

Patapsco Communications

Patapsco helps Carriers protect their Customers

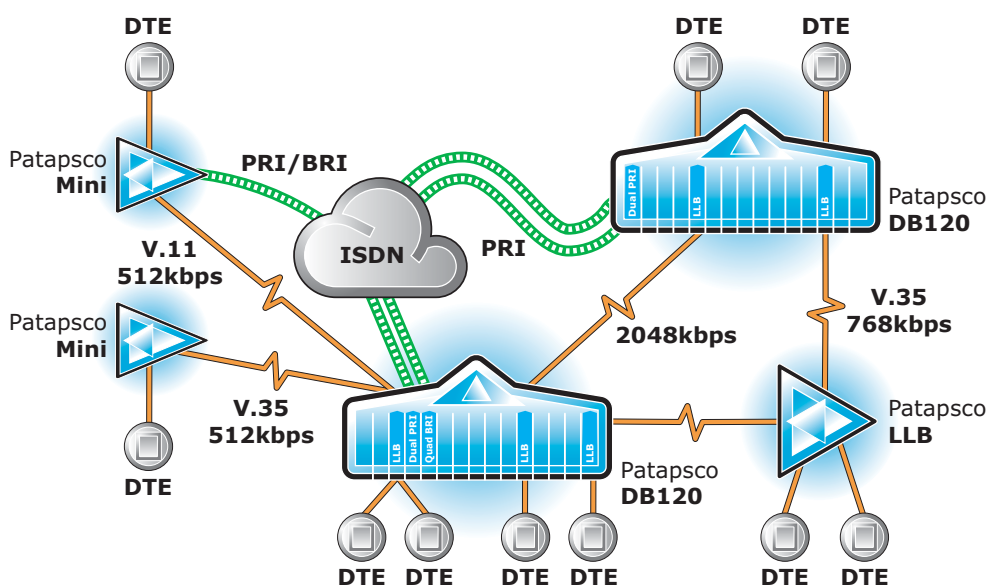
Leased Line Backup

In most countries around the world, the PTT's or Carriers are now facing competition following liberalisation of the telecommunications market. Patapsco continues to be very successful in providing Leased Line Backup for Carriers.

In this competitive environment, both incumbent and alternative Carriers are keen to provide extremely resilient networks.

Factors affecting our market with the Carriers are:

- New players often compete very strongly on price in an effort to gain market share.
- It is imperative for the Carriers to be able to differentiate their service offerings.
- Liberalisation brings Service Level Agreements (SLA's), with the potential for compensation for failure to meet service levels.
- Leased Lines are one of the most profitable products for most Carriers.
- The customers for Leased Lines tend to be larger organisations which contribute most of the profits of many Carriers.
- Even in today's modern digital networks, failures do occur. Leased Lines do fail.
- Even 99.9% availability can mean the loss of a full working day every year.
- Many large organisations spend considerable amounts on systems resilience, Business Continuity and Disaster Recovery, and for them the availability of the Wide Area Network is a key issue.



Products supporting this application:

- Databand Mini Backup
- Databand LLB
- Databand LL30
- Databand LLN
- DB120
 - LLB Cards
 - SG30 Cards
 - SGN Cards
 - SGNDS Cards
 - DPRI Cards
 - QBRI Cards
- DBManager

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- Failures to Leased Lines can occur to a single line in the local cable between the customer's building and the nearest Carrier exchange (local loop), to a group of lines if there is a major local loop cable failure, or between local and trunk exchanges, or to many lines simultaneously in the event of a major network failure.
- There have even been instances of sabotage causing major network problems.
- Many Carriers have reduced staff numbers and reacting to major failures can drain resources and take time to locate and repair.
- It is extremely rare for a customer to lose both dialled and leased line services simultaneously.
- During a Leased Line failure, both the customer and the Carrier are losing money, and these failures can result in recrimination, compensation and loss of customer loyalty for both parties.

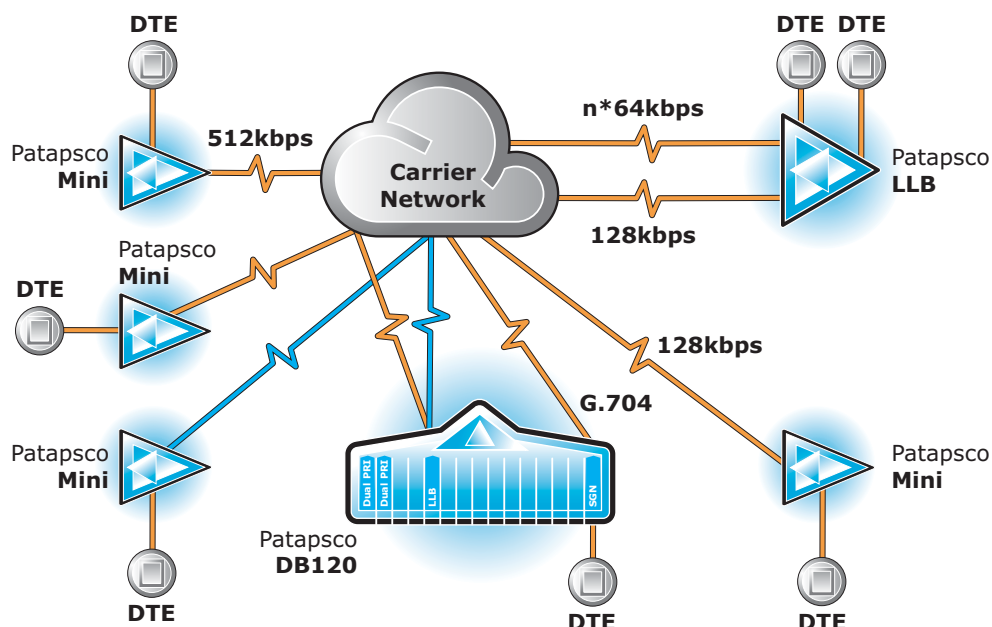
Patapsco provides a solution to all these issues, and has been successful with Carriers around the world.

The Patapsco Solution – what does it do?

In its basic form, as shown in Diagram 1, the Carrier provides a 64kbps leased line, and a Patapsco Databand Mini Backup unit is fitted between the NTU and the DTE.

When the Leased Line fails, it is automatically replaced with the same bandwidth using ISDN. The replacement bandwidth is delivered quickly and non-intrusively, meaning that the users are usually unaware that the leased line has failed, as applications sessions are maintained.

This backup can be achieved because of the true end-to-end monitoring of the leased line performance by the Patapsco Databand units. This monitoring continues during the failure so that the customer is not switched back to using the leased line until it recovers error free.



Because the backup is established so quickly, it could be that the Carrier would also be unaware that backup has occurred. For this reason, the Databand Mini is programmed to make a very short duration call to the Network Management Centre to provide an alert and details of the fault.

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The flexibility of the Databand range of backup units is unique. Using a combination of models, the Carrier can backup complex leased line networks comprising one or more data centres, and lines with a variety of speeds and interface types. This flexibility enables the Carrier and the Customer to potentially agree a single SLA for the entire network.

As networks grow, the Patapsco solution can backup full 2.048Mbps lines, and makes the best use of ISDN resources.

No company can compete with Patapsco on performance flexibility and value.

The Patapsco Solution – what are the benefits?

1. To the carrier:

- It provides a premium (assured) service which generates extra revenue. No infrastructure changes are required, and the revenue is derived from well established, already installed technology.
- It is inexpensive to provide. The cost of the Patapsco Databand units is easily justified by the additional revenue from the premium service, and the reduction in compensation to customers.
- It is very easy to install. The Databand units can be pre-configured with the final setup being carried out remotely from the NMC.
- It is easy to sell. The additional charge to the customer is usually much less than the lost business resulting from a network failure.
- It is totally transparent to customer data and can be used for any application, and with any terminal equipment.
- Users are normally unaware of the leased line problem, as the backup happens so quickly that most applications carry on working.
- It is a fully managed automatic service, and Carrier NMC staff can concentrate on directing field staff to repair the fault whilst the customer still has a full service.
- It provides full end-to-end diagnostic tools without the need for additional test equipment, giving the NMC staff visibility of the performance being experienced by the customer.
- Full statistics are generated on network failures and recoveries – as seen at the customer premise, giving objective data for the measurement of SLA's.
- It operates on a 24x7x365 basis, and unlike network staff, it never goes on holiday or is sick.
- It carries out a Self Testing routine regularly to ensure that all the backup facilities are available when really required.
- It only operates when needed – with built-in schedules to fit working patterns for each location, saving ISDN costs.
- It can be remotely invoked – for planned or scheduled leased line outages.
- It can be set to operate on a combination of very flexible leased line failure criteria, including error rates.
- Recovery criteria are just as flexible, including loop back detection.
- It can be used on a point-to-point or point-to-multipoint channelised G704 circuits.

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- The Databand units are power fail relay protected for installations where an Uninterruptible Power Supply (UPS) is not available.
- A special setting is available for Simplex services, such as satellite down-links.
- Once installed upgrades can be achieved remotely without the need for a visit, either by the NMC staff, or by Patapsco.

2. To the customer:

- It provides higher availability of the Wide Area Network.
- The customer only has to be concerned with a single supplier.
- There is a clear, simple interface between the customer and the Carrier's network.
- The customer buys a service, not a box, and does not have to worry about ordering or managing ISDN lines for backup.
- It provides guaranteed service availability, and ensures everyone has access to business critical resources, even during periods of leased line failure.
- Users remain unaware of problems, meaning that they can focus on their normal work.
- It is usually available for a slight increase in tariff, with no additional costs during failures.
- IT staff can concentrate on things within their control, resulting in better productivity.
- Maintains critical applications – keeps the business happy and the customer service is improved.
- It reduces calls to IT Helpdesks – therefore improves user service, otherwise a Helpdesk is flooded with calls reporting "the network's down".
- It is easy to justify.
- It can be used with any application as it is totally transparent to any data.
- It can be connected to any make of router or terminal equipment.
- The terminal equipment or router can be changed without affecting the link, or needing to involve the Carrier.
- It simplifies network design and management.

Summary

Leased Line Backup for Carriers has many benefits for both the Carrier and customers.

Some Carriers take the view that their Leased Line network is so reliable that backup is never justified. The feedback to us from their customers is that while network reliability is improving, so are the demands from Users for non-stop operation.

The globalisation of markets is stretching the business day and down-time represents lost revenue.

Patapsco has the highest reputation with its Carrier customers for performance, reliability and flexibility. Our priority is to maintain and spread this reputation.