

Expanding Role of the Service Provider—*from Music to Games to the Connected Home*

A Parks Associates Whitepaper

The background of the entire page is a vibrant blue with a dynamic, abstract design. It features several large, 3D-style arrows pointing in various directions, creating a sense of movement and forward progress. In the upper left quadrant, there are faint, glowing patterns of binary code (0s and 1s) that appear to be receding into the distance, suggesting a digital or data-driven environment. The overall aesthetic is clean, modern, and high-tech.

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Broadband as a Conduit for New Applications

Increased broadband penetration is causing operators to modify their strategies.



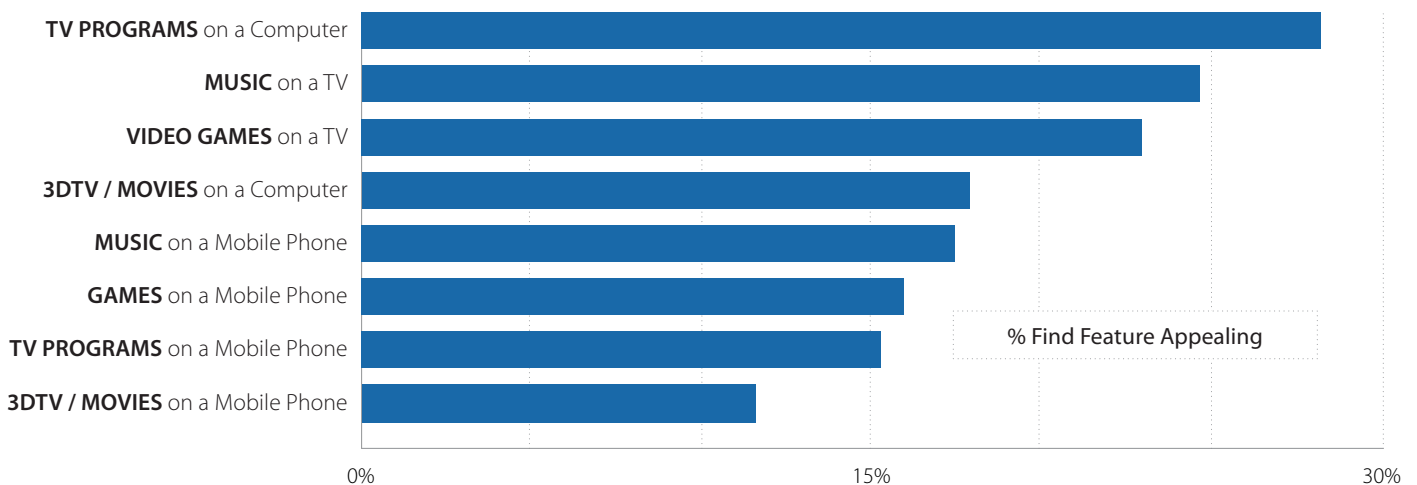
APPROXIMATELY 74% of all U.S. households WILL HAVE BROADBAND by the end of 2012.

Operators' revenue and subscriber growth rates are down as a result of this near saturation in developed countries, so service providers are anxious to compensate. They also want to leverage their established infrastructure, including installation technicians, customer connections, and the strength of their brands, to offer new value-added services.

Opportunities for value-added services span such categories as entertainment, technical support, home management, energy services, and healthcare. Each one offers a unique value proposition, and service companies view these services as means to retain customers and as platforms for future revenue growth.

Video is often the cornerstone of bundling strategies and service plans; however, this white paper will focus on the other value-added service opportunities, including music, gaming, energy, security, and health. Parks Associates has addressed and analyzed the opportunities in video services in multiple other publications, including the recent white papers "Getting Over-the-Top Video Right" and "The Data-driven Video Discovery Evolution." Visit www.parksassociates.com for more information.

Appeal of Entertainment Value-added Services (U.S. Broadband Households)



Source: *Cloud-based Value-added Services* | © Parks Associates

ENTERTAINMENT—MUSIC

While use of music download services remains substantial, Internet radio and subscription-based music services have been increasing in popularity. Pandora has 125 million registered users for its streaming music services. Spotify's U.S. user base is about 2.4 million users, and globally, the service has 10-12 million registered users.



Subscription service is not a new business model for the music industry, but the presence of big-name competition, notably iTunes, has made it challenging to successfully launch new music offerings. More recently, momentum for these service offerings is building due to several key trends:

- Growing adoption of mobile devices capable of streaming & accessing music services
- More effective discovery mechanisms
- Use of social networking tools for users to share music and related information
- The increasing number of connected CE devices
- Growing consumer acceptance of the cloud delivery and access model
- The willingness of diverse industry players such as ISPs, mobile carriers, OEMs, and car makers to partner with music service providers in order to enhance their offerings

Many of the early successes in operator-provided music services were in Europe. Danish broadband provider TDC; France Telecom, under the Orange brand; and Telia have successfully implemented music services.

In the U.S., Verizon has partnered with Rhapsody to create its V CAST Music offering. The company offers a subscription-based service for approved CE devices, with a Media Manager that provides online storage of personal music libraries.

ENTERTAINMENT—GAMING

*The number of gamers in the U.S. increased from **56 MILLION** in 2008 to **135 MILLION** in 2011*



The majority of these new gamers are in the “casual gamer” category. Typically, they use new platforms such as smartphones and tablets to play low-commitment titles.

This territory is familiar to many providers, with companies including AT&T, Verizon, Orange, and Telstra offering casual games as a core element of their offerings. There are many benefits to providers in offering gaming. The service has broad appeal, with an opportunity for bundling and as an enhancement to established business models. For example, TELUS offers a free Xbox 360 to fiber high-speed customers who sign a two-year service commitment, and the game console can be used as a set-top box for additional services.

AT&T's offering **AT&T Games** is a good example of a broad-based service.

It is an online portal for PC and mobile games that includes free games and game demos with service subscription options and games for purchase. It derives revenues from these sources and from advertising.

The gaming market also comes with its share of challenges. There is ample competition from a variety of sources, and the associated costs in acquiring content keep revenues relatively low.

Finally, broadband providers do not have a reputation as "serious" players in the gaming market. Most traditional gamers (often referred to as "hardcore gamers") do not associate their service providers with gaming.



CROSSOVER APPEAL OF GAMING

Gaming has applications in other service segments, with a variety of different companies using games as a means to engage their consumers. Utilities use "gamification" to encourage customers to compete for energy savings. In the health market, games encourage physical and mental activity. For example, Nintendo Wiis are deployed as part of health and activity regimens for sick or infirm patients.

IP Services and New Players

There are a variety of different IP-based services that providers could use to enhance their offerings:

- Energy monitoring
- Home security & monitoring
- Energy management, control, and convenience
- Managing major appliances
- Health-based services

CONNECTED HOME MANAGEMENT SERVICES

Home systems and home management products are evolving to become connected home systems and products, and these IP services are going mainstream as players such as Verizon, Comcast, AT&T, and ADT Security pursue their own IP-based connected home strategies.

Broadband providers in particular recognize a nearly unprecedented opportunity to establish a dominant role for IP connected home management bundles at home. They bring superb billing systems, marketing clout, and millions of customers as a target base. They also know how to run complex networks.

Even beyond these strengths, broadband providers perceive unexplored bundled service options in new categories such as energy management and lighting control.

IP connected home service bundles are attractive to service providers for several reasons:

- The services are offered to the operator's existing customer base
- The services leverage existing strengths, including their communication network, call centers, and monthly billing relationship with customers
- The services are outside of core offerings, allowing new bundling opportunities

The promised long-term growth of IP connected home management services can also help broadband providers defend their current businesses and fill the gaps of slowing growth.

BETWEEN 2009 & 2012 **THE CAGR FOR BROADBAND ADOPTION** (in terms of subscribers) **was 2.4%, DOWN FROM 6%** from previous year sets, and **it will continue to decline**

Recession, diffusion, and OTT competition all impacted pay-TV services, which dropped to a CAGR of 1.9% in 2009-2012. Parks Associates expects some economic improvement over the next several years, and this combined with new provider offerings (designed to compete against OTT providers) should provide a modest improvement of 2% CAGR.

By contrast, the CAGR for connected home system bundles including just home security systems and home control systems, without including single product offerings with fee-based services, exceeds 25% from 2011-2015.

ENERGY & SECURITY—VALUE IN BUNDLING

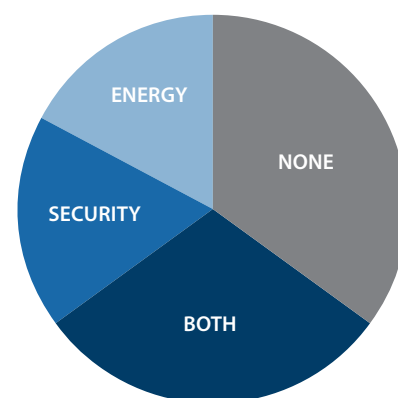
The three categories for home management services that score the highest interest among U.S. broadband householders are security, energy management, and control, but the value propositions for each service have unique challenges.

Bundling energy management and security services is an important strategy to increase consumer interest in these services.

ENERGY

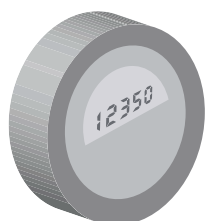
Energy management is not valued as intensely as security, but its span across broadband households is broader.

Appeal of Specified Services
(U.S. Broadband Households)



© Parks Associates

As a result, THE U.S. TARGET MARKET for residential energy management & home security technologies, DEPLOYED BY UTILITIES, SERVICE PROVIDERS, OR RETAILERS, WILL EXCEED A COMBINED 60% of all households by 2022.



The combination of IP proliferation and smart meters provides electric utilities more options to expand their services and create new relationships with their customers. Smart meters, which will be deployed in 56 million households by 2015, create a variety of new service opportunities, many of which may reach inside the home (e.g., appliance control). However, many utilities see the meter as their line of demarcation, and while new market conditions and the promise of cost savings may prompt them to expand their offerings, they are likely to seek partnerships for new IP-based service offerings.



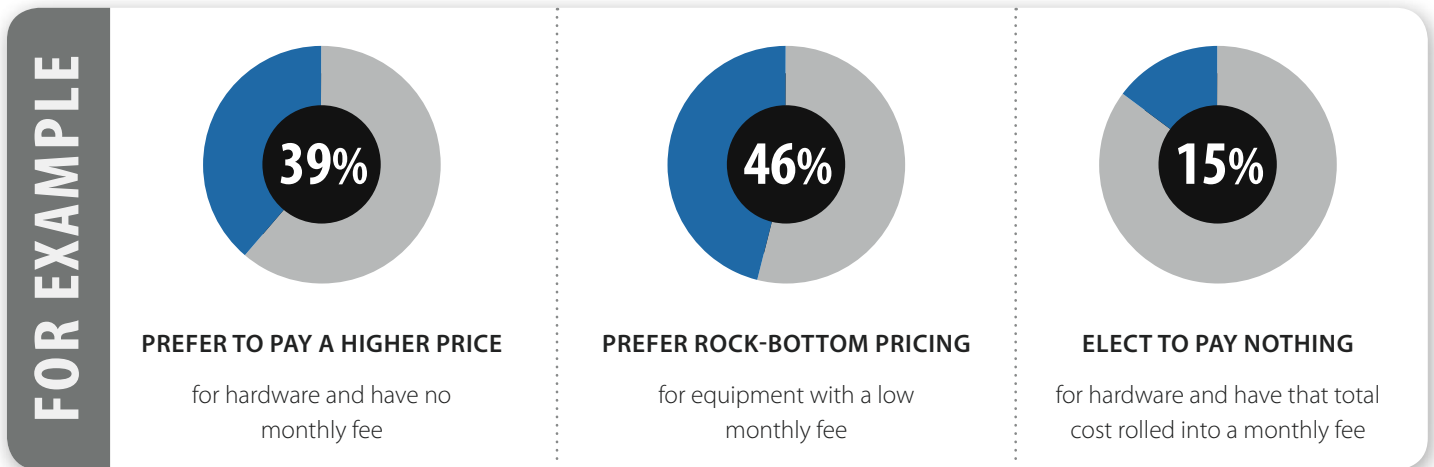
PARTNERSHIP OPPORTUNITIES ARE ABUNDANT

as widespread broadband and connected CE adoption, combined with the early, and hence unsettled, nature of the new IP-driven connected home management bundles market, prompts many different types of firms to enter this area.

- Security, Broadband Service Providers
- Energy Management Components
- Communications & IT Infrastructure
- Metering Solutions Manufacturers
- Home Control Platforms

However, for energy monitoring as well as energy management alone, the potential for incremental monthly revenue from these services is limited. Consumers exhibit high price sensitivity to energy services overall, and there is no consensus for preferred pricing plans among those interested.

U.S. Broadband Households



© Parks Associates



In almost all consumer segments, households seek to manage their energy costs while remaining comfortable in the home. Consumers are often their own strategists when it comes to this sector and gauge the ROI for energy savings carefully, reluctant to invest more than they can save.

For utilities, appliance and CE manufacturers, and service providers to improve consumer engagement for their energy-related offerings, they must enhance their value proposition while managing costs relative to consumers' high price sensitivity.

As a result, there are several viable paths to the market—but the top strategies bundle energy management with complementary services.

FOR EXAMPLE

VERIZON & INGERSOLL RAND

(through its NEXIA offering) **bundle energy management with remote control and monitoring**, charging a fee of \$9-\$10/month

TIME WARNER CABLE

packages energy management with security and remote control, charging \$34-\$40/month in an effort to grab share in the security market. This offering could take share from ADT, the market leader in the security space, which charges \$57/month for a similar package of services

SECURITY

The security provider industry has remained at 15%-19% of U.S. households with monitoring services for nearly a decade, with indications that the percentage of households with fee-based monitoring has declined slightly. Most of the factors for this slight but significant decline tie back to the recession, including consumer spending reductions, low to nonexistent numbers of new starts, and a rash of foreclosures in the housing market.

Consolidation across the security industry has also dropped the count of active dealers. Often those who have been successful in this difficult time expanded their residential offerings to include other system categories, including home theater or lighting control, to increase their per-customer revenues.

At the same time, traditional security providers (e.g., ADT, Protection One) managed to raise their monitoring fees over the past few years without an appreciable loss in their core customer base. These long-term security customers are above average in most standard socioeconomic demographics, notably in age, education, and income. They are able to absorb the added cost and see it as part of the daily cost of operating a home.

**SEGMENTS UNDERSERVED**

Given the characteristics of the average monitored security household, there are significant population segments that security providers have yet to serve. For example, young heads of household (18-34) have the highest rates of ownership and usage for new technologies, but they are much less likely to have a security system.

PLAYERS SEEKING TO CAPITALIZE

With so much of the market underserved, and IP lowering entry costs, the number of players seeking to capitalize on the security market is increasing. Security monitoring services generate \$30-\$50 per month. They can increase average revenue per user (ARPU) for service providers, and players are employing a variety of strategies, including price competition, bundling, and extending alerts to mobile and connected platforms.

CURRENT SECURITY OFFERINGS

- **ADT** launched **ADT Pulse** in October 2010 using the iControl platform. System includes energy monitoring, home security, and lighting control.
- **ALARM.com** introduced the “**emPower**” home automation package in June 2010. The package includes a lighting control system, Z-Wave-enabled two-way communicating programmable thermostats, and a door lock control system.
- **VIVINT** (formerly APX Alarm) **expanded** its control and energy portfolio to accompany its security offering.
- **NEST** announced its **communicating thermostat** in 4Q 2011, and Honeywell announced its Tuxedo system in 2012.

2012 SECURITY ANNOUNCEMENTS



AT&T Digital Life, a new division of AT&T, announced its **global monitoring and automation platform** in February 2012. This offering is available under license to service providers outside the U.S. and debuted in the U.S. in May 2012. According to AT&T, the platform will address multiple segments, including aging-in-place, energy management, and security, with a scalable design capable of growing based on consumer demand.



Lowe's announced **Iris**, a **monitoring and home automation system based on the AlertMe platform**, in 2011, with launch scheduled for the third quarter of 2012. As with AT&T, Lowe's Iris will integrate multiple product categories, such as locks, lighting controls, energy management devices, and IP network security cameras.

The entry of these two players will have ripple effects in multiple markets.



Both have tremendous reach into the consumer market, and they will make 2012 a very interesting year for connected home services.

HEALTH

In the U.S., about 20 million households are caring of one or multiple family members with age-related problems. An additional eight million households anticipate looking after an elderly parent with either age-related problems or chronic ailments.

Parks Associates' research shows consumers have considerable interest in home health monitoring solutions overall:

- 42% of U.S. broadband households surveyed found the independent living service concept appealing
- 37% found a vital-sign monitoring service appealing

Market interest in independent living and health monitoring services is increasing in tandem with the expansion of IP as the backbone of all service delivery platforms for the home. Broadband/telecom service providers have been eyeing the home health monitoring market for more than five years. Early trials fared poorly with end users, including Sasktel's LifeStat service, Orange France's GPS tracking service (enabled by Medical Intelligence), and Comcast's home monitoring service using BL Healthcare's solution.



These high-profile failures highlight the challenges faced by broadband service providers. They lack (or are perceived to lack) brand power, consumer trust, and established expertise in distributing health-related devices and services. These early disappointments have not deterred service providers; however, they have been playing more of an integrator role enabling service delivery rather than directly selling services to consumers. For example, AT&T partnered with WellDoc, and Verizon is collaborating with BL Healthcare in developing and deploying digital health offerings.

This approach, although offering smaller and less immediate revenue opportunities, reduces service providers' business risks, helps them gain expertise, and enables them to build broad partnerships with health monitoring technology providers and healthcare service providers along the way.

From an application perspective, broadband service providers' interest crosses all major service categories in digital health, with a strong focus on chronic disease management and senior independent living service. In these two areas, they actively pursue partnerships with solution providers, platform enablers, and service renderers. In other areas, such as GPS location tracking, medication monitoring, and chronic condition diagnostics, they are currently content in the role of backend infrastructure providers, collecting revenues from their partners for use of their network on a per-device basis.



Interoperability: The Need for Standards

A key driver for all these services is the proliferation of connected CE and mobile platforms. Consumers are buying tablets, smartphones, and smart TVs, and these devices are removing barriers that once stood between different service categories. For example, a key point of the AT&T Digital Life is that owners can control the home system, including lights, locks, and security cameras, from an iPad app. Whole-home systems that once had to supply their own controllers now must connect to platforms already in the home.

Consumers will have CE, appliances, home systems, and energy management components from multiple manufacturers in their homes, and they will expect, rightfully, all these disparate devices to communicate and share data.

Several organizations in these industries are taking the necessary steps to ensure interoperability. On the entertainment side, DLNA has been a successful model. In energy management, the NIST created the Smart Grid Interoperability Panel (SGIP) with the specific task of developing these necessary communication protocols. OpenADR is another piece of the puzzle; it is an automated demand-response (DR) protocol that is also IP based. Both ZigBee and Z-Wave are prominent in the energy industry, so players in the market are looking to the best methods to bridge the two standards.



These are all important efforts in opening the home and its disparate systems to new technologies and products.

FAILURE TO ACHIEVE INTEROPERABILITY would quite simply be a failure to realize the vision of the connected home.

About the Authors



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Tom was a client of Parks Associates' energy management service (2010) while serving Lennox Industries as Corporate Director, Advanced Engineering and as Director of Product Management. Tom previously worked in the utilities industry, the consumer goods industry, and for Motorola in the telecom industry. He holds a MS in Software Engineering from the University of Texas and a BS in Systems Engineering from the United States Naval Academy.

His roles in product strategy for a home controls company as well as experience in the utilities industry and the telecom space provides him with very strong qualifications to serve our energy and home controls clients' needs.



TRICIA PARKS, *Founder and CEO*

Tricia Parks is the founder and CEO of Parks Associates, a market analyst and research company dedicated to providing meaningful information and counsel to companies offering technology-based products aimed at improving people's lives. She presents worldwide on consumer trends, market requirements, and industry structure, with an eye to meshing visionary and progressive ideas to consumer needs and wants.

Parks Associates hosts CONNECTIONS™, an international conference and showcase for the digital home hosted in the U.S., and CONNECTIONS™ Europe, hosted in Europe and focusing on market opportunities for digital products and services in the many nations of Europe. Tricia Parks also developed the Relevancy Theory, a forecasting model for sales across a broad range of digital electronic products and services.

Tricia has served on a variety of industry boards including CEA's Home Networking and Information Technology division, the National Research Council's Committee for a Partnership to Assess Technology for Housing (PATH), the AMD Board of Global Consumer Advocacy, and CABA. Tricia Parks has a BA from Sweet Briar College and graduate studies from the University of Texas.



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Brett Sappington leads Parks Associates services research team, including access and entertainment services, digital media, OTT, cloud media, video gaming, and technical support services. Brett is an expert in worldwide television and broadband services. His personal research focuses on the activities and trends among operators and the market forces affecting their businesses.

Brett has spent over eighteen years in the industry as an analyst, executive manager, and entrepreneur. He holds an MBA from the University of Texas at Austin with a concentration in high-tech marketing and a BA in physics from Baylor University.

INDUSTRY EXPERTISE: International Digital Living Trends, Television Services (IPTV, cable, satellite/DTH, terrestrial/DTT), Broadband Services, Multiscreen Services, Value-added Services, Cloud-based Consumer Services, Set-top Boxes, Residential Gateways, Electronic Program Guides, Video Search and Recommendation, Video Metadata, Middleware, Technical Support Services



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Harry Wang studies the consumer electronics and entertainment service industries with a focus on portable CE hardware, software, and associated applications and services. He is also the lead analyst for Parks Associates' digital health research program. Harry has presented his research in numerous industry events including CES, Digital Hollywood, Photo Marketing Association Annual Show, American Telemedicine Association Annual Show, World Health Congress, and Parks Associates' CONNECTIONS™ conferences.

Harry earned his MS degree in marketing research from the University of Texas at Arlington. He also holds an MBA degree in finance from Texas Christian University and a BA degree in international business from Guangdong University of Foreign Studies, P.R. China.

INDUSTRY EXPERTISE: Digital Health Products and Services, Portable and Mobile Access Platforms and Applications, Digital Imaging Products and Services

About Parks Associates



Parks Associates is an internationally recognized market research and consulting company specializing in emerging consumer technology products and services. Founded in 1986, Parks Associates creates research capital for companies ranging from Fortune 500 to small start-ups through market reports, primary studies, consumer research, custom research, workshops, executive conferences, and annual service subscriptions.

The company's expertise includes new media, digital entertainment and gaming, home networks, Internet and television services, digital health, mobile applications and services, consumer electronics, energy management, and home control systems and security.

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