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**SUMMARY**

Broadband over power lines (BPL) is a technology that allows the use of existing wiring infrastructure to transmit data, video, and VoIP traffic. BPL supports a variety of broadband applications, including LAN, high-speed Internet, splash pages, video surveillance, digital signage, two-way video conferencing, VoIP telephony, point-of-sale systems, and energy and building management. This technology is ideal for carriers, service providers, ISPs, WISPs, CLECs, as well as the hospitality, healthcare, education, government, military and public safety industries.

Providing data traffic to any building that is not currently wired for data can be a daunting task. Installing new high-speed network cable can be expensive and older buildings are wired with twisted pair cable, not Cat5 or fiber. BPL supports multiple data solutions and voice/video, using existing electrical outlets. These installations combine wire-line and/or wireless last-mile networks to distribute bandwidth within a variety of large office buildings, hotels and multidwelling residences.

**FEATURES**

- Incorporates existing infrastructure
- Provides a true voice, video and data backbone
- Offers raw data rates of up to 15 Mbps
- Supports 10Base-T Ethernet interface
- Provides a secure wired connection using 56-bit DES encryption
- Supports up to 300 users per gateway
- Uses PLC network management
- Improves wireless coverage by adding Wi-Fi access points
- Includes VLAN support

**BENEFITS**

- Rapid installation without construction or disruption
- Secure connections with encrypted, protected data
- Flexible PLC platform to support any device/application using standard Internet protocol
- Remote monitoring and management capability
- Seamless integration with any broadband signal, including DSL, T1, E1, cable, satellite, or wireless
- Ability to add customers with no truck role
- Significant cost saving

**REAL WORLD EXAMPLES**

**Situation:** An educational facility wanted to outfit its dorms and buildings with the latest technology to enrich the learning experience of its students and to keep them safe.

**Problem:** The walls and ceilings of the buildings were constructed of concrete and no wiring blueprints existed.

**Solution:** The school installed a broadband power line solution and deployed data networking and a secure video surveillance system.

**Situation:** An ISP was tasked with providing broadband connectivity throughout a multidwelling unit (MDU).

**Problem:** The ISP's customer did not want his tenants inconvenienced by a major installation project and he had concerns about cost.

**Solution:** The ISP installed a cost-effective BPL system quickly and without disruption to the community.

**ADDITIONAL CONSIDERATIONS**

- Have you done a site survey prior to system design?
- What does the floor plan cover: walls, hallways, floor levels?
- What is the electrical diagram of the existing structure?
- What are the bandwidth requirements per user?
- Does the connection to electrical infrastructure require licensed electricians to conform with national and local code standards?
- How many buildings are to be served?

**PRODUCTS**

- Broadband over power line network interfaces
- Wireless broadband radios
- Ethernet switches
- Routers
- Network and bandwidth management
- Antennas
- Premise cable or wire
- Circuit test equipment
- Tone and probe tool
- Enclosures
- Security cameras

**Knowledge Solutions**

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