

THE FUTURE OF SUPPORT: Intelligence Managing Technology

A Parks Associates Whitepaper in partnership with
EchoStar, *developers of Symbi*



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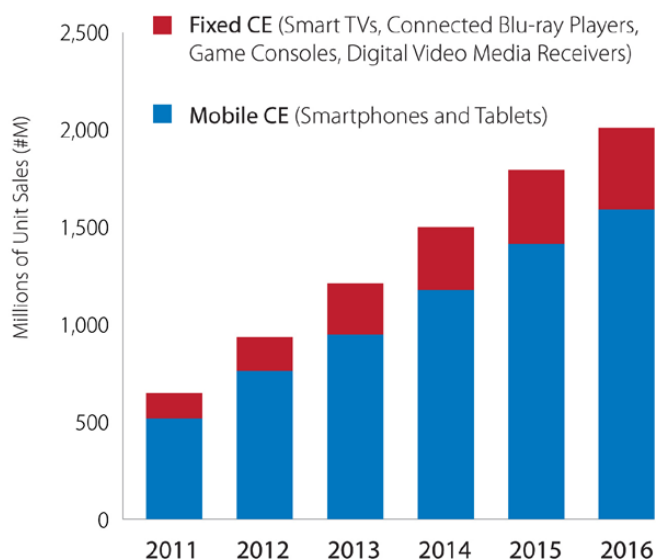
A Digital Explosion

The information age now touches nearly every human on the planet in some way.

The mass of information available and relevant to our lives is growing exponentially every year, and we are increasingly dependent on our ability to readily access and disseminate that information through the technology we have created to do so. More important is our ability to “filter” the data in an effective and efficient manner so that we can apply the right information at the most relevant times of need.

Unit Sales of Internet-connectable Consumer Electronics

(Worldwide Sales, in Millions)



Source: Parks Associates' Forecasts | © Parks Associates

Figure 1: New Technologies, Replacements and Upgrades all Hasten Growth

There is much for consumers to manage: an ocean of information and content combined with a growing number of devices to access the incoming data. Smartphones, tablets, residential gateways, connected TVs, gaming consoles, wireless networks, and high-speed broadband connections are among the increasing array of new devices and technologies appearing in consumers' homes (Figure 1).

With them comes an increasingly complex amalgam of connectivity challenges, performance issues, and security threats. Additionally, the “planned obsolescence” of some devices results in product life spans as short as two years. This environment has created a moving target for the digital industry as we have watched the increasing sophistication of our technology paralleled by an equal growth in complexity. As a result many consumers become frustrated by the very technology that is intended to simplify and enrich our lives.

Interestingly, many of the entities that help consumers manage their technology products are themselves victims of these trends.

Like consumers, service providers face a massive and growing volume of information.

While new consumer electronics continue to add intelligent features to help consumers find sought-after content and information, not all electronic systems that enable support services have similarly evolved. As the industry looks to the future, intelligent systems will play an important role in enabling better service delivery from providers and a better technology experience for consumers.



Opportunity Knocks

Amidst this consumer angst in managing their connected devices is potential opportunity for OEMs, retailers, and digital service providers (DSPs).

As consumer frustration mounts, fueled by device complexity and the desire to be seamlessly connected, the demand for premium tech support increases.

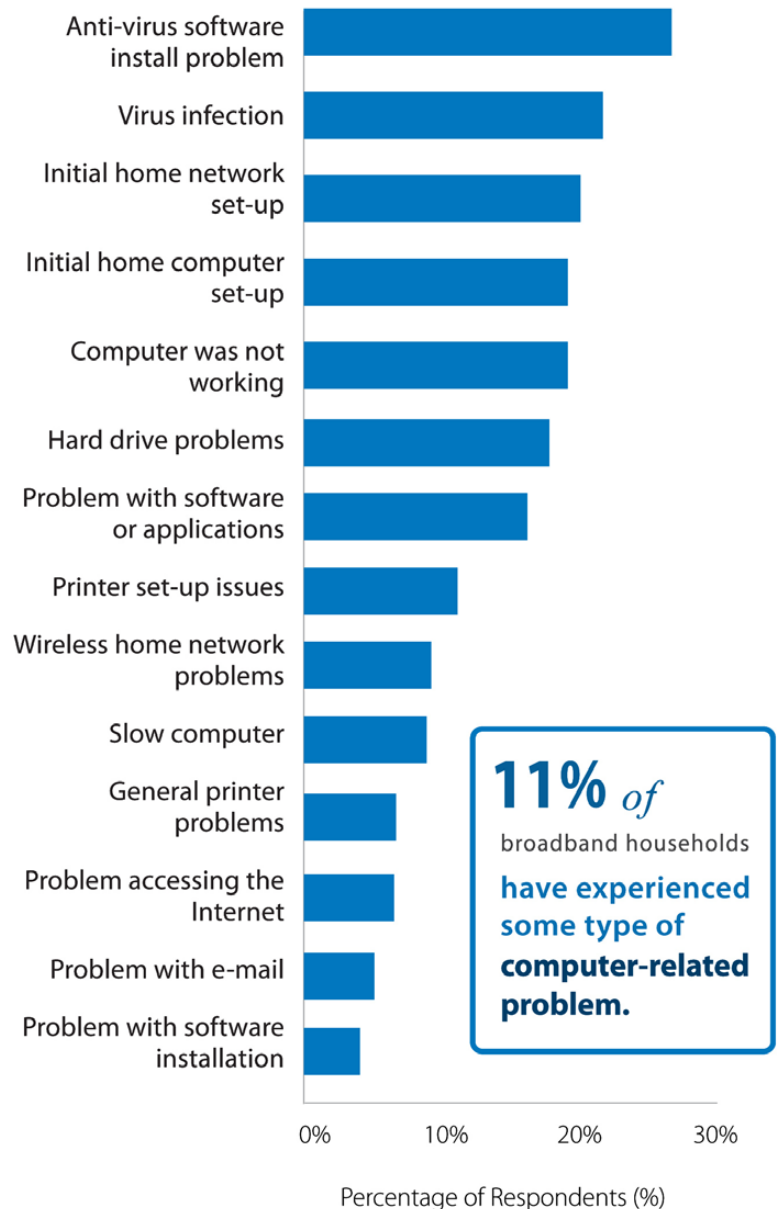
Consumers regularly seek professional services to resolve a plethora of new technology issues (Figure 2).

DSPs in particular are well situated to capitalize on consumers' growing support needs.

Providers have an opportunity to develop service offerings that leverage the discovery, management, and support of network connected devices. Support offerings can also extend to home services, which enhance consumer safety, security, energy monitoring, and home entertainment options such as TV Everywhere.

Using Professional Support for Computer-related Problems

(Among U.S. Broadband Households with Home Computer Problems)



Source: *Consumer Demand for Technical Support Services* | © Parks Associates

Figure 2: Using Professional Support for Computer-related Problems

Service providers are often first to be contacted when consumers encounter a technology problem that is beyond their own ability to resolve.

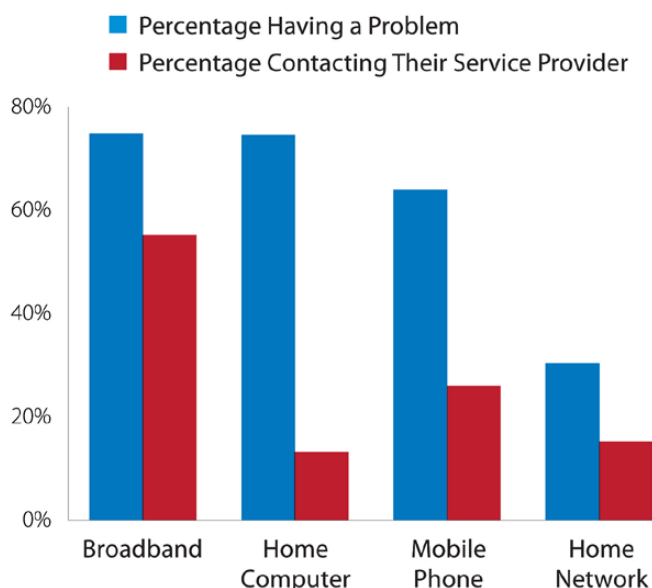


Consumers also routinely turn to service providers for assistance even for device issues typically considered “out of scope,” like a computer virus or a DIY wireless network in the home that is improperly configured.

In Parks Associates’ *Consumer Demand for Technical Support Services* survey (Figure 3), the majority of consumers who encountered a problem with their broadband connection sought help from their provider. A notable number also reach out to their broadband provider to address problems relating to computers, home networks, and mobile phones, which typically fall out of scope of the level of support offered.

Consumers Experiencing Home Technology Issues and Their Responses

(Among U.S. Broadband Households)



Source: *Consumer Demand for Technical Support Services* | © Parks Associates

Figure 3: Consumers Seeking Service Provider Support for Home Technology Issues

For DSPs, being seen as a consumer’s “go-to” source for tech support can present a conundrum.

While successful resolution can build customer loyalty, the cost of providing broad, top-flight customer care can be prohibitive. DSPs have seen the cost of providing adequate technical support soar; consequently, many seek to minimize support interaction with their own customers. Although it is their customer who has a technical issue that needs resolution, some providers turn away “out-of-scope” calls.

While this approach addresses a short-term cost, it also tosses away a significant opportunity.

By turning away customers in need, the provider closes a window of opportunity to cement a customer relationship and risks subscriber ire. Parks Associates’ research shows that consumers are more than twice as likely to leave a mobile or broadband service provider if dissatisfied with customer service. In contrast, addressing these out-of-scope issues can more tightly bind the consumer to the service provider and presents premium support opportunities for new revenue generation.

By embracing the role of the consumer’s front line of support, DSPs gain an effective “first right of refusal” to opportunities for building customer loyalty and generating new revenues via premium services.

They can then utilize these contacts as “touch points” to support subscribers, control their perceptions, monetize their needs, and improve overall satisfaction ratings.

The Puzzle of Customer Support

An important question remains:

If a support issue is outside of the service provider's capability or desire to address the problem, the definition of "out of scope," exactly how does a DSP create a satisfied customer?

The delivery of superior technical support requires excellent execution of many tasks. From a pure operations and cost-savings perspective, the more a DSP can do to deflect and shorten customer contact, the better.

The use of advanced automated support tools holds several advantages for operators.

Automated tools not only help identify problems, they also greatly streamline the process of problem resolution, allowing care centers to achieve first-call resolution goals in a consistent and timely manner. This helps keep support costs low and customer satisfaction high throughout the process.

Tools that support customers in the home proactively *before* issues arise



are also a major piece of the satisfaction puzzle.

Remote Access & Tier 0 Tools

Many DSPs and BPOs use remote access support software to take control of a user's device, allowing agents to work more freely to resolve problems and to avoid asking essential technical questions of non-technical end users.

In contrast, by employing intelligent Tier 0 tools with built-in user/agent communication mechanisms, agents can access necessary technical user environments without access to personal user locations (documents, browsers, photos, etc.).

Such tools allow providers to use remote control as a last resort option rather than the first line of support, limiting liability exposure, reducing costs, and creating self-sufficient subscribers who become comfortable solving basic issues on their own through the tools provided.



More DSPs are beginning to offer “Tier 0” tools
—software solutions that enable an end user to monitor and diagnose technical problems without the help of an agent.

Providing early support via Tier 0 can broaden the touch-point opportunities for the DSP to market additional services while, at the same time, helping to solve problems in a manner that is faster and more pleasing to customers. Importantly, rather than simply being a way to minimize support calls, Tier 0 technologies can enhance the customer support experience by enabling information gathering, issue-related diagnostics, and other benefits in advance of the subscriber’s call.

Tier 0 services start the support process prior to first contact.

Optimally, these automated tools will also drive satisfaction by providing consumers with recognizable value in the form of preventative services that address multiple needs simultaneously, rather than by simply alerting consumers to a potential issue in an isolated manner, after it becomes a pain point. Because of common malware and support scams, today’s consumers are leery of unexpected pop-up windows that announce a need for action or request payment for an unknown service that does not come from an already trusted source.

Some single-point solutions that work under the historical break-fix model and appear only after problems arise may seem like a gamble to consumers, leading to dissatisfaction. Alternatively, some DSPs are considering Tier 0 solutions that may become a trusted source to users by enabling them to quickly self-resolve common issues “before” they become a larger problem. Tools that enable self-resolution can lead to customer loyalty and retention and increase customer lifetime value.

A Changing Customer Support Environment

As DSPs consider ways to expand the scope of their support responsibility beyond general customer care or low-level technical support issues, two approaches are commonly seen.

Some DSPs are expanding their own support assets to be able to handle both standard and premium tech support issues internally. Alternatively, other service providers partner with external business process outsourcers (BPOs) that offer more technically comprehensive services such as the resolution of a personal computer virus, deeper hardware and software help, and peripheral and network device troubleshooting.

While DSP/BPO business models historically have charged per call/per minute, new models are emerging in the form of premium subscriptions for consumers that generate new recurring income and revenue-sharing opportunities for both parties.

Today’s agreements between these companies may include service-level commitments or performance metrics that employ agent results-based incentives or penalties. Measurements such as first-call resolution, service up-sell, and overall customer satisfaction have greater importance in a premium environment, rivaling traditional metrics such as average handle time.

In this environment, the DSP and the BPO benefit from support tools that proactively gather consumer network environment and device diagnostic information that can be used to streamline the support process and reduce costs.



Key Support Considerations

Many support organizations utilize disparate software applications for their call-center agents to handle various aspects of the provider's support interaction, including device provisioning, service activation, billing, CRM, customer care, and technical support.



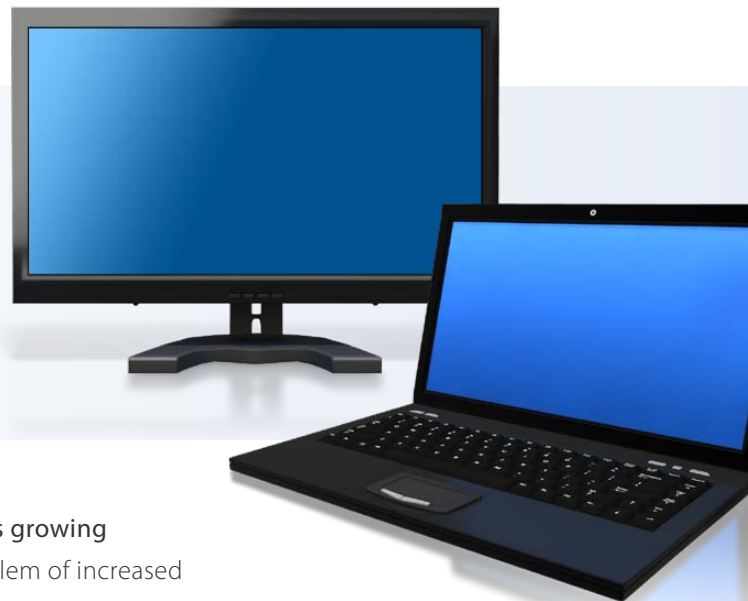
This mix of tools presents a labyrinth of workflows for the average customer-care agent to manage, especially under the pressure of an organization that measures performance predominantly by average call handle times.



In addition, providers may supplement existing software with “point solutions”: software systems designed to address particular technology problems that arise among users.

Often, agents find themselves toggling between various screens and applications to handle the needs of their customers, a manual process that allows a finite level of efficiency—since an agent can only work so fast—and introduces a greater potential for human error by the agent.

Ironically, support providers which are in business to monetize this growing consumer demand for support end up suffering from the very problem of increased complexity that they are working to resolve for consumers.



Intelligent support systems offer a path away from this constraint towards improved service delivery capabilities.

As DSPs and BPOs evaluate intelligent support solutions, several key directives should be considered:



Guarantee a high level of accuracy in problem resolution.

An innovative, highly integrated solution with many features is not worth having if it does not quickly provide diagnosis and an accurate path to resolution. Ultimately, any support system must provide high accuracy while retaining the flexibility to handle evolving issues.

Scalability.

As the number and complexity of devices and services in the home increase, a support solution must be able to present the appropriate resolution steps and technical knowledge to agents in order to address the many problems that connected consumers experience. Often organizations attempt to overcome problems in the scalability of their support tools by inserting more tiers of service escalation (involving additional head count) and by giving their service agents an expanded set of software tools to address new technology issues. In an ever-changing environment, solutions that can scale to address new issues ultimately minimize both capital and operational costs and produce a better service experience.

Integration with existing systems across departments.

Current tools often lack the kind of comprehensive information such as call logs, network performance, incident history, billing information, and other data necessary to fully address customer care issues without escalation (and higher costs). Solutions that tie into a service provider's existing framework for CRM, billing, and operations will minimize integration costs and enhance the quality of the service delivered. In addition, well-integrated systems can better allow multiple departments within the DSP to work together more closely to please customers, drive incremental revenues, improve interdepartmental communication, and promote greater alignment of overall business strategy throughout the organization.

Holistic and unified.

A service provider's support system should span the entire range of the DSP's network and include a variety of capabilities, from Tier 0 troubleshooting solutions to advanced adaptive knowledge databases, which allow the organization to adequately address the wide range of technology issues that may arise. Solutions should handle multiple tickets (incidents) through a unified workspace, create multiple, high-quality touch points with the consumer, and employ dynamic knowledge management rather than static FAQ systems.

Automatically access a history of issues or problems with specific devices or services.

Solutions powered by a knowledge management system that are contextual to a consumer's network environment will allow end users and customer support agents to collaborate in problem solving. As the number of issues proliferates, each adds to the knowledge base and, theoretically, increases the capacity of the DSP to resolve more issues. Not only will the information available to agents be more current, but intelligent systems can also reduce the time required to resolve similar occurrences, supplying data on common problems and resolutions that are unique to the service provider's offerings and contextual to the end user's network environment.

Provide customers with a seamless experience.

Rather than shuttling customers to multiple departments, the solution should allow a single agent to address a variety of issues beyond incident resolution. Offering customers a “one-stop shopping” service will help maintain customer relationships, allow up-sell of additional services, and minimize the time necessary for the support call.

Adaptable solutions.

The best case scenario for service providers is for problems to be resolved proactively, preventing a support call in the first place. By employing adaptive intelligence, future technical support solutions promise to use each incident to improve the solution database, further reducing support costs while improving the customer experience (Figure 4) and, in many cases, eliminating the need for human agent interaction. Intelligent “always on” tools can provide support beyond the break-fix model to address the consumer’s entire digital life experience.

Effectiveness of Support Solutions over Time

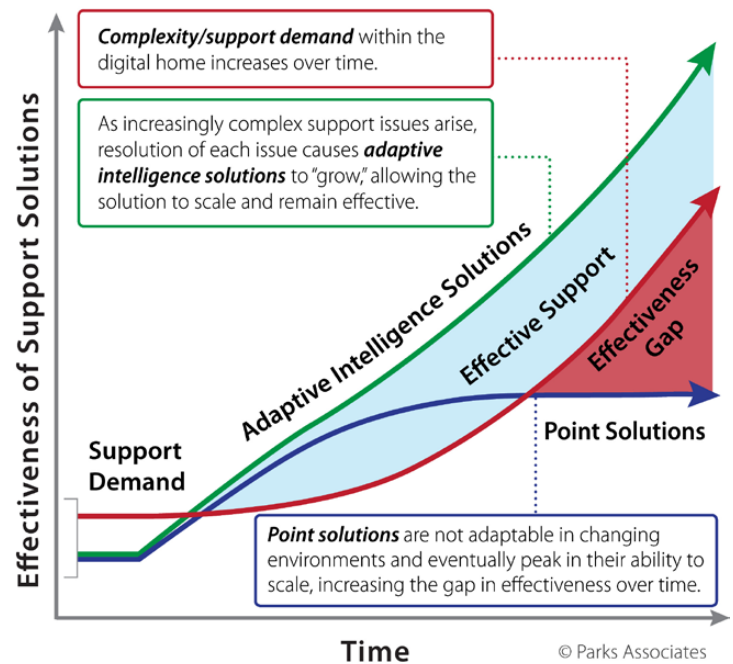


Figure 4: Effectiveness of Support Solutions over Time

In order to address the consumer’s future needs and to provide a service experience that will drive satisfaction and new revenues, support solutions must be smart, flexible, scalable, integrated, and focused on the customer experience.

Therefore, service providers need intelligent systems that:

- work for all technology users and data consumers;
- are contextual to each individual’s needs, both support staff and the end user alike;
- are built into care systems and managed devices to help information and technology manage itself; and
- facilitate holistic technical support and collaborative customer care, providing capabilities beyond what any single user, advanced or novice, could achieve on their own.

IN A PERFECT WORLD

» no support issue would be “out of scope” and cause a service provider to turn away a subscriber in need. Thus, the players who are first to market with a solution that closes the technical support gap for both consumers and support agents will quickly capitalize on a largely untapped market opportunity, which will grow to \$8.25 billion by 2017, according to Parks Associates.

About Troppus Software



Incorporating intelligence into real world technology enablement solutions is the ongoing mission of Troppus Software, a leading customer service and support software development company. Looking at support from a whole new direction, as hinted by reading their name backwards, it is their goal to transform the technical support industry by changing the very philosophy and approach to customer care itself.

Troppus Software has developed a comprehensive customer service and support delivery platform incorporating a SaaS solution for consumers that interfaces with an advanced incident management application for agents. The Troppus suite of products leverages the Semantic Knowledge Management System™ (SKMS™), a proprietary adaptive intelligence engine for knowledge management, content management and business intelligence. With the ability to create dynamic support content, the SKMS™ ensures that no support request is out of scope and that automated solutions are proactively built into support tools to enable consumers to manage their digital lives rather than purely react when a problem arises. An appropriate analogy would be to compare the wisdom of maintaining your personal wellbeing applied to your digital life; managing health and not illness.

The Troppus solution suite is known by the name Symbi, which represents the enablement of a symbiotic relationship between people and their technology.



Symbi simplifies the growing complexity of the digital landscape, delivers significant operational savings and capitalizes on multiple monetization opportunities including rich consumer insight data.

Troppus is developing close partnerships with a variety of CE and middleware manufacturers to increase the breadth and depth of network discovery and device identification capabilities.

Troppus Software was established in 2009 with the launch of its version 1.0 product. Symbi version 3.6, will be launched in September, 2013. Troppus Software was acquired by EchoStar Corporation as a wholly-owned subsidiary in January, 2011.

Visit www.meetsymbi.com, call (303) 554-2050 or email: info@meetsymbi.com

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As a director of research at Parks Associates, 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 is a regular speaker and moderator at international industry events.

Brett has spent over eighteen years in the industry as an analyst, executive manager, and entrepreneur. Previously, he founded and served as vice president for Teligy, a software company specializing in software for wired and wireless communications systems. Brett established new divisions for networking and audio/multimedia software for Intelligraphics. He has also been involved in the development and marketing of early-market products for 802.11 wireless networking, VoIP, and other technologies. Brett 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.

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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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