications

PacketBand®-TDM: the ideal way to converge your circuit-oriented 2G and 2.5G traffic onto a high speed 3G backhaul packet network

For mobile operators building 3G infrastructure or with IP network access, PacketBand-TDM provides the most effective way for you to converge and back-haul your 2G services.

- Patapsco's PacketBand-TDM lets you converge your 2G and 3G networks
- "Back-Haul" 2/2.5G via IP
- Exploits IP and MPLS network infrastructures
- Reduces network costs substantially
- Simplifies the network, support and training
- Protects 2G investment
- Supports T1, G.703/4 both full and fractional over your IP network
- Provides a 'system-in-a-box' Pseudo-Wire solution without the expense of extensive core network equipment upgrades
- Is easy and fast to install and manage

OVERVIEW

With the introduction of 3G, the orientation and speed of the network serving the mobile operator's base station network has to change. Current 2G and 2.5G mobile networks are largely TDM-based where transmission is tuned for voice with data as an add-on. In the 3G world however, data is king, and an IP network is the common carrier delivery method.

This creates a potential opportunity for mobile operators. By transporting their 2G voice channels over the broadband IP/MPLS network which feeds most 3G services, mobile operators can benefit from network convergence, gaining lower costs and better manageability.

One potential way to converge 2G with 3G is to re-engineer the 2G network for Voice over IP (VoIP). This way, 2G voice and data services can be carried across the IP network, and the leased lines carrying the G.703/4 services can be decommissioned. But VoIP has issues with degraded voice quality and end-to-end delays.

Patapsco's PacketBand-TDM, 'system-in-a-box' Pseudo-Wire TDM over IP solution provides the best of both worlds. By overlaying a Pseudo-Wire synchronous network on top of the 3G IP/MPLS network, it protects mobile operators' existing investment in G.703/4, but at the same time converges the 2G and 3G networks, saving on both infrastructure cost and management complexity.

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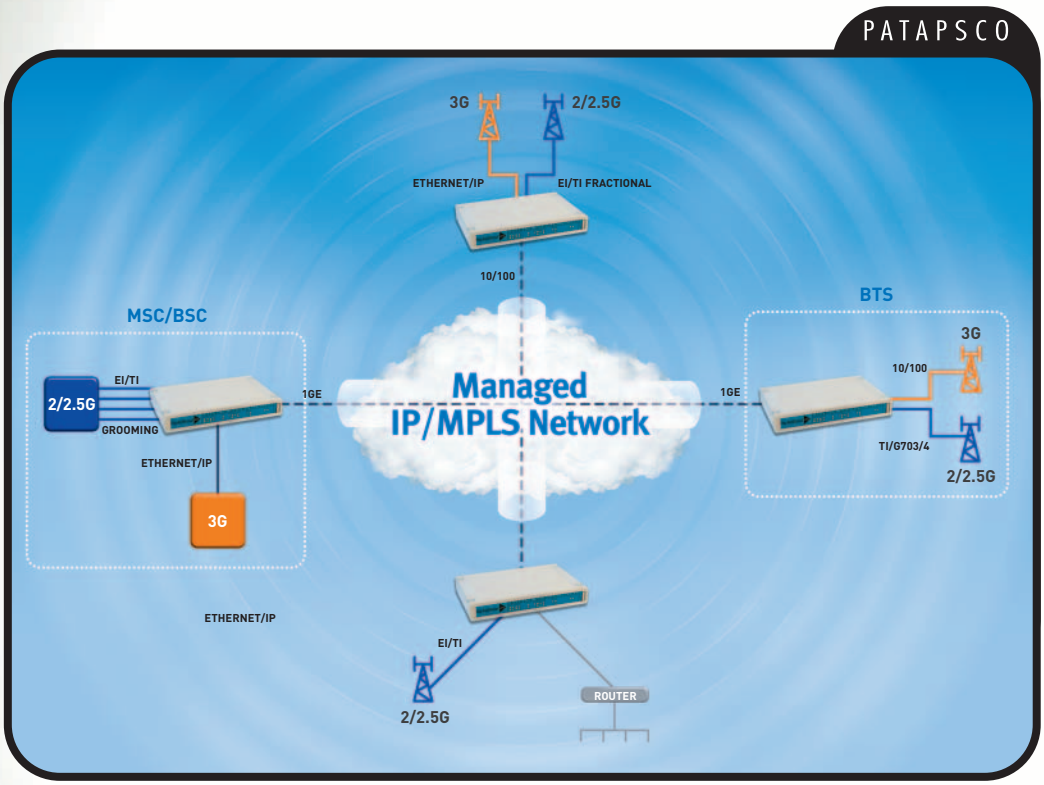
PacketBand delivers N*64kbps E1/T1 clear channel access across your IP/MPLS network, essentially transforming it into a clear clocked full or fractional G.704/T1 circuit. Employing a sophisticated clock recovery system to ensure very accurate timing and synchronisation, it links the BTS to the MSC/BSC with minimal latency and no reduction in voice quality.

"Grooming" of several E1/T1 circuits into a single trunk at the MSC/BSC uses expensive ports more effectively. A single PacketBand can run up to sixty four N*64kpbs connections to BTSs.

PacketBand-TDM is an easy-to-configure, edge-of IP network 'box' solution. There is no expensive core network upgrade to be undertaken. With PacketBand-TDM, any T1 and G.703/4 services will run over the IP network transparently and cost-effectively.



PacketBand-TDM

- Provides cost-effective Pseudo-Wire services across your IP/MPLS network.
- Delivers synchronous clocked TDM circuits over IP.
- Very accurate clock recovery mechanisms.
- Jitter handling capabilities.
- "Grooming" of multiple fractional links into a single TDM stream.
- Will support all current and planned relevant TDM standards, including Y.1413, an ITU standard specifying how TDM traffic should be handled by MPLS.
- Support for 1Gbit/s and 10/100Gbit/s Ethernet.

PacketBand-TDM: Two versions

- PacketBand-TDM-4: Supports up to 4 E1 (European 2Mbit/s), T1 (US 1.5Mbits/s) clear mode or channelised ports.
- PacketBand-TDM-1: Supports a single T1/E1 TDM interface.

Both products have a high-speed IP/MPLS network connection and a local Ethernet port for router/VoIP/3G traffic etc.
For more details, please see the Technical Datasheets and Application Notes.

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