

# **Multi-Dwelling Unit (MDU) marketplace summary**

## **Solutions marketing**

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## Introduction

The MDU is a residential structure, as compared to a multi-tenant unit (MTU), which is inhabited by businesses. The MDU market has gained the attention of service providers because it provides a densely concentrated service area. This can greatly reduce the customer acquisition cost for the service provider. It has also gained the attention of property owners as a method of generating additional revenue through leasing or selling the access right-of-way to service providers. Finally, it is a marketing tool for acquiring new tenants as well as a retention tool to decrease turnover.

## Executive summary

The multi-dwelling unit (MDU) market consists of 20 million plus apartments. This market represents an opportunity for enhanced services such as video, applications including smart home services, and high-speed access. The total market is \$20 billion including all telephony services: local, long distance and Internet.<sup>1</sup> The opportunity in the near future is for service providers to provide broadband and enhanced services such as applications, firewalls, and Quality of Service (QoS) differentiation. According to Cahners In-Stat, the expected incremental opportunity group is approximate \$780 million through 2004.<sup>2</sup>

## Definition

### Multi-dwelling unit (MDU)

MDUs include apartment buildings, garden apartments, apartment complexes, and townhouses, regardless of whether they are owned or rented by the occupants.

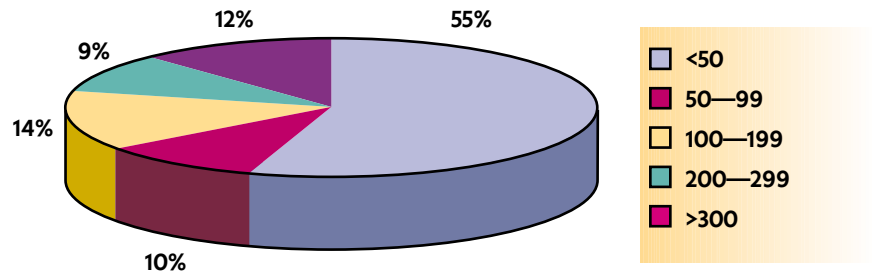
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<sup>1</sup> Yankee Group, Nov. 1999, Vol. 16, No. 19, *Residential MDUs*, pp 1, 3, and 6.

<sup>2</sup> Cahners, May 2000, *Network Neighborhood*, pp 37, 43, and 37.

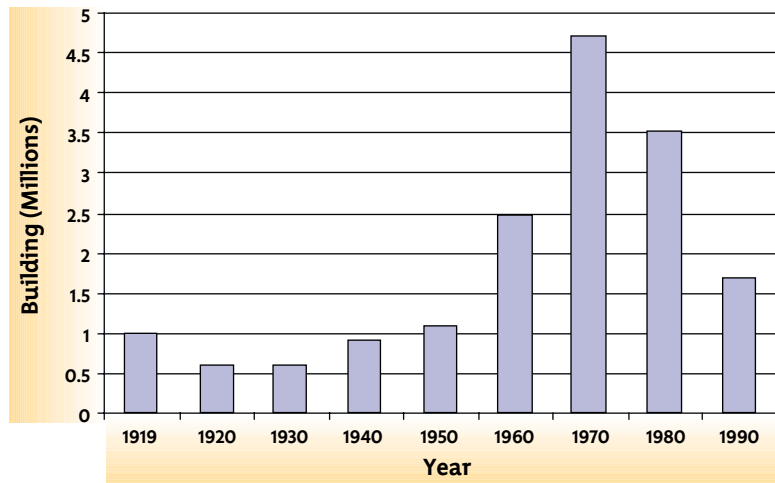
## Market Research

The market research presented in this paper is based on U.S. Census data and Cahners In-Stat information.



**Figure 1. Rental properties by distribution of number of units<sup>3</sup>**

The target market for service providers will be those MDUs with more than 50 units. While this segment represents slightly less than half of the number of MDUs, economies of scale dictate that larger properties should be the target market.



**Figure 2. Apartments by year built<sup>4</sup>**

Since most apartments were built before the Category 5 (CAT5) wiring performance standard was in place, CAT3 is the wiring that is most prevalent.<sup>5</sup> New wire runs are labor-intensive and increase startup costs, so that working within this infrastructure will be key for the service provider.

<sup>2</sup> Cahners, May 2000, *Network Neighborhood*, pp 37, 43, and 37.

<sup>3</sup> Dain-Rauscher-Wessels, June 2000, *Bullish on Broadband*, p 123.

<sup>4</sup> U.S. Census Bureau, 1996, <http://www.census.gov>.

<sup>5</sup> Cahners, May 2000, *Network Neighborhood*, pp 37, 43, and 37.

Market Research—continued

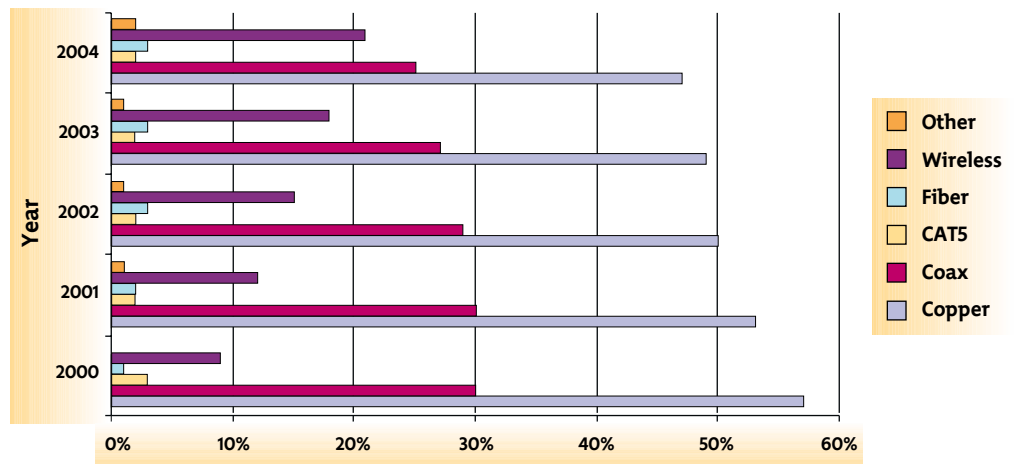


Figure 3. MDU wiring forecast

In-Stat’s wiring forecast for the MDU 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.

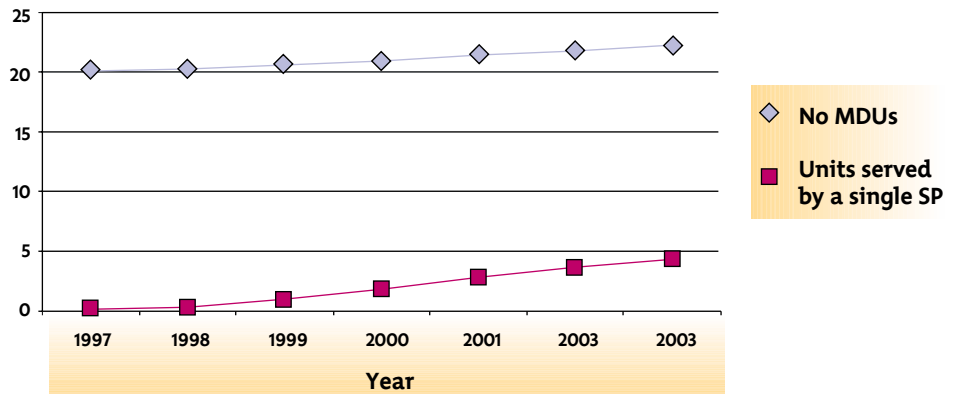
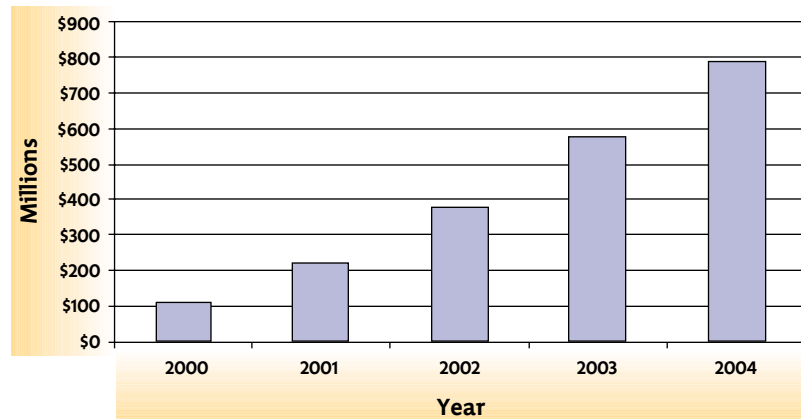


Figure 4. Residential MDU forecast

The growth opportunity for service providers is not only in the growth of MDUs only. The key is the increase in households with a choice of local services, and in the increase in the competitive local exchange carrier (CLEC) take rate.<sup>6</sup>

<sup>6</sup> Yankee Group, Nov. 1999, Vol. 16, No. 19, *Residential MDUs*, pp 1, 3, and 6.

*Market Research—continued*



*Figure 5. MDU revenue forecast*

The market is projected by Cahners In-Stat to grow from under \$110 million in 2000 to almost \$800 million by 2004.<sup>7</sup> New services will play an important role in market growth. One new area is “smart home services,” which includes the following:

<b>Entertainment</b>	<b>Telephony</b>	<b>Home management/ control</b>	<b>Information/ computing</b>
Audio/video on demand Gaming VCR/TV/ DVD control	Call manager IP telephony	HVAC Security/event notification Lighting/electric Appliances Remote meter reading	Desktop/mobile PC Printer/fax control PDA/web appliances Web portal customization

<sup>7</sup> Cahners, May 2000, *Network Neighborhood*, pp 37, 43, and 37.

## Business approach and alliances

MDUs are owned by a variety of entities: corporations, partnerships, real estate investment trusts (REITs), and individuals. The most efficient approach is to win those entities that own or control a large number of 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 leading MDU service providers are listed in the table below.<sup>8</sup>

Service Provider	Services				Media					Penetration
	Video	Dialtone	DSL	I'Net	Coax	Fiber	HFC	CAT5	Wireless	Bldg/Units Served
BRIX COMM. (IDTC)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	110,000 units
BROADBANDNOW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1.3 Mil units
CAIS	No	No	Yes	Yes	No	No	No	Yes	No	215,000 units
CASTLE CABLE	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	125,000 units
DARWIN/INTERQUEST	No	Yes	Yes	Yes	No	No	No	No	Yes	170,000 units
DUALSTAR COMM.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	180,000 units
FIRST ROCHDALE	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	650 Bldgs.
NEXWAVE ENTERTAIN.	Yes	No	No	Yes	Yes	No	No	No	No	150,000 units

<sup>8</sup> Nortel Networks, May 2000, eCommerce Launch, *Executive Overview* presentation.

## Global view

In some European countries, there is a pattern of apartment ownership rather than renting. In some European cities, the deployment of broadband technologies that require construction to deploy fiber would be difficult if not impossible.

In Asia Pacific, the expected opportunity is more like that in the U.S.

## Potential solutions

Any proposed solutions must live within the existing infrastructure. New construction of facilities for existing MDUs is difficult at best, and prohibited by the operator in most situations. Only in greenfield opportunities can construction of high-speed infrastructure, such as fiber, be considered.

The reference architecture will include the following solutions:

Architecture	Wiring
Digital subscriber line (DSL)	CAT3
Cable	Coax/hybrid fiber coax (HFC)
Ethernet	CAT5
Wireless	Transport

## Conclusions

The MDU market has a total value of \$20 billion, with an incremental opportunity of \$780 million through 2004. The target opportunity is enhanced services that differentiate a service provider beyond basic high-speed Internet access. Service providers must work within the existing infrastructure—mostly CAT3 copper. Wireless will also be an attractive access method because new construction is unlikely to be permitted. Larger apartment complexes will provide the needed economy of scale.





**In the United States:**

**Nortel Networks**

4006 Hwy. 54  
P.O. Box 13010  
RTP, NC 27709

**In Canada:**

**Nortel Networks Limited**

8200 Dixie Road  
Suite 100  
Brampton, Ontario  
L6T 5P6

**In Europe:**

**Nortel Networks**

Maidenhead Office Pk.  
Westacott Way  
Maidenhead Berkshire  
SL6 3QH  
Tel: +44 1628 432 000  
Fax: +44 1628 437 666

**In Asia:**

**Nortel Networks**

**Singapore Pre Ltd**

151 Lorong Chuan  
#02-01  
New Tech Park  
Singapore, 556741  
Tel: 65 287-2877

**In Australia:**

**Nortel Networks**

**Australia Pty Ltd**

380 St. Kilda Rd.  
5th/6th Fl.  
Melbourne, Victoria  
3004  
Tel: 613 9206 4646

For more information, contact your Nortel Networks representative. Call 1-800-4 NORTEL (1-800-466-7835) in North America or 1-506-674-5470 outside North America.

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