White Paper

Multi-Tenant Unit (MTU) marketplace summary

Solutions marketing

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Executive summary

The multi-tenant unit (MTU) service delivery model is attractive to service providers because it is an economical way to reach a group of customers and sell enhanced services. MTUs can now offer service, flexibility, and functionality close to their tenants, and even tailor service bundles to the needs of the tenants within a particular building or group of buildings.

Technology advancements allow small and medium-sized businesses (SMBs) to have networks that are as robust as some of the largest corporations. Integrated services digital network (ISDN) and dial-up connectivity solutions are becoming a thing of the past, as local exchange carriers (LECs), competitive LECs (CLECs), service providers, Internet service providers (ISPs), real estate investment trusts (REITs), and individual business owners are differentiating their services and buildings with flexible and open high-speed networks. In the past, only the larger corporations could afford to have high-speed access, leaving the SMBs further disadvantaged in the marketplace. MTUs offer SMBs high-speed connectivity, allowing them to keep in touch with their customers and associates around the globe.

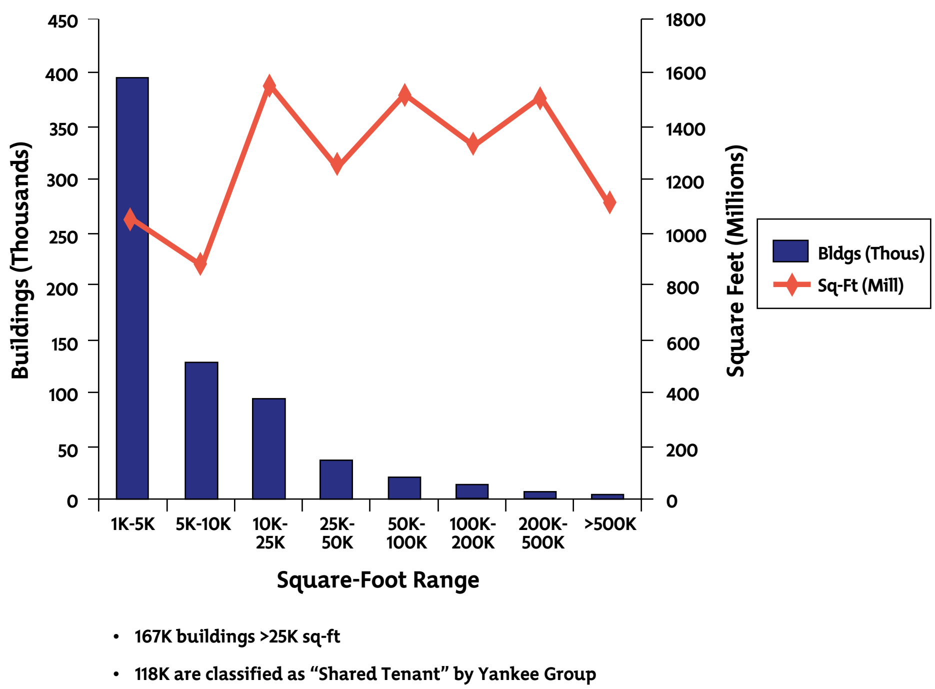

Figure 1. MTU—number of buildings vs. square feet

Introduction

The broadband market is developing areas of focus once ignored by traditional service providers. One such area is the MTU. A new industry of specialized equipment and service providers has surfaced to fill the demand for high-speed Internet and other advanced services.

In the past, typical access for MTU facilities consisted of separate physical connections from each tenant to their specified provider. The aggregation point was in the central office, and the tenants' networks were completely separate. The advent of the MTU shifts this aggregation point from the central office to the MTU.

Service delivery can often be accomplished using in-building wiring, eliminating an investment for the service provider. However, when an upgrade to the building wiring is required, MTU owners reap the benefit.

Service providers can expand their footprint on a building-by-building basis, rather than on an individual customer basis, reducing selling expenses and equipment investment.

Advantages to MTU owners include the ability to attract and retain tenants through the offering of broadband services. Usually, there is no capital investment required by the owners, creating a low-risk business opportunity to increase revenue through the sale or lease of building risers, as well as participation in service revenue.

Market research

According to the U.S. Department of Energy (DOE), there are 4.5 million commercial properties. Of these 705,000 are classified as "office space." The remaining properties consist of factories warehouses and other commercial space. The identified market sweet spot is mid-sized to large office properties. There are 167,000 buildings with more than 25,000 square feet (see Figure 1)[1] and, of these, the Yankee Group has classified 118,000 as "shared tenant" office space.[2]

Shared tenant space is key because these businesses need high speed access but usually do not have the internal network staff to create and manage a corporate network. Major corporations usually own their own building and manage their own networks.

The Real Estate Investment trusts (REITS) offer a centralized point of property ownership and management. The REITS focus on MTU properties greater than 50 thousand square feet and have a greater than 15% ownership in this segment[3]. Smaller properties typically are privately held or are not centrally owned and managed by a large property management company or REIT.

In a market segment as vast as MTU, it is critical to focus first on the proper horizontal opportunities, and on vertical markets second. The concept of shared tenant space is unique to the MTU segment, because there are multiple business tenants sharing a single property. Each of these tenants has the same common core requirement of high-speed access, and typically has no access to a single end-to-end solution. Individual tenant ownership of the infrastructure is cost-prohibitive, making a shared-revenue approach favorable for property owners as well as tenants. In addition to the tenants' requirements, property owners are constantly looking for ways to improve tenant retention and thus reduce their 9 to 10 percent yearly vacancy figures.

Global view

The data gathered as of the writing of this draft is for the U.S. only. However, we expect to find similar drivers for broadband in Europe, the Middle East, and Africa (EMEA), the Caribbean and Latin America (CALA) and the Asia Pacific region. In some European countries, there is a pattern of apartment ownership rather then renting. In some European cites, the deployment of broadband technologies that require construction to deploy fiber would be difficult, if not impossible. In the Asia Pacific region, the expected opportunity is more like that in the U.S.

Business approach and alliances

The MTU market is the most competitive of the new market segments. A wide range of service providers, hardware vendors, and property owners are busy carving out their niche. At the same time, new competitors are continually emerging across the whole MTU market.

The MTU owner can be a REIT, corporation, partnership, or individual. There may also be management companies involved in the operation of a property or properties. Some players in the market are competitors as well as potential customers. Some of the providers manufacture their own equipment for part of the solution, and purchase the rest from other equipment vendors.

The market is segmented into wholesale and retail (Figure 1). Within this segments there are several approaches.[2]

1. **Retail—fully outsourced.** This strategy involves expanding the network footprint. These service providers do not own their own

[1] U.S. Department of Energy (DOE), 1995 survey, http://www.doe.gov.

[2] Yankee Group, May 2000, Vol. 1, No. 7, *MTU Broadband Service Providers*, pp 2 and 4.

[3] Dain-Rauscher-Wessels, June 2000, *Bullish on Broadband*, pp 113-114.

equipment, nor can they provide value-added services in-house.

2. **Retail—owned and leased.** This strategy involves investment in network infrastructure. These service providers lease local access facilities, but own their own switching and routing gear.

3. **Retail—fully owned.** These service providers own their own access facilities, all switching and routing gear, and their own IP network.

4. **Wholesale—fully outsourced.** These service providers own switching gear in each metropolitan area they serve, but do not own local access or IP networks.

5. **Wholesale—fully owned.** These service providers own local access and backbone infrastructure, but only sell to other service providers.

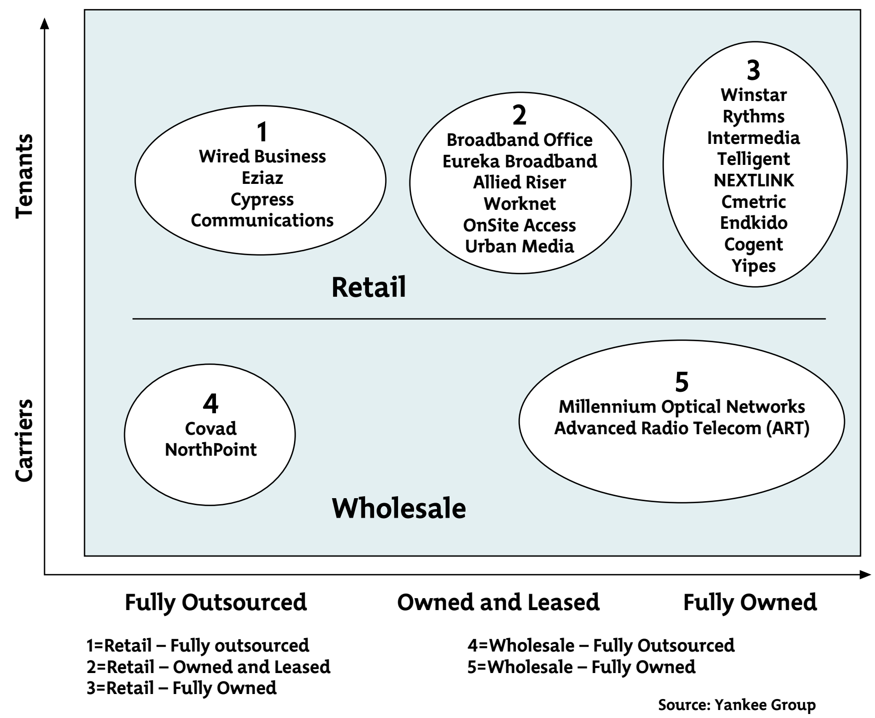

Figure 2. Market segmentation and positioning

Potential Solutions

The graph below shows that solutions must include copper, which is the predominant access media.

In-Stat's wiring forecast for the MHU market shows copper as the leading infrastructure from 2000 through 2004. During the period, fiber will gain ground, but wireless is expected to increase the most.

See the forecast in the chart at right.[4]

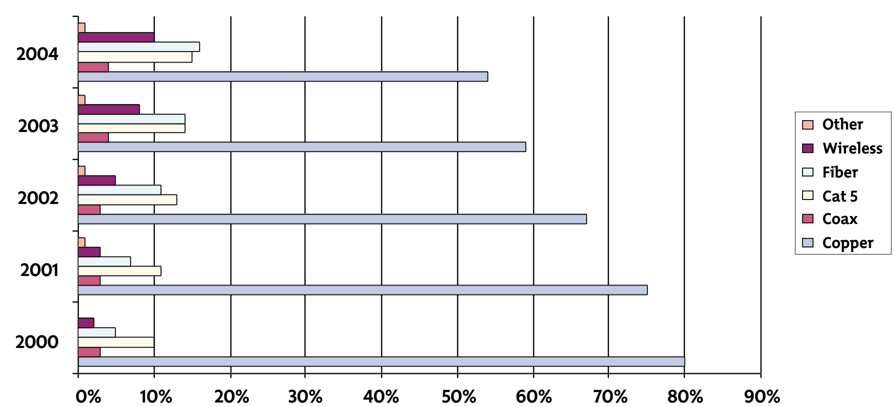

Figure 3. MTU wiring forecast

[4] Cahners, May 2000, *Networked Neighborhood*, p 43.

The reference architecture will include—but will not be limited to—the following solutions:

Architecture	Wiring
Digital subscriber line (DSL)	CAT3
Optical Ethernet	CAT5/Fiber
Wireless	Transport

Conclusions

The MTU market is the emerging market for next-generation services such as e-commerce, management, and web hosting/design. Larger building complexes, business owners, and building owners will provide the needed economy of scale. Marketing and sales should be targeted to large REITS or other owners that control access to a large number of properties.

The service provider is best positioned to deliver equipment to the buildings. Leveraging this, there is more focus on marketing equipment to the provider and forming partnership relationships.

The sweet spot in the MTU market is office buildings with small to medium-sized business tenants.

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