

## Secure Phone Terminal Application Note

### *Migrating secure telephone terminals from ISDN to Next Generation Networks (NGN) or Packet Networks.*



ISDN secure phones, including The Brent, Brent 2, STU3, Elcrodat and TSC2000 offer high-security communications utilising traditional ISDN service provided by a carrier. Deployments can be permanent, temporary, remote or mobile.

But, many organisations are migrating to Packet and IP based networks which do not support clear-channel ISDN working, or they need secure access where ISDN is unavailable or the carrier is withdrawing service.

It is into this environment that Patapsco Communications offer a range of connectivity solutions using the PacketBand “ISDN over IP” range which can solve many of these migration and access dilemmas.

PacketBands are COTS products that provide easy and flexible secure phone connectivity to both traditional ISDN network infrastructures but also to, across and through the new managed packet networks.

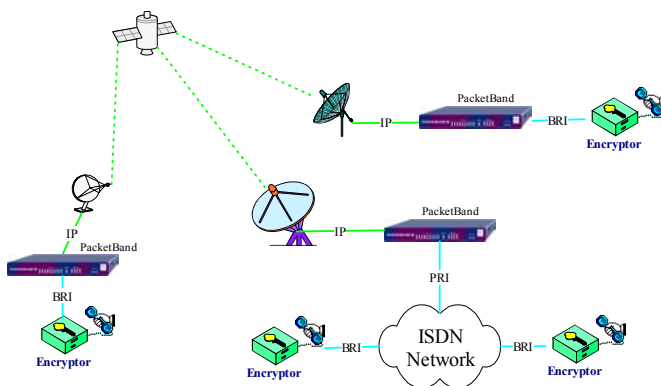
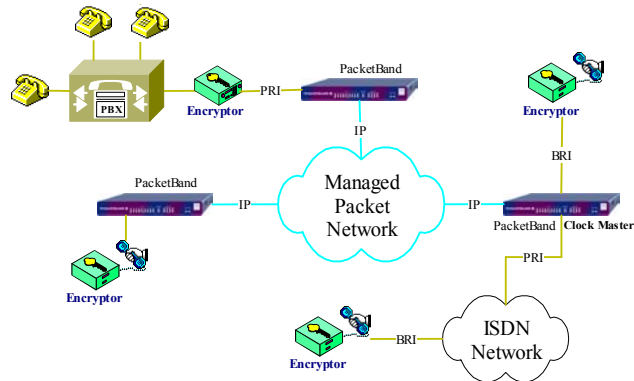
Any ISDN devices such as secure faxes, encryptors and high quality audio codecs, videoconferencing stations etc can be connected. In fact any ISDN device can benefit from PacketBand’s ability to deliver ISDN transparent services just as if they were delivered from a local exchange instead of across a packet network.

### PacketBand ISDN over IP

With the increasing migration to NGN’s or where an ISDN service is not available, secure phone terminals can be still be operated using Patapsco’s PacketBand ‘ISDN over IP’ solution. This innovative technology creates asynchronous, clock-locked transparent clear-channel ISDN ‘tunnel’ for transport over packet networks.

Dynamically switched non-compressed clear ISDN ‘B’ channels are established, as needed, providing an ISDN link between PacketBands and the connected secure devices.

Utilising packet networks also offers cost advantages over traditional ISDN services particularly internationally.

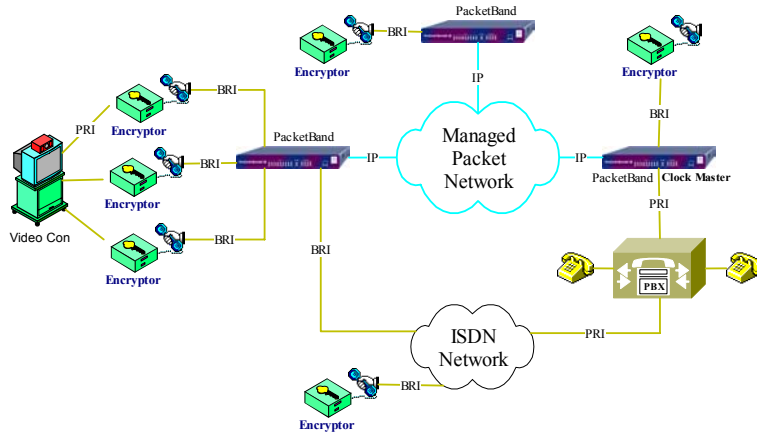


Additionally, otherwise permanent ISDN/TDM circuits can be freed, releasing this limited and costly network capacity.

Networks are available globally through both terrestrial and satellite services. PacketBand can therefore deliver secure phone access almost anywhere.

The break-out and dial-in capability means PacketBand-based devices can still communicate, in either direction, with other ISDN-based units which have not yet been migrated to the packet network.

The secure phones are connected directly to the PacketBand via the ISDN Basic Rate or Primary Rate ports (BRI/PRI ports) and the PacketBand connects to the packet network. PacketBand responds to out-going calls by connecting to another PacketBand across the NGN and then to a secure phone, or “breaking-out” into the real ISDN and then on to the end destination.



Primary, secondary and tertiary routes can be configured if the call(s) are unsuccessful, adding significant levels of resilience.

PacketBand handles all ISDN signalling between locations without the requirement for any other equipment. A SIP (Session Initiating Protocol) version will be available in Q2 '06.

As another example, multiple PacketBands can be used as “cross-site” devices to link a single campus, base, building or other establishment.

Where more than one secure device is needed at a single point (phone, fax, video unit), the PacketBand supports multiple BRI and/or PRI ports.

Overall PacketBand offers an easy and flexible way to interconnect ISDN devices; in fact any ISDN type interface can be cross connected to any other ISDN device! There are many applications and possible configurations of PacketBand and space allows for just a few here. Please contact us to discuss your ideas and requirements.

## Switch and Routing

As well as providing the ISDN over IP access, PacketBand can perform a wide range of useful switching and routing functions. These include the ability to convert dialled numbers, to add or change CLIs and to route calls to a variety of destinations depending on a number of criteria. These functions are also available in another Patapsco product, the *Liberator*, which is an ISDN PRI/BRI conversion and routing product with a wide range of applications and uses.

The **PacketBand** offers key advantages:

- Local, national and global access via NGN’s (terrestrial and satellite) and ISDN
- Simple migration from ISSN to a packet-based technology
- Secure phone operation where ISDN services are not available
- A substantial reduction in call costs
- Freeing of ISDN/TDM capacity
- Reduces and simplified cabling

So, if you are trying to solve:

- Migration to NGN’s
- Access to ISDN services where there are no traditional ISDN network providers
- Access to ISDN services where only a packet network is available
- Access to ISDN services for temporary, mobile or remote use
- Interoperability issues between ISDN networks and secure phone terminals
- Instability of ISDN networks (mobile, satellite)
- Removal of call information such as date / time stamp
- Identification of dialled and dialling number
- Call re-routing issues

Then the **PacketBand ISDN** can provide:

- Clock-locked ISDN ‘B’ channels across and through managed NGN networks
- A simple migration path which does not impact current connectivity options
- Continued use of ISDN legacy equipment
- Routing on specific DID or CLI
- Masking or translation of incoming DID numbers
- Removal, hiding or changing of Caller Line Identifier (CLI)
- Call event history through trace capability
- ISDN protocol interrogation
- Intuitive remote management and diagnostics

For more information on this and other applications, please visit [www.patapsco.co.uk](http://www.patapsco.co.uk) or contact us on the numbers below.