OVERVIEW

The LPS-20xR is an outdoor/low profile span-powered Access Point (AP). The LPS-300C Central Office (CO) power module provides span powering to the LPS-20x. Each LPS-300 can power two individual LPS-20xs. There are currently two types of APs available: the LPS-20xR L1A Outdoor series and the LPS-20xR L1B Low Profile series units.

Telco carriers in the Wireless Fidelity (Wi-Fi®) market can create a carrier class access point with the following features:

- Span powering over symmetric or asymmetric, rate adaptive Digital Subscriber Loop (DSL) from any Digital Subscriber Line Access Multiplexer (DSLAM) supporting xDSL transport
- Hardened outdoor packaging
- Roadmap support for class Quality of Service (QoS) in the Asynchronous Transfer Mode (ATM) DSL backhaul
- Simple Network Management Protocol (SNMP) Management Information Base (MIB), allowing integration into their management system
- Product family support for fatter pipe, NxDS1 backhaul
- Low first-cost deployment from remote cabinet DSLAM and Digital Loop Carrier (DLC) platforms
- NEBS and OSMINE compliant

Wi-Fi deployment fits into the overall DSLAM broadband services market. It allows Telco carriers to use their existing infrastructure to easily be part of the public Wi-Fi arena. The LPS-20x is a simple end device that, with the exception of the span powering, uses standards based interfaces. This permits it to be deployed directly from existing DSLAM equipment without the need to introduce new CO ATM switching elements into the Telco carrier's network.

The two-wire dry xDSL interface from the DSLAM is routed through a power shelf co-located in the CO (Figure 1). The LPS-300C located in the power shelf does not regenerate the xDSL signal; rather, it superimposes a Class A2, DC powering voltage on the outside plant (OSP) interface. This is a standard xDSL signal since it comes from a DSLAM. Therefore, there is no proprietary signal added to the stream.

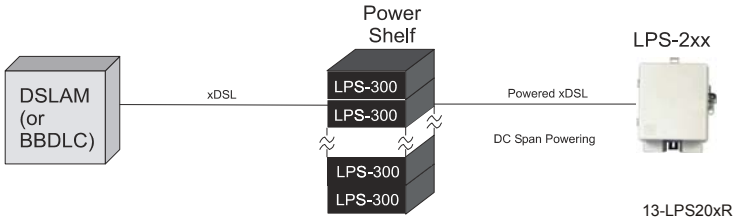

Figure 1. CO-Based DSLAM Deployment

DESCRIPTION

WI-FI CO-BASED DSLAM DEPLOYMENT

Using existing DSLAMs, a G.SHDSL or ADSL pair is routed to the LPS-300C power card in the HMS-318 power shelf (Figure 2). The LPS-300C is a 3192 double-wide card that supports two powered xDSL pairs per module. A total of 11 LPS-300C cards can be installed in the UL-60950 compliant HMS-318 power shelf for a total of 22 span-powered pairs. The LPS-300C, without affecting the xDSL signal, adds power to the span to operate the LPS-20x.

The access point converts the ATM data coming in on the span and bridges it an Ethernet transparent bridge broadcasting via 802.11b Wi-Fi standards to any client who has a wireless Network Interface Card (NIC).

The Access Controller forwards to the RADIUS Server authentication requests, then the RADIUS Server authenticates the user. Once authenticated, the user has access to the internet. The Access Server tracks the connection time for billing purposes. Some applications may include the replacement of pay phones with LPS-20xs to create a wireless public hotspot.

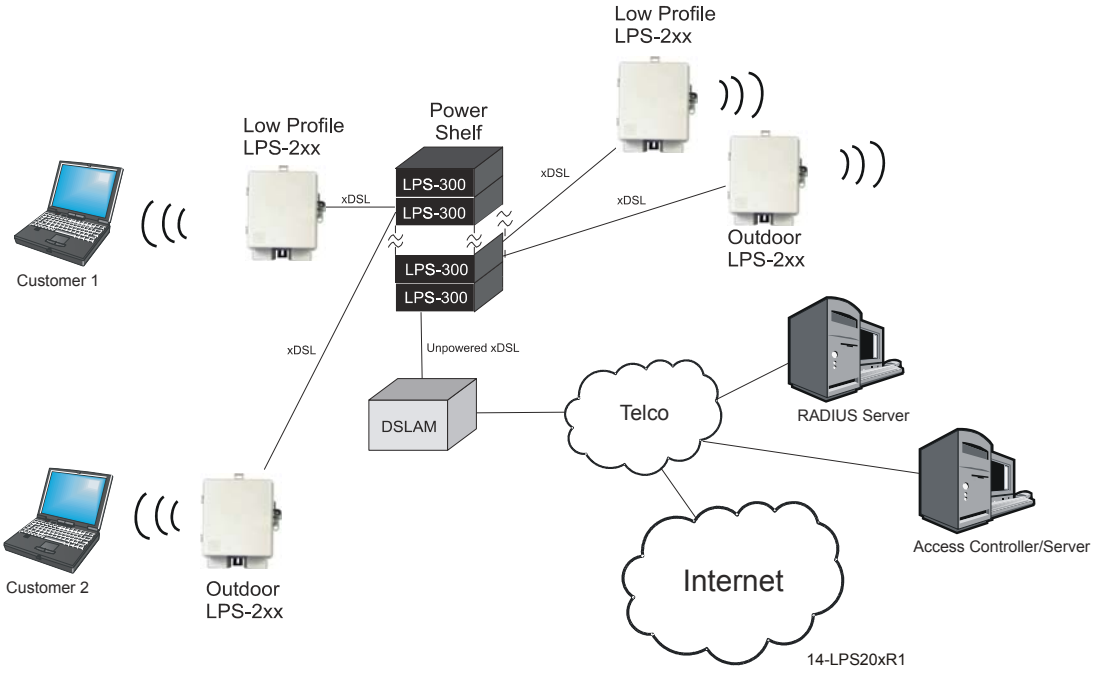

Figure 2. Wi-Fi CO-Based DSLAM Deployment