



Business Travelers Demand Fast, Secure Internet:

High-Speed Internet Access and Security are Important Factors for Discriminating Business Travelers.

New broadband applications feed the need for speed among business travelers who work and play online after hours. As more guests engage in high-bandwidth activities, the lodging industry is being pressured to deliver fast, reliable, secure broadband.

With two thirds of business travelers now using computers in their hotel rooms,ⁱ it's no wonder that after guest room comfort, the second most important amenity is high-speed Internet access (HSIA).ⁱⁱ If the broadband service fails to meet expectations, these valued guests will not come back.

According to Jupiter Research (www.jupiterresearch.com), a technology research and advisory firm, 88 percent of all business travelers say availability of HSIA is extremely important in their hotel choice. Of the guests who were dissatisfied with the broadband service, 52 percent said they would not return to the hotel, and 15 percent said they would abandon the chain.ⁱⁱⁱ

Accessing the Internet on the road is so important, frequent business travelers don't mind paying extra for broadband. One executive told New York Times columnist Joe Sharkey, "Reliable high-speed Internet service is probably my No. 2 requirement in a hotel, right after hot water." Sharkey sympathized, adding that like most other business travelers, he regards the quality of the connection to be more important than how much it costs.^{iv}

Broadband service providers for the hospitality industry estimate that 20 percent of a hotel's guests are online at once.^v The first delivery challenge for hotels is size of the Internet "pipe." The second significant challenge is in managing the bandwidth within the hotel or conference center so that the first five or six users can't "hog" the available bandwidth through bandwidth-intensive applications, making Internet access a poor experience for everyone else. As more business

travelers use the Internet for these bandwidth-intensive activities, even broadband service can slow to a crawl. Managed HSIA services are fulfilling the growing demand for bandwidth—which helps hotels fulfill their promise to deliver fast, secure broadband services.

Internet Savvy Guests

Now that more consumers have broadband connections at home than ever before, more people are using the Internet when they're on the road. The Pew Internet & American Life Project (www.pewinternet.org) May 2005 survey showed that 53 percent of home Internet users have high-speed connections, up from 50 percent in December 2004.^{vi} In-Stat (www.instat.com), a provider of digital communications market research and analysis, expects the number of worldwide broadband subscribers to double within five years, reaching 413 million by the end of 2010.^{vii}

On an average day, the 73 percent of American adults who use the Internet do such mundane activities as send e-mail, search the Web, and get news and weather. But a surprising number also watch a video clip or listen to an audio clip (56 percent); download games, videos or pictures (42 percent); download computer programs (39 percent); play games online (31 percent); listen to a live or recorded radio broadcast (29 percent); share files (27 percent); download music (25 percent); make Internet phone calls (13 percent); and use social networking sites (11 percent).^{viii}

In all, the average American Internet user spends 13.3 hours per week online.^{ix}

Researchers have found that the intensity of Internet use correlates directly to connection speed and years of online experience. Broadband

users who have been online more than two years engage in more advanced activities such as peer-to-peer (P2P) file sharing, gaming, buying music online and watching streaming video.^x They're not just doing these advanced, bandwidth-intensive activities on their home computers. According to Nielsen//NetRatings (www.netratings.com), more than 20 million people now watch and listen to streaming media at work.^{xi}

Pew Internet Project Director Lee Rainie notes, "[B]roadband users who have high-speed access at home and at work represent a leading edge of content consumers and content creators... [H]igh-speed connections transform online behavior; users spend more time online and engage in a wider array of activities with greater frequency than dial-up users."^{xii}

Broadband users spend more hours online doing business from their home computers, and doing non-work related activities from their office computer—about 3.5 hours per week.^{xiii} With broadband access both at home and the office, nearly two thirds of business travelers use hotel broadband when they're on the road, according to In-Stat.^{xiv} These guests expect to replicate the online activities they perform at home and in the office while traveling.

Broadband Internet access enables travelers to perform tasks that dial-up access does not. With a minimum 1 megabit per second (Mbps) connection speed, guests can network and collaborate online, upgrade their software remotely, take online training and videoconference. Indeed, the Positively Broadband Campaign contends that "broadband significantly raises the bar on the variety and value of work that e-workers can accomplish."^{xv}

Although more business travelers are using 3G devices such as Blackberries for wireless

broadband access, the upstream speed of 50–100 kilobits per second (Kbps) is inadequate for transferring large files and videoconferencing.^{xvi} Additionally, the screen size of these devices are not conducive for such files as graphics, presentations—using common applications like Microsoft PowerPoint. For that they need to use their laptop computers and a secure, dedicated high-speed connection to the corporate virtual private network (VPN).

Whether at work or play, accessing the Internet on the road is becoming a habit for frequent travelers. In-Stat Senior Analyst Amy Cravens reports, "[W]hile hotel broadband is thought of as principally a service for business travelers, 75 percent of survey respondents have used this service for personal reasons, either singularly or in combination with business usage." In fact, when these business people travel for personal reasons, they consider the availability of HSIA when selecting lodgings—55 percent consider broadband important when traveling for business or pleasure.^{xvii}

Bandwidth-Intensive Applications or "Bandwidth Hogs"

During down time at a hotel, the tech-savvy business traveler is as likely to turn to the Internet for entertainment as cable TV or movies on demand. Availability of broadband has promoted proliferation of high-bandwidth applications such as music and movie downloading, multimedia file sharing, video on demand and Internet TV. In turn, these applications are rapidly gaining popularity among the growing number of broadband users.

Catalyzed by Apple's 2003 U.S. introduction of 99 cents per track downloads in the iTunes Music Store,^{xviii} the online music market continues to boom, with worldwide sales growing from \$1.5

billion in 2005 to \$10.7 billion by 2010, according to In-Stat.^{xx} But music downloading, legal or no, is no longer a leading online activity.

Peer-to-peer (P2P) file sharing is the single fastest growing consumer of network capacity, according to telecommunications research firm TeleGeography (www.telegeography.com), which reported that international demand for bandwidth grew 42 percent in 2004 as file sharing shifted away from music and on to video.^{xx} CacheLogic (www.cachelogic.com), a firm that monitors global P2P traffic, estimated that P2P applications consumed 60–80 percent of capacity on consumer Internet service provider (ISP) networks by early 2005, with average file sizes exceeding 100 megabytes (MB).^{xxi}

Video files not only take more bandwidth to download but also consume more online time as viewers search and stream clips. ComScore Networks (www.comscore.com) reported an 18 percent increase in the average number of minutes spent watching video online over a six month period. The average U.S. Internet user monitored for the study watched 100 minutes of video content in March 2006, compared to 85 minutes in October 2005.

Enabled by increasing broadband connectivity, video on demand may soon rival cable TV as a major source of entertainment. Thousands of cinema-quality movies are now available online thanks to video-on-demand providers such as CinemaNow (www.cinemanow.com), which offers more than 5,000 films for online viewing, including 2,000 feature-length movies that can be downloaded or streamed.^{xxii} If a typical movie file is about 900 MB,^{xxiii} downloading can take about 90 minutes. Even amateur productions are growing in popularity with sites such as YouTube (www.youtube.com), where visitors view more than 50 million videos a day, spending an average of 16

minutes on the site per visit.^{xxiv}

ComScore CEO Peter Daboll notes, “With two-thirds of consumers accessing the Internet from home using a broadband connection, and publishers continuing to innovate using the latest technologies to deliver content in a way that engages users, video consumption is poised to become a standard part of the online experience for a majority of consumers.”^{xxv}

Television programming is also being viewed online, thanks to new “placeshifting” technology that redirects home digital video recordings (DVR) and live cable or satellite TV streams to Internet-connected devices for viewing anywhere in the world. Now that 40 percent of U.S. cable TV subscribers are reportedly unhappy with their current service, many are turning to content delivered over the Internet.^{xxvi}

Among technology experts and social analysts surveyed by the Pew Internet Project, 53 percent agree that by 2014, personal entertainment—including audio, video, print and voice—will stream in and out of the home and office via the Internet.^{xxvii} As broadband becomes ubiquitous, demand for bandwidth will only increase, forcing carriers to continually upgrade their networks to accommodate demand. Phone companies like AT&T and Verizon Communications are spending billions on capacity upgrades, and they’re considering asking those who use bandwidth-intensive applications to pay for priority access to the Internet.^{xxviii}

Degrading Quality of Service

ISP, telecommunication and cable companies agree that hogging bandwidth to watch movies and TV online can make the Internet choke. Advanced services such as video on demand require

speeds faster than “high speed,” which is defined by the Federal Communications Commission as transmitting 200 Kbps in one direction. According to the Computer Systems Policy Project, TV-quality video streaming requires 750 Kbps, and DVD-quality requires 4 Mbps.^{xxxix}

Universities with high-speed connections often ban Skype (www.skype.com), a popular Voice over Internet Protocol (VoIP) application, because it can turn a host computer into a “supernode” for the benefit of other users and quickly overwhelm a 100 megabit per second connection.^{xxx} With VoIP projected to grow 62 percent a year according to In-Stat,^{xxxi} the potential for VoIP users to overwhelm hotel networks will only increase. MySpace (www.myspace.com), a social networking site for more than 72 million members—mostly high school and college-age students—eats up so much bandwidth that one community college banned the site because it contributed to 40 percent of its daily Internet traffic.^{xxxii}

To slow demand, cell carriers that offer broadband services either are banning bandwidth hogging activities such as Internet calling and video streaming or charging customers based on how much capacity they use—a practice that has sparked a firestorm of debate over “network neutrality” laws that would require all Internet traffic to be treated equally.^{xxxiii}

The issue is a thorny one for hotels, where a majority of guests expect broadband access to be included in the price of lodging.^{xxxiv} When guests pay extra for HSIA, they expect fast, reliable and secure access. Yet a whopping 80 percent of recent travelers have encountered problems using HSIA at hotels, according to Jupiter Research. The most frequent technical problems among those who pay for access are failure to establish a connection (36 percent), service interruption (32 percent) and slow Web surfing (29 percent).^{xxxv}

Though not the sole cause, too many guests using high-bandwidth applications may well be the culprit. In just two years, the amount of data moving through one hotel network increased four-fold, from 252 terabytes in 2003 to 926 terabytes in 2005. Despite the promise of high-speed access, if only four guests downloaded video at the same time, others guests received connection speeds slower than dial-up.^{xxxvi}

An In-Stat survey of business travelers found that 55 percent would be willing to pay for an enhanced service.^{xxxvii} In exchange for their fee, what frequent travelers want most from wired or wireless HSIA is a faster connection (56 percent), constant availability of service (45 percent) an ease of use (47 percent), according to JupiterResearch.^{xxxviii} To deliver this quality of service, hotels need to have their networks managed so they can monitor and control usage.

Meeting the Need for Speed

When three or four guests can commandeer hotel bandwidth, there is no practical way for a property to dynamically control the quality of service. That puts the promise of “free high-speed Internet” in jeopardy, potentially damaging the brand. Guests who experience slow access speeds and frequent disconnects will associate the problems with the hotel (not the service provider) and choose a different hospitality brand the next time they travel. Even hotels that currently charge for HSIA are in danger of defaulting on their brand promise, because people are using more bandwidth than anticipated.

According to iBAHN™ (www.ibahn.com), a leading provider of secure wired and wireless broadband services for hoteliers and meeting organizers, more than 80 percent of hotel broadband users surveyed indicated connection speed is their

No. 1 requirement. In 2005, 13 percent of users planned to download video files while traveling (an increase of 11 percent over 2004); and 42 percent planned to download audio files (an increase of 16 percent). Clearly hotels need to provide ever-increasing amounts of bandwidth to satisfy their guests' need for speed.^{xxxix}

The solution for forward thinking hoteliers is a tiered service offering that provides free HSIA for low-bandwidth users and a fee-based premium service that delivers continuous, secure HSIA with a quality of service guarantee. One innovative business model is the Speed Solution from iBAHN, which provides free Internet service and support to hoteliers in exchange for the revenues collected from the premium service users. Guests can choose free basic service or buy the premium service at daily or weekly rates.

With iBAHN's Speed Solution to control bandwidth, hotels can "throttle down" access so that a few guests cannot commandeer bandwidth to the detriment of others. Since rolling out the service in March 2006, iBAHN reports that about 15 percent of customers at trial properties in North America selected tiered bandwidth for \$9.95. By monitoring and controlling usage, iBAHN improved overall quality of service, and calls to customer support went down 31 percent.^{xl}

With the number of hotels that offer in-room broadband Internet access expected to triple by 2009, the decision about how to deliver that service is top of mind in the industry.^{xli} The cost of satisfying the growing demand for bandwidth goes directly to the bottom line. iBAHN manages and delivers different speeds of bandwidth to each guest at the hotel, while simultaneously reducing hoteliers' cost for the service. iBAHN Speed Solution enables hoteliers to provide high-speed broadband services to their hotels for the cost of an Internet circuit.

Contact Us

For more information on the contents of this paper or how iBAHN-approved hotels and conference centers can assist in securing traveling executives against Internet information theft, please contact:

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iBAHN is the leading global provider of secure wired and wireless Internet service to the hospitality industry, providing service to more than 2,100 hotels and meeting and conference venues in 18 countries worldwide. iBAHN provides secure and speedy broadband HSIA services, allowing end users to work safely and efficiently from public access locations. iBAHN is unique in providing secure wireless access (WPA) throughout its entire network, allowing travelers to rely on iBAHN to protect themselves outside of their corporate environments.

Unlike other system providers, the iBAHN network is "locked," eliminating the ability for hackers to intercept a signal before it reaches the security gateway, protecting users from phishing, worms, spyware, and other attacks threatening their hard drives, passwords, and virtual private network (VPN) connections. Additionally, the secure and continually monitored wired backbone delivers the industry's most practical and safest available wired or wireless connection, allowing business travelers to conduct business away from the office with confidence that their private information will be protected and easily accessible.

Top 10 Bandwidth Hogs

- 1. Music downloads** — Apple announced in February 2006 that one billion songs have been legally downloaded from the iTunes Music Store (www.apple.com/itunes) since it was launched less than three years ago.^{xii} Fifty-three percent of online music purchasers have used iTunes, making it the most popular music download site.^{xiii}
- 2. Video downloads** — The No. 1 Internet video provider is a relative newcomer. Nearly 43 percent of all video searching is done through YouTube (www.youtube.com), a consumer media company founded in February 2005 for people to watch and share original videos. YouTube is now the 27th most popular Web site worldwide,^{xiv} with 12.5 million visitors a month.^{xvi}
- 3. Voice over Internet (VoIP)** — Skype (www.skype.com) is the most downloaded VoIP service provider, with more than 100 million registered users worldwide. The company achieved this milestone in just two-and-a-half years, nearly doubling its user base since September 2005.^{xvii}
- 4. Social networking** — MySpace (www.myspace.com), the No. 1 social networking site with 38.4 million unique visitors, experienced 367 percent growth from April 2005 to April 2006 to surpass top contenders including MSN Groups, Classmates Online and AOL Hometown.^{xviii}
- 5. Gaming** — Nearly one in three online Americans visit gaming sites, which are among the stickiest on the Web. Leading the pack is Slango (www.slango.com), where the average player spends four hours and eight minutes per visit playing single, dual and multiplayer games.^{xix}
- 6. Peer-to-Peer (P2P) networking** — With 920,837 users online,ⁱ eDonkey 2000 (www.edonkey.com) overtook BitTorrent as the world's largest P2P file trading network in 2005.ⁱⁱ In response to threat of legal action by the Recording Industry Association of America, the company has converted its user base to an online content retailer operating in a closed P2P environment.ⁱⁱⁱ
- 7. Placeshifting** — Sling Media's SlingBox (www.slingmedia.com) recently ranked as the 36th most popular electronics product on Amazon.com, up from 69th the week before.ⁱⁱⁱⁱ With the April 2006 launch of SlingPlayer Mobile for handheld computers and mobile phones, the company threatens to turn any Internet-connected device into a personal TV.^{liv}
- 8. Podcasting** — Twenty-five percent of those who use broadband at home and at work own an iPod (www.apple.com/ipod) or MP3 player. Of the 22 million American adults who have an iPod/MP3 player, 29 percent have downloaded podcasts.^{lv}
- 9. Streaming audio** — Offering a catalog of 1,680,000 songs, Rhapsody (www.rhapsody.com) led the streaming audio sites in listener loyalty with 3.82 sessions per person in March 2006. Each sessions lasted about 18 minutes, compared to 13 minutes for the next most popular site, XM Satellite Radio.^{lvi}
- 10. Video on demand** — CinemaNow (www.cinemanow.com) offers the greatest selection among video on demand providers, with more than 5,000 films for online viewing, including 2,000 feature-length movies that can be downloaded or streamed.^{lvii}

Broadband glossary

- **Bandwidth:** The number of binary bits of information that can be transmitted per second through a given channel.
- **Broadband:** Channel transmission speeds exceeding 200 kilobytes per second (Kbps) both upstream and downstream (about four times the speed of standard 56 Kbps dial-up modem).
- **High-speed:** Services with transmission speeds of at least 200 Kbps in one direction.

Source: *Pew Internet & American Life Project* (<http://www.pewinternet.org>)^{viii}

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