

Abstracts

Ka band satellite system architecture for local loop Internet access

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A Ka-band satellite system architecture that provides wide-band local loop access to consumers and small businesses is described. It is based on the phased deployment of simple, low cost bent-pipe GEO satellites providing highly directive spot beam coverage over the continental United States. Each spot beam covers a desired service area, usually not well served by terrestrial communications systems. Internet Service Providers (ISP) use hub antennas within the spot beams to provide two-way Internet connections to the end users. The end users access the ISP hub via the GEO satellite using USATs (Ultra-Small Antenna Terminals). The downstream data rate can be as high as 90 Mbps, and the upstream rates vary from 64 kbps to as high as 2.048 Mbps.

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