

# PacketBand®-ISDN: New High-Margin Services on Low-Cost Infrastructure

The first ISDN Pseudo-Wire 'system in a box' will smooth migration to next generation networking (NGN) for Carriers and their customers.

With Patapsco's PacketBand-ISDN customers can retain the synchronous services they need but still move to a packet infrastructure; carriers can offer high value synchronous services over IP. It's the best of both worlds.

- Patapsco's PacketBand-ISDN is the ONLY complete ISDN tunnelling solution for IP Networks
- Enables non-compressed call switching via IP, giving carriers and users the ability to create a virtual switched ISDN cloud on an IP network
- Dynamically switched non-compressed clear-channel calls
- On-network or with national/international breakout into "real" local ISDN networks
- Offers IP network Service Providers (SPs) and telcos high-margin services in a slim margin world
- Protects User investments in ISDN equipment, terminals and applications
- Provides cost and management competitive advantages for SP
- Targets and retains existing customers and wins new prospects
- Also supports non-switched TDM over IP or leased line over IP applications
- Easy and fast to install and manage
- Sited at either customer premises or carrier POP
- Allows Carriers to economically extend their ISDN and leased line reach
- Can be used as a valuable migration tool as companies move from legacy to IP



## OVERVIEW

There are currently over 20 million ISDN Basic Rate lines and 2 million Primary Rate circuits in use in the world. There are also 56 million narrowband leased lines. And they won't be going away any time soon.

While the telecom industry focuses on the next wave of IP-based infrastructure and services, many users will be happy keeping their ISDN circuit switched based equipment and applications. Why? Because they work and because there is a large world outside of VoIP and router traffic.

This might present some problems if you're selling an NGN portfolio. After all, one of your prime selling points is that by moving to packet they can win huge cost and manageability advantages by converging all their services. If you don't have a way to bring ISDN and other synchronous applications into the IP domain your customers will have to keep their existing ISDN connections and leased lines and your cost advantage story could suffer.

### Patapsco's PacketBand-ISDN is the answer.

PacketBand-ISDN offers the best of both worlds: it is a Pseudo-Wire-in-a-box system which sits between ISDN terminal equipment and the MPLS/IP network, creating dynamic, transparent, clear, non-compressed "B" channel tunnels across which any ISDN applications can be switched, unchanged.

You can now sell a convergence story which preserves user's investment in trusted applications and terminal equipment such as ISDN based facsimile machines, video conferencing equipment, encryptors, backup systems, and highly featured PBXs. In fact anything that needs ISDN access. PacketBand-ISDN can also deliver TDM over IP leased lines.

You will have a strong competitive advantage in offering customers the complete package; VoIP, router traffic and now national and international ISDN services and leased lines, the international element being the high-value high-margin services.

### Pseudo-Wire for a smooth upgrade path

For many users, taking a 'big bang' single step from tried and trusted synchronous equipment and applications to converged services on a packet-based network is just too much.

### Too much risk

Users may be reluctant to exchange reliable and proven equipment and applications for a Voice over IP equivalent which may have voice quality problems. Some applications, particularly synchronous devices, simply cannot use current IP technologies.

## Too much cost

Users don't want to bear the huge cost of upgrading all their customer premises communications equipment and applications at the same time, especially if the existing investment has not been written off.

## Too much disruption

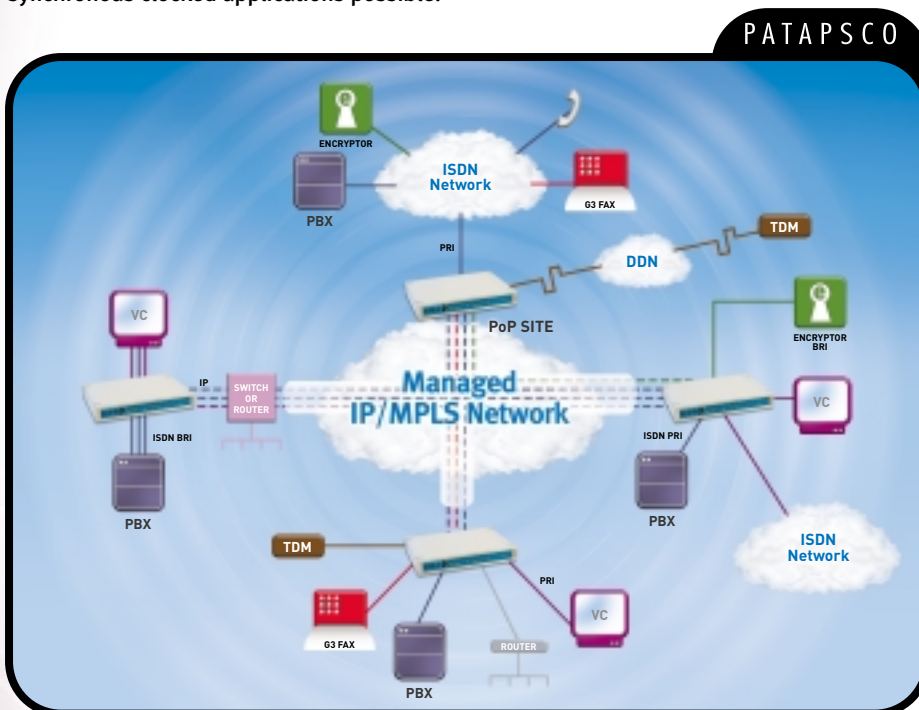
Users don't want to restructure or re-train staff on multiple upgrades.

## PacketBand for new Applications

PacketBand-ISDN not only provides a smoother upgrade path but an answer to these legacy synchronous applications. Customers can enjoy the benefits of their broadband IP networks without having to converge all their applications on 'day one'.

Instead, reliable and critical existing services can be supported by using PacketBand-ISDN to create ISDN tunnels across the corporate IP network, with or without break-out capabilities. Existing equipment and services (and end-user satisfaction) can be preserved without the cost and management effort of retaining a parallel network of synchronous leased lines.

Better still, PacketBand-ISDN also supports virtual leased lines or TDM over IP services, making delivery of synchronous clocked applications possible.



The diagram illustrates a few possible ISDN switched and non-switched TDM applications with break out from a PoP site.

## PacketBand-ISDN

- Enables Carriers to win new business by being able to offer cost-effective, dynamically switched ISDN services in an IP network package; and to target both existing customers and help win business with new prospects.
- Delivers multi-services to multiple tenants over IP.
- Preserves all the signalling and performance characteristics required by an ISDN call.
- Also T1/E1 clear or channelised services with "Grooming".
- Support for 1Gbit/s and 10/100Gbit/s Ethernet.

## PacketBand-ISDN: Two versions

- PacketBand-ISDN PRI (Primary Rate Interface) supports 1 to 4 PRI interfaces, E1 and T1 and non-switched T1/E1 full or fractional "leased lines". The system can be configured with both NT (network side) and TE (terminal side) presentations, which means it can operate at either end of the IP network, connecting to either local equipment or to an ISDN carrier network.
- PacketBand-ISDN BRI (Basic Rate Interface): supports either 4 or 8 interfaces. Each can present as NT or TE.

Both products have a high-speed IP/MPLS network connection and a local Ethernet port for router/VoIP traffic etc.

For more details, please see the Technical Datasheets and Application Notes.