Patapsco Communications

Improve access and user/application performance without increasing network costs

Delivering ISDN connectivity to devices/applications to meet peak demands can be expensive. Sufficient network access is usually provided just to cover the average loading. At peak times users have to live with a degraded service.

If multiple ISDN devices are located at a single site, Patapsco's Liberator balances network access to match differing capacity requirements without having to add extra network connections.

Customers can use Liberator to:

- **Sharing ISDN services between multiple devices**
- **Usage of existing services is not continuous**
- **Improving application, customer & staff service levels without increasing network costs**

Application descriptions

As in Diagram 1, many locations use a PRI circuit for the PABX in addition to ISDN circuits for other applications.

Some of these applications would benefit from higher speed network access when loads are above average, but adding additional ISDN circuits for these periods can be prohibitively expensive.

How Liberator can help (1) – Accommodating peak traffic loads whilst budgeting for the average

Using the Liberator's ability to present more local interfaces than there are network connections and allow them to share or contend for network access means that each port can "borrow" channels from a common ISDN pool.
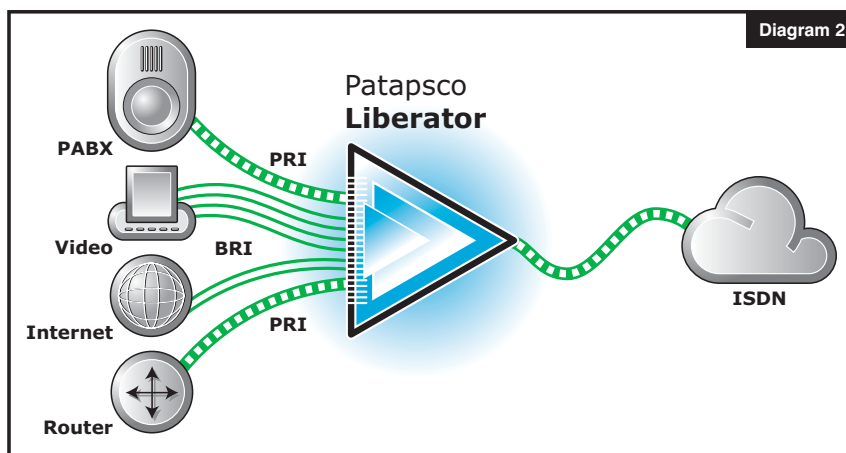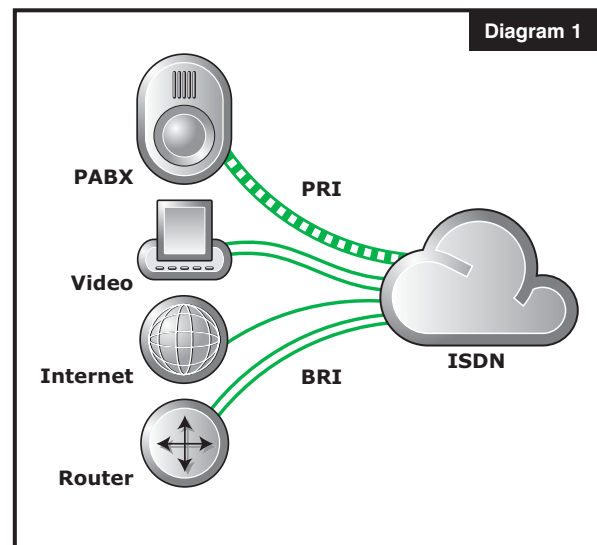

Diagram 1

Diagram 2

Diagram 2 shows that extra ISDN connections have been made available to all devices. The router has been upgraded to support a PRI instead of two BRIs. This means the applications can have improved ISDN access without necessarily increasing the number of rented ISDN channels.

When Devices require access or higher-speedconnectivity, they use any part of the "pool" not currently being used by other devices or reserved for them.

To avoid any single application or Device 'hogging" too much

bandwidth, minimum and maximum levels of network access can be configured for each Device, ensuring all have the required minimum level but can add to this from the shared "pool", up to a maximum limit.

Users and applications benefit from an increased service levels and performance without the extra costs of installing and renting extra ISDN lines.

As access and speed requirements grow, additional ISDN channels can be added to the Liberator, these being either dedicated to an application or to add to the generally-available "pool" of "B" channels.

Liberator is easy to install and configure and will provide information on ISDN usage so customers can identify peak periods, how much ISDN is being used, how often all channels are in use, which devices are using them and how often ISDN access is requested but unavailable because it is fully utilised.

In addition to improving service levels the Liberator is a valuable tool for identifying traffic patterns and identifying when capacity needs to be increased, or perhaps reduced.

Application Note AN-006 also addresses improved network access based upon automatic "time-of-day" reconfiguration.

How Liberator can help (2) – Mixed Applications

Whilst this note is one of a series that considers different applications separately, Liberator places no restriction on the number of applications that can be supported simultaneously.

Overall, the benefits of Liberator for multiple ISDN installations are:

• Improved ISDN usage by giving all devices access to a single "pool" of circuits, allowing the overall number of circuits to be reduced.

• Increase in service levels to/from devices by maintaining the number of network ports yet increasing the number of connections from the devices to the Liberator.
• Reduced installation costs
• Reduced rental costs by using capacity more efficiently
• Simplify billing and circuit tracking.
• Fast availability of extra BRIs for expansion at virtually no cost
• Less space, fewer "boxes" and simplified cabling.
• Fast, simple installation with minimal user-impact.
• Simple to configure and re-configure (unlike most PABXs!)

Summary

The Liberator is a range of professional products for carriers and corporates. Priced to help reduce ISDN installation costs, reduce rental costs and improve flexibility and expansion, it requires no system changes or user disruption, keeps data applications separate from voice and is easy to install and configure.

Other application notes in this series cover:

AN-006(A)	**PRI to BRI Conversion**
AN-006(B)	**Using existing PRI's to provide BRI ports**
AN-006(C)	**Sharing a single PRI between PRI and BRI devices**
AN-006(D)	**ISDN "Time-of-Day" Reconfiguration**
AN-006(E)	**Low-cost ISDN backup by sharing ISDN**
AN-006(F)	**Improve dial-in and dial-out access and user/application performance without increasing network costs**
AN-006(G)	**Pre-allocate network resources applications have access to**
AN-006(H)	**Stand-alone BRI and/or PRI "networks" for demonstration and testing or across-site communications**
AN-006(I)	**Low-cost Carrier provision of PRI, Fractional E1 and BRI**
AN-006(J)	**Least Cost routing to a second carrier**