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Low-cost Carrier provision of PRI, Fractional E1 and BRI

Delivering PRI ISDN, BRI ISDN and FE1 to customer sites can be difficult and expensive with multiple pairs needed between the Exchange and multiple expensive DTE ports to derive the services.

This can mean that Carriers are unable to deliver revenue and profit-generating services to both new and some existing customers' locations.

In these circumstances a customer may switch to competition, and opportunities to increase revenues for the Carrier and its customer can be lost.

Carrier

- More revenue
- Improved market share
- More competitive offering
- Improved coverage
- Frees line plant for use with other customers
- Earlier revenue stream
- More flexible & easier to manage

Customer

- Better pricing
- Fewer "boxes on the wall"
- Faster delivery of services
- Single point of contact
- More flexibility of services
- Easier to manage (billing)

Application descriptions

Many companies require a combination of network services which frequently include Fractional E1 (FE1) for inter-site data communications ISDN PRI for PABX connectivity and BRI for smaller data applications such as web access, videoconferencing, router top-up and backup. Diagram 1 shows a typical example.

From the diagram it can be seen that it is expensive, in both Exchange/PoP interfaces and circuits to provision such facilities to the site.
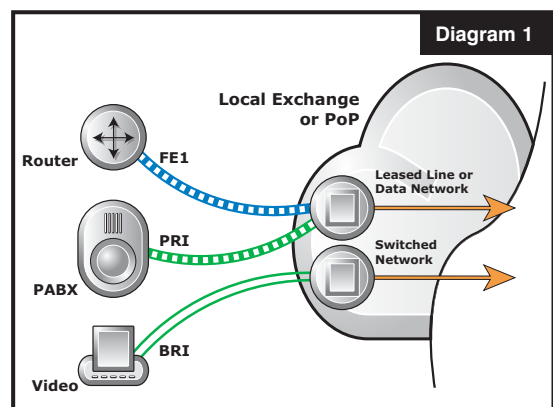
Diagram 1

How Liberator can help (1) - Reduce the number of lines required
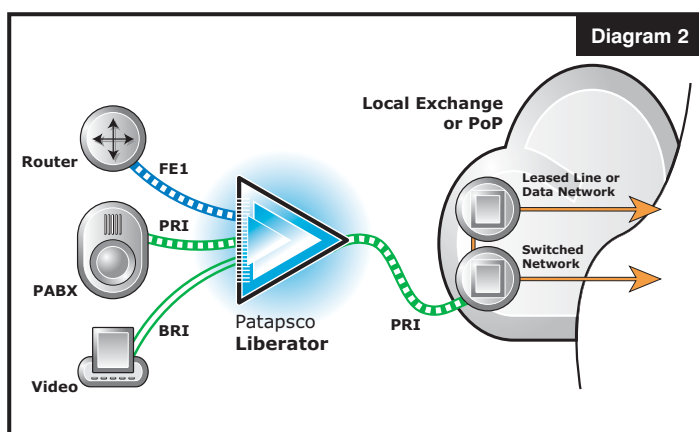
Diagram 2

The Carrier can deliver a single PRI ISDN service to site with Liberator presenting a flexible combination of services to the client that can easily be modified.

Diagram 2 illustrates the same customer as above, but with Liberator being used to deliver all the different services over a circuit.

The Fractional E1 is, in effect, "nailed up" multiple ISDN channels which the Carrier can either transport across its network as contiguous timeslots or pass to a separate data network at the PoP site. Fractional PRI can be delivered to the PABX and multiple BRIs can be supported from the low-cost compact and manageable Liberator unit.

How Liberator can help (2) – Deliver a dynamic service to meet a customer's changing requirements

Often a customer will have different networking profiles for different times of the day and for different days – perhaps needing more data access in the evening for server backup than in the day and with fewer voice circuits needed at this time.

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A Carrier who can meet these requirements has a significant competitive advantage.
The Liberator's ability to automatically invoke a number of different profiles means Carriers can tailor network services and access to meet users' changing needs.

Referring to Diagram 2, the Liberator can invoke a profile in the evening which would, for example deliver more timeslots in the FE1 to the router and fewer to the PABX and BRIs.

How Liberator can help (3) – Small low-cost equipment at the Exchange/PoP for savings and flexibility.

An extension to the service provision shown in Diagram 2 is shown in Diagram 3 where a Liberator is installed at the Exchange/PoP site. This allows the carrier to replace expensive Exchange and inter-connect equipmnet and provide additional flexibility for the customer.

The illustrated FE1 link could be delivered through the Exchange directly to another PoP so no local Exchange hardware is required for the data services.

Diagram 3
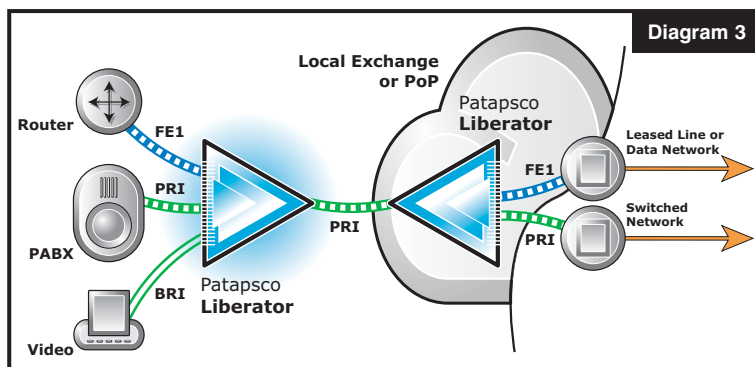
Other information

Liberator provides a wide range of configuration options with a comprehensive but easy-to-use graphical interface. The devices can be accessed locally or via a remote call and are software uploadable. All ports are accessible by all others, minimum and maximum bandwidth capacities can be set, call billing information and other stats are also generated.

Least-Cost-Routing is available on the Liberator (see Application Notes 6J and 6K) as is the ability to deliver to more than one customer from a single circuit, for example into serviced offices or shared buildings (see Application Note 6L) For more in-depth details, please see the Technical Sheets.

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Summary

Liberator delivers low-cost services for Carriers who wish to provide voice and data capacity to customers using few physical circuits and where other methods are prohibitively expensive.

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 an alternate carrier's circuit**
AN-006(K)	**Least Cost Routing using Carrier Selection**
AN-006(L)	**Low-cost carrier delivery of PRI and BRI to >1 customer**