Solution Note

Lucent Technologies
Bell Labs Innovations

Dial-up Solutions for Backup and Backup & Overflow Networks

Analysis

Many organizations use leased lines between major facilities, and for a good reason. Leased lines are a cost effective way to handle a high volume of voice video and data traffic. They are generally dependable and the regular monthly cost in easy to budget.

But leased lines have two major limitations. First, periods of traffic saturated the available bandwidth, causing congestion and delays. If the leased line is fixed correctly, then a second leased line of any capacity is overkill. In fact, normal (non-peak) traffic may be well below the data rate of the existing line.

The second limitation is the lack of redundancy with a single leased line. For mission-critical applications, which often depend on leased lines, this can be a serious limitation with devastating consequences.

Separate provisions that use dial-up lines can provide the necessary backup and overflow bandwidth inexpensively and transparently. Unfortunately, integrating switched backup-and-overflow with the existing network can be a challenge. Most routers are not equipped to handle backup and overflow cost-effectively and most inverse multiplexers cannot be used to supplement a leased line transparently.

Solution

What is needed is a capable, versatile, and affordable system that integrates seamlessly with leased lines and uses Switched Services to provide dial-up backup and/or backup and overflow bandwidth-on-demand. Or a system with a multichannel T1/primary rate interface (PRI) link can enable the leased line to manage traffic more effectively during peak periods by giving more channels to higher priority needs and possibly eliminating the need for dial-up provisions.

The Lucent Multiband MAX™ 3000 and Multiband MAX 6000 inverse multiplexers with dynamic bandwidth management are capable, versatile, and affordable network access system. These systems support dial-up bandwidth-on-demand or multichannel communications to provide backup and backup and overflow for mission-critical WAN applications.

The channelized T1/PRI model supports T1/PRI conversion, along with drop-and-insert to yield optimal use of all 24 channels for voice, video, and data communications. In many situations, merely allocating more channels to priority traffic during peak periods alleviates any problems caused by overflow.

The multi-line Multiband MAX system provides both backup and backup and overflow bandwidth-on-demand for voice/data leased line applications. The WAN ports can be used in any combination of primary (leased) and secondary (dial-up) lines. The dial-up bandwidth can be programmed for on-demand or time-of-day activation.

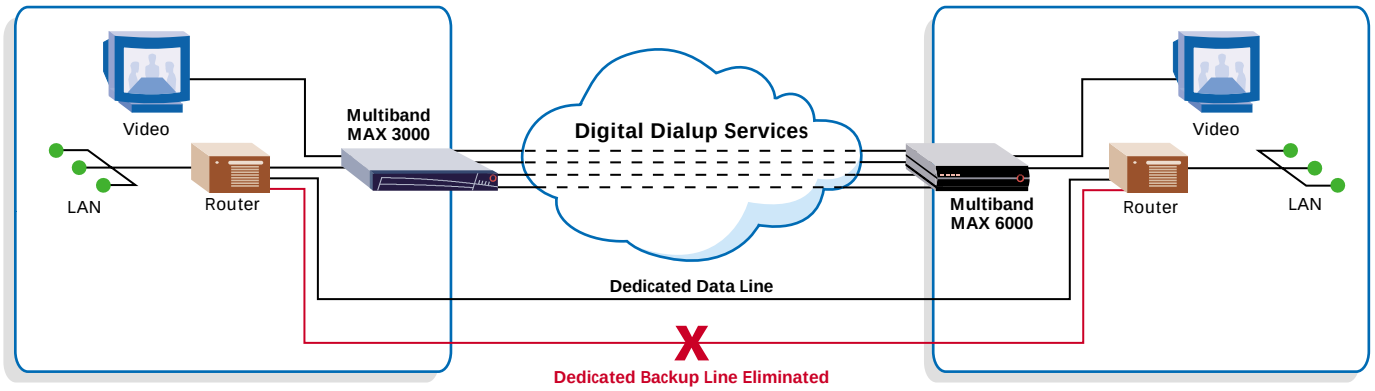
The multiple device ports on all models of the Multiband MAX 3000 and Multiband MAX 6000 can interface to routers, videoconferencing equipment and even a PBX to maximize bandwidth utilization. All devices can communicate with different destinations, if desired, including alternate routes. Comprehensive local/remote management, loopback tests and other diagnostics simplify operation and minimize the need for an on-site technician at all locations.

Advantages

- The dial-up lines combine to furnish the necessary backup/overflow bandwidth cost effectively
- Dial-up bandwidth is fully programmable for automatic on-demand or time-of-day activation
- The multiple WAN ports can be used in a optimal mix of primary (leased) and secondary (dial-up) backup/overflow lines
- Multiple device ports on the Multiband MAX 3000 can interface to routers, videoconferencing equipment and even a PBX to maximize utilization of backup/overflow bandwidth
- Sophisticated dialing options permit calls from different devices to different destinations, which allows for alternate routes to other facilities in a mesh topology

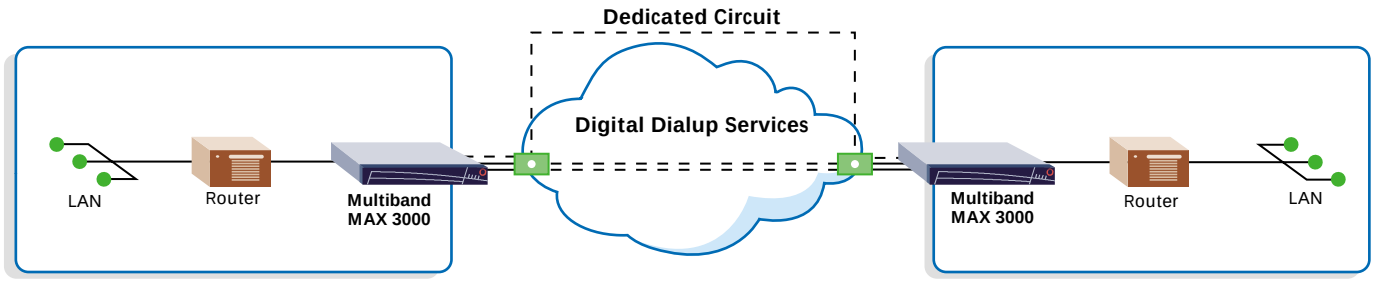
- In-band remote management capability means there is no need for an on-site technician
- Comprehensive local/remote loopback tests and other diagnostics simplify troubleshooting
- Standard NT-1 and optional Channel Service Unit (CSU) line interfaces eliminate the need and expense of external units
- Certification with all popular switches and major carriers assures operation worldwide
- Flexible and Future-proof

Dial Backup for Dedicated Data Circuits



The Multiband MAX gives businesses a cost effective alternative to excess leased lines by connecting locations through dial-up services

Backup & Overflow for Dedicated Data Circuits



The Multiband MAX 3000 also gives businesses a cost effective solution for additional bandwidth, during peak traffic needs, through dial-up services

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