

Broadband Access

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Ultimately most U.S. households and small/medium size businesses (SMEs) will conclude that broadband “always-on” connectivity and high-speed multimedia Internet access are essential for day-to-day business and personal pursuits.

Broadband now serves over 26% of U.S. households and is growing rapidly by almost any standard. NCTA (National Cable & Telecommunications Association) estimates that by the end of 1Q2004 there were 17.3M cable modem subscribers, up 15% in 6 months. According to the FCC, 28.2M high speed lines served homes and small businesses as of 12/2003, of which cable modems represented 58% or 16.4M and telco DSLs (digital subscriber line) 34% or 9.6M.

This is just the beginning. In South Korea almost 70% of households subscribe to a broadband access service. While South Korea differs from the US in important respects, its experience demonstrates that 50%+ broadband penetration is achievable.

Although cable modems enjoy a substantial market share advantage over telco DSLs, telco marketing is increasingly aggressive and effective. During 2Q2004, growth in DSLs was approximately equal to that of cable modems.

Generally telcos have competed on price while cable operators have emphasized value. In general cable operators have not attempted to match low-tier telco rates such as Verizon’s \$29.95/month for 1.5Mbps/384Kbps downstream/upstream DSL service. Instead they offer premium broadband tiers with higher data speeds, most recently up to 7Mbps downstream.

Cable operators also are promoting enhanced broadband services features. For example, Comcast increased storage capacity for email accounts to 250 Mbytes from 10 Mbytes. Comcast also offers specialized broadband content including a rich selection of video clips and audio

programming exclusively for its cable modem subscribers.

Cable’s strategy favoring higher priced premium tiers preserves high operating margins for cable broadband services, which reportedly approach 60% of revenues as compared to traditional 40% margins for video services. The trade-off is that cable is losing market share to DSL. In response, some operators are reducing rates and/or offering lower-priced service tiers. For example, Cox has introduced a lower priced 128 Kbps upstream/downstream tier as a customer save tool. To date, Cox reports this has not cannibalized higher priced tiers, one of the major concerns of cable operators with this approach.

In general, enhanced broadband service features, multiple tiers, and more intense marketing, all aspects of increased competition between cable operators and telcos, will expand the broadband market.

Cable modem equipment costs are now less than \$50. These costs will decline further with host-based or CPE-controlled cable modems (CCCMs) that will be inserted in PCs or set-top boxes and will draw on host PC processing and memory resources. CCCMs are likely eventually to become as common in new PCs as dial-up 56Kbps modems are today.

Most SMEs receive broadband access via T1/DS1 or DSL lines but cable is a real option for businesses that are located where cable fiber nodes can readily be deployed. For example, Cox Business Services offers symmetric (128kbps or 256kbps) and asymmetric (up to 3.2Mbps/512kbps) data services. RoadRunner (Time Warner Cable) provides a range of broadband data rates for small, medium, and larger size enterprise business customers.

Meanwhile, CableLabs is certifying DOCSIS 2.0 cable modems and CMTSS that will provide expanded, symmetrical capacity – 30Mbps upstream as well as downstream -- for both enterprise and residential users.