



## Applications for 39 GHz Networking

### *Broadband Connectivity in a Campus Environment*

#### Key Benefits of 39 GHz Broadband Wireless Solutions:

- **Cost and capital equipment** – Equipment is carrier class, readily available and offers unsurpassed price/value relationships.
- **Fast to install** –39 GHz licensed transmission capacity can be available within a few days of your request.
- **Licensed** –offers the protection of interference-free operation.

#### Business Requirements

Most organizations situated in a campus environment have broadband connectivity requirements between at least two buildings. This need is typically for a high-speed connection between routers/LANs, often mixed with some voice requirements and sometimes video and/or security applications as well.

As with most requirements these days, this need is immediate – often the sooner the better – and must be done in a cost efficient manner.

A popular way to meet the inter-building connectivity requirements is by laying fiber optic cable. Burying fiber cable is expensive, takes planning and execution time, and is disruptive. The total cost to bring fiber into a building can easily exceed \$100,000 and often takes 6-9 months. Alternatively, telco facilities could be leased to serve the connectivity needs.

#### Solution

39 GHz fixed wireless broadband links are an excellent alternative to fiber in a campus environment. The solution simply requires the installation of a radio at each site - connected via a line of sight path from the rooftops - that is then connected to the two communicating devices. There are both financial and operational benefits to this alternative:

#### Financial Benefits

- Equipment is reasonably priced. The total cost of a 45 Mbps to 100 Mbps link, including equipment, installation, etc., is usually between \$25,000 and \$35,000. A 155 Mbps OC 3 link is less than \$50,000. These costs are typically 50% lower than the cost of using fiber.



- Secondary market equipment is readily available. You may also consider using equipment from the secondary market – there is an abundance of new equipment being sold in secondary channels at tremendous discounts. The cost of a broadband link can be reduced to under \$15,000.
- No recurring costs. There are no monthly recurring costs as are associated with other network facilities. The savings over two years could easily pay for the equipment.

### **Operational Benefits**

Operational benefits can be realized in both the installation and ongoing operations of the systems.

- The entire implementation process can be done in two to four weeks, and sometimes it can be done in a matter of days. The installation is straightforward – and non-disruptive to those using the facilities.
- Increased bandwidth is immediately available. Leased facilities are typically much slower than internal LANs and that bottleneck is avoided.
- Network redundancy can be easily achieved as fixed wireless provides fast secure and inexpensive protection for networking needs.
- Radio systems can be easily integrated into your existing management systems using standard protocols. Monitoring a 39 GHz link is the same as monitoring any other component of your network.
- Protection from interference. The use of 39 GHz links means the system is protected from the interference of other systems, further decreasing the chances of trouble.
- Radio systems can also be moved. As requirements change, and bandwidth needs to be moved, a broadband link can be reinstalled between the two locations as simply as it was initially put in.

*The partnership of First Avenue Networks and Comsearch is designed to help you through the process of implementing broadband wireless networking. Please contact us at [customersupport@comsearch.com](mailto:customersupport@comsearch.com) or at **800.318.1234** for more information.*