

Market Segmentation:

Using Tiered Internet Access Services to Enrich Your Bottom Line

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**CONNECTION TYPE BY MARKET
TOP 50 LOCAL MARKETS
Q4 2003**

SOURCE: COMSCORE NETWORKS

TOP 10 BROADBAND MARKETS			TOP 10 NARROWBAND MARKETS		
	BROADBAND	NARROWBAND		NARROWBAND	BROADBAND
San Diego	52%	48%	Albuquerque-Santa Fe	76%	24%
Boston	50%	50%	Grand Rapids	70%	30%
New York	49%	51%	Harrisburg, PA	70%	30%
Providence, RI	47%	53%	Indianapolis	70%	30%
Kansas City	46%	54%	Sacramento-Stockton	69%	31%
Detroit	45%	55%	Birmingham	68%	32%
Tampa-St. Pete	45%	55%	Nashville	68%	32%
Orlando	44%	56%	Louisville	67%	33%
San Fran-Oak-SJ	44%	56%	Memphis	66%	34%
Los Angeles	44%	56%	St. Louis	66%	34%

Imagine being able to offer a tiered service offering that dramatically boosts your monthly service revenue. If you are a service provider who offers Internet access, you have the opportunity to generate more monthly revenue – much of which can come from your existing customers! This same tiered offering can also help you become more competitive by allowing you to offer subscribers more choices and compelling services that will attract new customers.

Let’s look at today’s most common Internet services – dial-up access that ranges from free for basic 56K speeds to \$24 per month for software-optimized connectivity, and DSL or cable broadband access that typically costs \$30 to \$40 per month. According to most industry estimates, the number of dial-up subscribers still outnumbers broadband subscribers – indicating that while a significant number of subscribers want faster Internet access, they aren’t willing or able to pay the higher price.

According to comScore, an ISP tracking service, consumer broadband usage comprises only about 33% of

the 150 million total US Internet connections – but not surprisingly, broadband usage is closer to half in the country’s largest markets¹. The table below details broadband versus narrowband connection types in the top 10 markets for each connection type.

comScore also noted that more than one in four Internet users intend to switch ISPs in the next six months, with the primary driver being a move to broadband. The second most common reason for switching ISPs was price.

Another market researcher, Parks Associates, supports this assertion. Their March 2004 report, entitled *Trends in U.S. Broadband Adoption*, shows that dial-up subscribers have slowed their migration to broadband since 2002 – primarily due to price.

Figure 1 shows a general breakdown of today’s Internet service subscribers using dial-up versus broadband, depicting an average of 60% dial-up and 40% broadband subscribers.

1. comScore Press release dated 3/10/04, “Broadband Usage Poised to Eclipse Narrowband in Largest U.S. Markets”

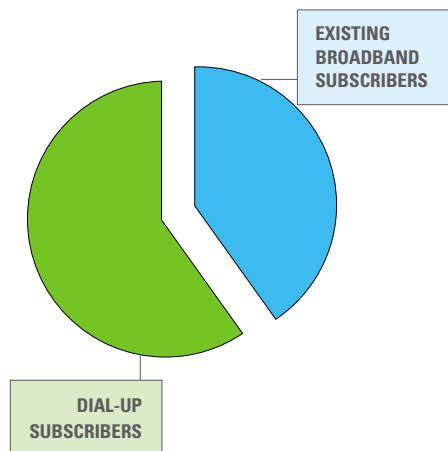


Figure 1: Existing Internet Service Subscribers

Clearly, a significant revenue generation opportunity beckons for service providers: offer high-speed, always on Internet access at a price point that falls between dial-up and today's broadband service. While the cost of today's customer-located DSL modems may not make this fiscally attractive, Netopia offers an extremely cost-effective, yet full-featured ADSL modem that makes it not only possible, but profitable.

From the world's smallest ADSL pocket gateway for single PCs to Wi-Fi enabled gateways that support multiple networked devices, Netopia delivers a comprehensive line-up of solutions that enable service providers to roll out lucrative tiered service offerings.

Broadband Market Segments

As illustrated above, today's Internet access market generally falls into two segments: low-cost, slow dial-up access, and higher cost high-speed access. However, a distinct and significant opportunity exists for Internet service providers to offer high speed, always-on Internet service at a price point that falls between these two segments, as well as offering a premium service that sits above existing high-speed offerings. This results in three distinct market segments for broadband access:

1. **Low End, Single PC Subscribers.** Highly cost sensitive, these subscribers tend to be technology

shy. Unwilling or unable to pay the higher costs associated with high-speed access, they rely on dial-up services in order to perform routine online tasks such as e-mail, surfing the Internet, or paying bills. They are frustrated by the slow speeds inherent with dial-up access, but the significantly higher cost of broadband is too great a barrier for them to move up.

2. **Existing Broadband Subscribers.** These subscribers are already enjoying the benefits of high-speed Internet access and are able to afford the higher costs associated with broadband. They have become accustomed to the higher speeds and "always on" state of their connection, as well as the additional applications and benefits they enjoy with high-speed connectivity, such as music downloads, online gaming, multimedia, superior parental controls features and faster surfing. They are typically served with a standard DSL or cable modem installed at their house, but may also have a router installed to connect multiple PCs.
3. **Wi-Fi and Advanced Feature Subscribers.** These subscribers consider broadband a necessity, and are willing to pay a higher monthly fee for technology and features that they believe have value such as integrated Wi-Fi networking, sophisticated firewall and security features, or superior parental controls features. This segment also represents remote workers who require a secure connection to a corporate office via a Virtual Private Network (VPN).

Revenue Opportunities

Market Segment One

The first market segment – the cost-sensitive subscriber – can become a significant source of increased revenue for service providers who roll out a tiered service offering using Netopia's highly cost-effective 3342 ADSL Pocket Gateway.

Although the cost-sensitive subscriber is unlikely to move up to the mid-level broadband offering due to its higher costs, if presented with a price point between that of their dial-up service and the mid-level broadband offering, a significant number of those subscribers will make the move.



An example of this type of migration is the recent availability of software acceleration products that use caching and compression to improve throughput over standard dial-up connections. Customers are willingly paying a higher monthly fee for this improvement to their Internet access speed, which is still considerably less than the monthly cost of a typical broadband service.

Another factor driving single-PC households to want broadband is the capability included in Microsoft® Windows® XP, where different members of the household can each log onto the computer with individual settings and identities. This multi-user configuration has caused the single PC to be used by more family members, more hours of the day – often resulting in extended periods of time that the home’s primary telephone line is unavailable to make or receive telephone calls.

Service providers who offer high speed, always-on Internet access for a price between dial-up and standard broadband, for example, \$15 per month, can put themselves at a strong competitive advantage.

- Generate new revenues from existing dial-up customers
- Attract new customers from other service providers who do not offer this entry-level broadband service
- Protect existing high-margin broadband segment

In addition, service providers who can offer low-cost DSL service are ideally positioned to increase revenues in areas where broadband is not yet widely deployed,

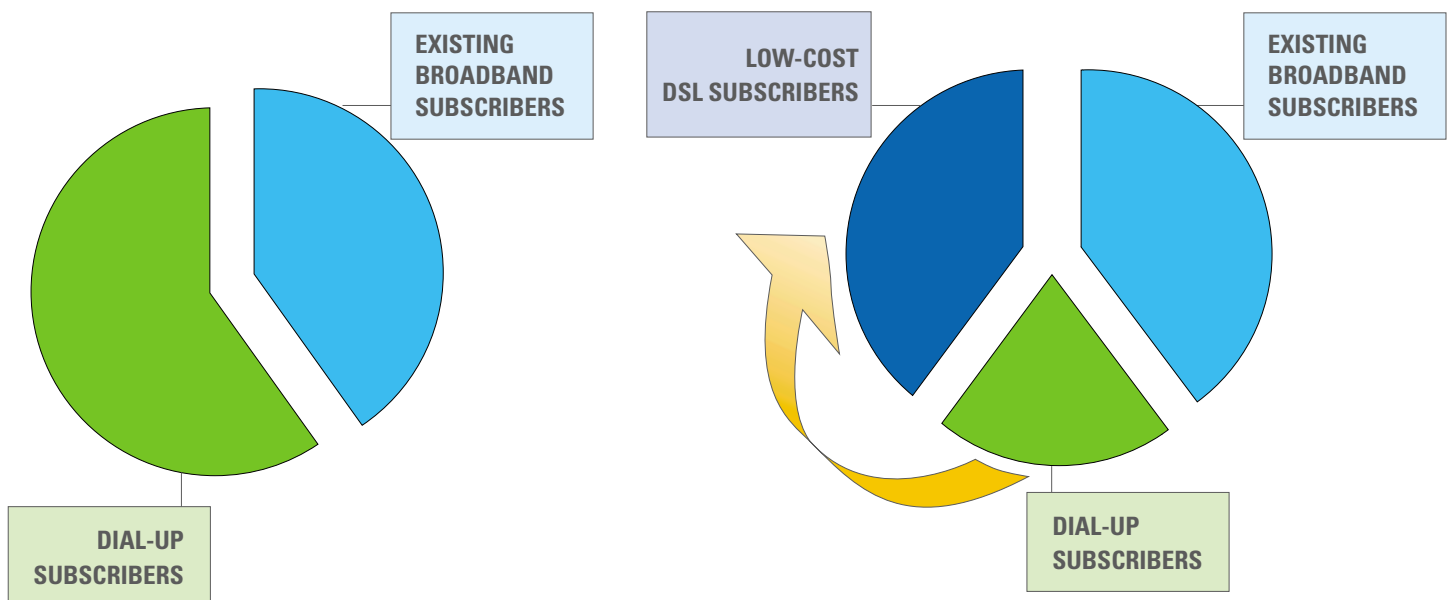


Figure 2: Market Segmentation Before and After Dial-Up Subscribers Move to DSL

or where technology is emerging more slowly than others. For example, homes with computers in second- and third-world countries tend to have a single computer, which, if connected to the Internet, is most likely using dial-up access. If these homes had DSL available to them at slightly more than the current cost of dial-up, many customers could be expected to subscribe, as shown in Figure 2.

The key to delivering this attractive service, while protecting your existing DSL subscriber base, is in Netopia's powerful, compact 3342 ADSL Pocket Gateway.

Netopia 3342 ADSL Pocket Gateway



Netopia's compact and cost effective, yet full-featured 3342 ADSL Pocket Gateway is the ideal platform for service providers to deliver low-cost DSL to the single-PC house-

holds found in Market Segment One. Designed for high-volume, cost-sensitive markets, the Netopia 3342 combines an ADSL modem and USB interface, along with powerful software features for deployment and support savings. Housed in an amazingly small form factor and powered directly from the PC to which it is connected via its USB port, the 3342 offers:

- Intuitive Web User Interface (Web UI) for easy, fast subscriber self-installation
- Sophisticated security features that protect the subscriber's PC from security threats including an ICSA Labs Certified firewall
- Optional Parental Controls Service that protects family members from inappropriate content, allows time restrictions, and e-mail and instant messaging controls – customized for each individual family member, even if they are all using the same computer
- Robust one-click diagnostics for ongoing customer self-help and troubleshooting

- Remotely configurable and manageable, simplifying deployment and reducing support costs for service providers – while improving customer satisfaction
- Optional IPSec Virtual Private Network (VPN) support for private, secure connectivity to another network point such as a corporate office for teleworkers
- Built-in PPPoE client eliminates licensing costs and reduces support burden of PC-based PPPoE client installation
- Sufficient internal memory to allow the addition of new applications in the future

Because of its small form factor, the 3342 is easy to deploy and install, and its powerful feature set ensures reduced service provider costs and increased customer satisfaction.

Protecting Your Existing DSL Business

Because it is designed specifically for mass deployment to a cost-sensitive market such as Market Segment One, the 3342 ADSL Pocket Gateway allows service providers to offer a low-priced broadband service without concern that existing broadband customers will want to switch to the new, lower-priced service.

The 3342 only allows a single PC to be connected to the DSL line, and because it uses a standard USB port, rather than Ethernet, to connect to the PC, subscribers cannot attach multiple PCs or a home router to the 3342.

The low cost, high-speed DSL service provided by the 3342 is unlikely to tempt existing broadband customers to “trade down,” in spite of its attractive pricing. Broadband subscribers who are paying higher monthly fees have grown accustomed to the broader features they have with their existing services, such as Wi-Fi access or Ethernet home networking, that are not supported by the 3342.

Other Marketing Opportunities

Other marketing opportunities can be leveraged because of the 3342's low cost and compact form factor. For example, service providers can work with PC manufacturers to offer a free trial period of high-speed Internet service and include the 3342 with new PCs.



Because Netopia also offers a powerful Parental Controls Service which can be made available with the 3342, service providers can promote parental controls as an incentive to attract new customers or encourage existing dial-up customers to upgrade.

Market Segments Two and Three

As we have seen for Market Segment One, the dial-up users, the introduction of an aggressively-priced broadband service can provide a relatively untapped source of revenue for broadband service providers. The more traditional Market Segments Two and Three can also provide a valuable source of new customers or increased revenues.

Subscribers in Market Segment Two have already embraced broadband, and are likely sources of revenue if they are offered improvements to the service they already have. Service improvements can include:

- Addition of networking capability so that additional PCs or other network-capable devices can share the broadband connection and additional features
- Powerful, flexible security features such as firewalls
- Gateway-based parental controls services
- Virtual Private Network (VPN) capabilities for working from home – vital for home-based workers who need to connect to a corporate network
- Wi-Fi wireless capabilities to allow multiple Wi-Fi enabled PCs or other devices to share the broadband connection

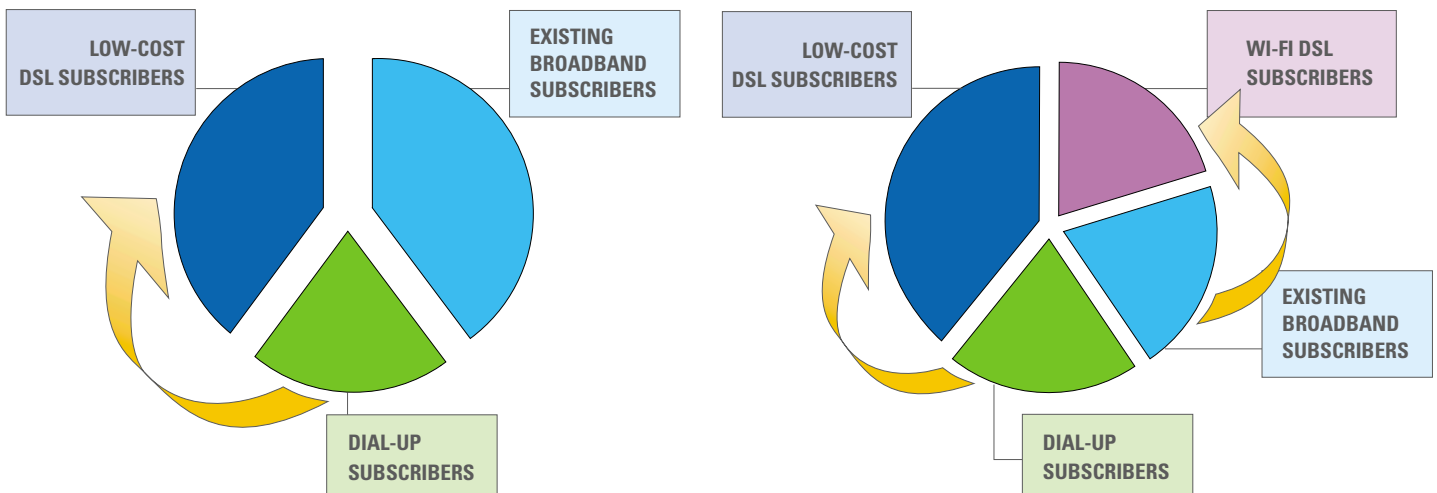


Figure 3: Market Segmentation as Subscribers Move from Existing DSL to Wi-Fi

- Lower cost for service, or competitive cost with improved features

Service providers who are able to offer these types of service enhancements for a small incremental increase in monthly service fees can offer their existing customer base the opportunity to upgrade. It is also an excellent way to attract new customers who are dissatisfied with the services offered by their current broadband provider, or who have needs that cannot be met by their current provider.

The resulting market segmentation after the implementation of tiered broadband service offerings is shown in Figure 3. A significant percentage of dial-up subscribers have now upgraded to the low-cost DSL service, while many of the existing DSL subscribers have upgraded to take advantage of new features such as Wi-Fi.

Netopia Broadband Wired and Wi-Fi Gateways and Routers



To capitalize on the opportunities available in Market Segments Two and Three, Netopia offers affordable broadband gateways and routers, including gateways with built-in ADSL and ADSL2/2+ modems, for both Wi-Fi wireless and wired connectivity, and which have been widely approved and deployed by major carriers worldwide.

Quick setup, comprehensive management and high reliability make Netopia gateways and routers both powerful and easy to use. These gateways and routers share a common architecture, built upon a rich feature set and robust performance that has connected millions of homes to broadband networks.

Built-in security protects data, applications and gateways without separate software or hardware, and without subscribers having any special knowledge or understanding of network security technology in order for their network to be protected from security threats. Some of the specific features offered by Netopia's

gateways and routers are a built-in firewall, security monitoring and logging and intrusion detection, protecting subscribers from unwanted network attacks across the Internet.

The gateways also provide extended remote management, logging capabilities, and an optional IPSec VPN gateway that creates a private and secure "tunnel" between two network points – an important feature for people who leverage their broadband connection to work from home.

The use of Wi-Fi wireless networks presents special security challenges that are solved by Netopia's superior implementation of the industry standards Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA). Not only do Netopia's Wi-Fi gateways include WEP and WPA, Netopia has made these vitally important technologies easy to use.

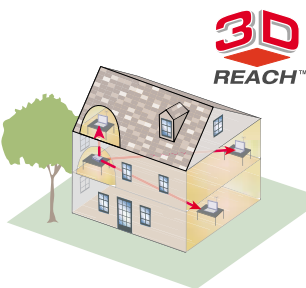
Netopia's broad selection of residential gateways and routers share common device software, which simplifies deployment and reduces support costs. A variety of models are available to meet the needs of individual subscriber segments, from single-port smart modems to four-port router/gateways. Both ADSL over POTS (Annex A) and ADSL over ISDN (Annex B) are supported, along with models that include both USB and Ethernet.

- **Universal Connectivity.** True plug-and-play is supported using USB for computers not equipped with Ethernet adapters, or Ethernet for those so equipped.
- **Self-installable.** Subscribers can self-install and be browsing the Internet in just minutes with the integrated Web User Interface (Web UI).
- **Secure.** Unlike traditional DSL modems, Netopia's gateways and routers protect the subscriber's PC and home network from unwanted intrusion when surfing the web or playing online games.

- **Home Network Capable.** Add more PCs or Internet appliances as home networking needs grow, without swapping out devices or compromising performance.

Netopia's Wi-Fi Gateways with Netopia 3-D Reach Technology

In addition to the common features outlined above, Netopia's Wi-Fi CERTIFIED™ Gateways incorporate 3-D Reach technology for unparalleled Wi-Fi performance. Netopia's 3-D Reach technology utilizes two radio



antennas specifically tuned for both vertical and horizontal range providing seamless wireless coverage with no dropped connections or dead zones – ideal for homes with more than one story.

Value-Added Service Capabilities for All Market Segments

Netopia's portfolio of residential gateways and routers, including the compact 3342 ADSL Pocket Gateway, are unparalleled in allowing service providers to deliver highly competitive, full-featured broadband Internet service, and are already approved and in use by major carriers and service providers worldwide.

All of these products are designed to support the delivery of a variety of value-added services that can be delivered to subscribers without any change of customer premises equipment (CPE) or hands-on configuration. These services include:

- Superior Parental Controls service
- Firewall configuration and management
- VPN configuration and management
- Triple play voice, video, and data services
- Future applications

These services and applications can be offered to subscribers to generate additional monthly recurring revenue, which can allow service providers to recoup the cost of CPE more quickly and realize ongoing revenues that contribute directly to the bottom line.

A Winning Combination

Service providers can become significantly more competitive in attracting new subscribers, as well as more profitable from their existing customers, by introducing tiered DSL service offerings. Using Netopia's residential routers and gateways – including the innovative 3342 ADSL Pocket Gateway – service providers can deliver superior service offerings that are tailored to different market segments. And because Netopia's family of broadband products are built using a common architecture with powerful management, security, and parental controls services, the costs for deployment and support are reduced, while customer satisfaction grows.

Service providers and their subscribers both win with Netopia's solutions. Providers increase revenues and reduce costs, while more subscribers are able to enjoy broadband connectivity – truly a winning combination!

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