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It's Time To Give Virtual Agents Another Look

by Diane Clarkson
for eBusiness & Channel Strategy Professionals



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by **Diane Clarkson**

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EXECUTIVE SUMMARY

Efficient online self-service is a critical component to the online purchase experience: 57% of US online consumers report that they are very likely to abandon an online purchase if they cannot find quick answers to their questions. However, satisfaction with online self-service has room to improve. To reinvigorate online customer service, eBusiness professionals should give virtual agents another look. Virtual agent technology is evolving, with capabilities including natural language processing and the ability to integrate with enterprise systems. Virtual agents offer compelling business benefits, including enhancing customer experiences, reducing live help costs, and driving cross-sells.

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NOTES & RESOURCES

Forrester used data from the North American Technographics® Customer Experience Online Survey, Q4 2009 (US) in the writing of this report.

Related Research Documents

"How To Improve Searchable Self Help Online"
September 11, 2009

"Online Retail Customer Service Needs Some Improvement"
August 7, 2009

"Travel Customer Service Is Far From Perfect"
July 27, 2009

CONSUMERS CRAVE SELF-RELIANCE FOR SERVICE

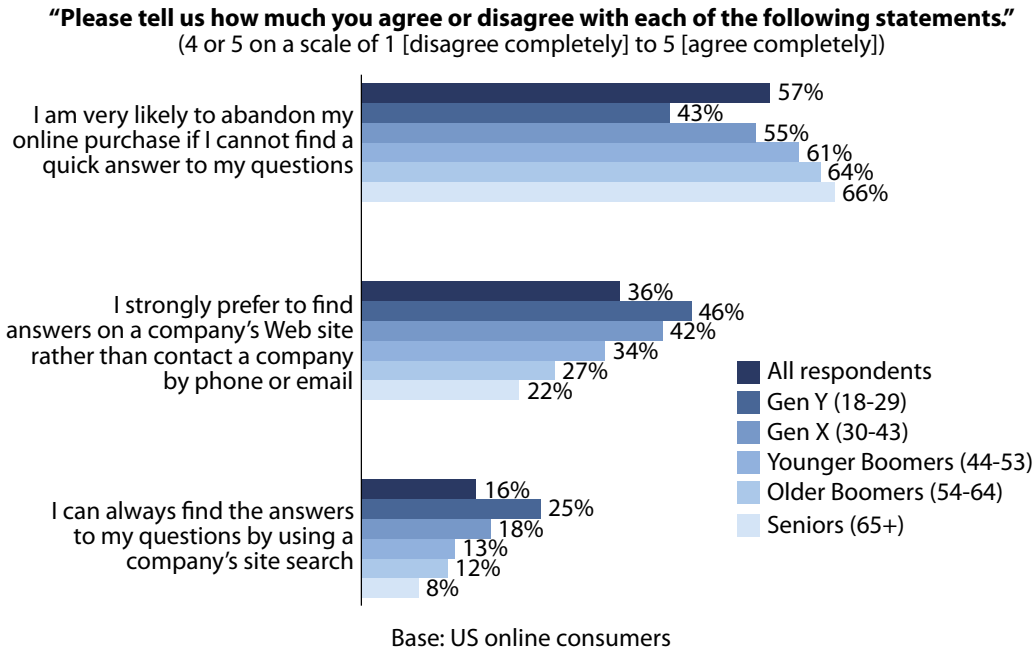
The downturn in the economy has driven eBusiness professionals to increasingly look to strategies that reduce customer service operational costs by deflecting agent-assisted costs. Here's an important fact: Your customers don't want to have to call you either.

Consumers Want Speed And Self-Help

There is a marked disconnect between the importance consumers place on effective online self-service and the experience many Web sites are providing. Our survey of 4,653 North American consumers reveals that:¹

- **Consumers will abandon an online purchase without fast answers.** Online self-help affects the bottom line. Among US online consumers, 57% report that they are very likely to abandon an online purchase if they cannot find quick answers to questions (see Figure 1). This need for fast resolution increases with age. Among Gen Xers (ages 18 to 29), 43% will likely abandon an online purchase without a fast answer; this sentiment increases to 66% among US online consumers older than 65.
- **Consumers want to be self-reliant online.** Thirty six percent of US online consumers strongly prefer to find answers for themselves rather than reach out via telephone or email. In fact, only 28% of US online consumers prefer to contact companies via telephone or email rather than using a company's Web site to get answers to their questions.
- **Satisfaction with online self-service has room to improve.** Consumers are more likely to be satisfied with agent-assisted customer service than with self-service. Fifty-nine percent of consumers who used keyword searches were satisfied, as were 56% who used help or frequently asked questions (FAQs) (see Figure 2).

Figure 1 Customers Are Likely To Abandon A Site If Quick Answers Are Not Available

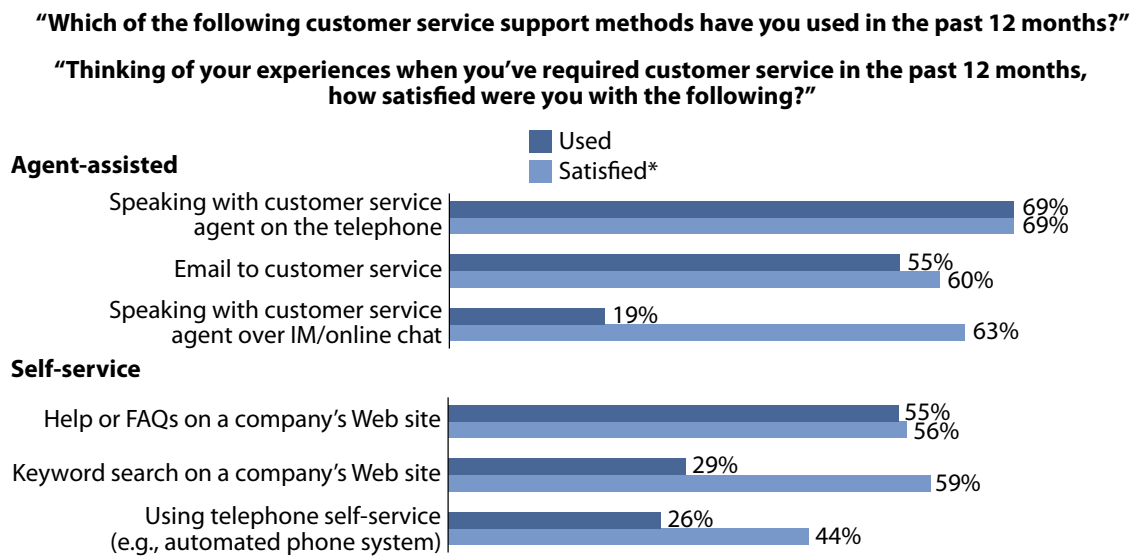


Source: North American Technographics® Customer Experience Online Survey, Q4 2009 (US)

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Source: Forrester Research, Inc.

Figure 2 Self-Service Has Room For Improvement



Base: US online consumers who used any customer service method in the past 12 months

Source: North American Technographics® Customer Experience Online Survey, Q4 2009 (US)

*Respondents answering 4 or 5 on a scale of 1 (extremely dissatisfied) to 5 (extremely satisfied)

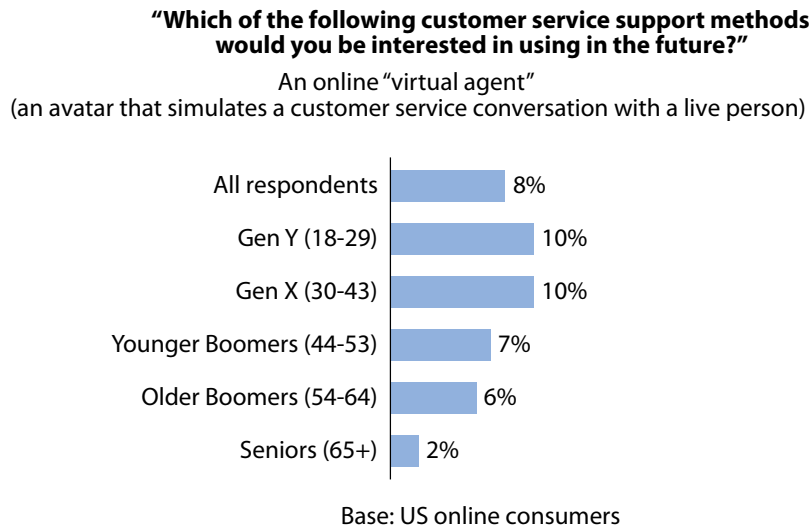
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Source: Forrester Research, Inc.

IT'S TIME TO GIVE VIRTUAL AGENTS ANOTHER LOOK

Virtual agents — typically with a digitalized human appearance — are software services that provide automated assistance by simulating a two-way conversation with customers. Virtual agents are used for many functions, most commonly to help consumers perform online tasks or locate online information. Consumers are not yet demanding virtual agents. In fact, in a recent survey, only 8% of US online consumers indicated an interest in using a virtual agent, with interest waning with older demographics (see Figure 3). This is likely due to little exposure to virtual assistance and the lackluster performance of many virtual agents when it comes to complex questions.

Figure 3 Consumer Interest In Virtual Agents Is Limited Today



Source: North American Technographics® Customer Experience Online Survey, Q4 2009 (US)

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Source: Forrester Research, Inc.

Virtual Agent Technology Is Evolving

Today's virtual agent technology has evolved from the days of Microsoft's Clippit. Clippit was among the earliest interactive assistants. It was an animated paperclip that integrated with Office help content. It first appeared in Office 97 when the program determined that a user might need assistance searching help or using Office features (see Figure 4). Arguably, one of the measures of Clippit's impact is in the number of parodies it inspired, and the feature was ultimately not included in Office XP. Today, we find that:

- **Adoption of agent technology by firms is nascent.** While most companies have not readily embraced virtual agents to date, there have been several early adopters. One example is IKEA, which launched its virtual agent “Anna” in 2004. “Anna” speaks 10 languages and guides users through IKEA's Web site (see Figure 5). Alaska Airlines launched “Ask Jenn” in 2008, and

Continental Airlines introduced “Alex” in mid-2009, both using Next IT technology.² These airline virtual agents provide assistance with site search and open relevant pages for the user, covering topics such as flight rules, city guides, and visa information. Other organizations that have used virtual agents include Verizon and the US Army.

- **Natural language processing is becoming more sophisticated.** One of the main limitations of many virtual agent solutions has been keyword search architecture, but a few firms are helping to overcome those problems. As an illustration of the limitations, telling Continental Airlines’ Alex “I left my BlackBerry on the plane” helpfully opens the “Report Lost Items” page and offers related FAQs (see Figure 6-1). However, asking the question with the wording “I left my BlackBerry on a flight” does not produce the same relevant results (see Figure 6-2). Natural language processing (NLP) is growing more sophisticated. VirtuOz.com offers advanced NLP as part of its conversation-based architecture, while Next IT has partnered with Language Weaver to offer ActiveAgent. This advanced NLP allows users to engage in an interactive dialogue and answer complex questions (see Figure 7).
- **Today’s technology can connect with enterprise systems.** Connections with enterprise systems make integration into customer relationship management (CRM) and eCommerce platforms possible, which in turn makes situation-specific assistance possible, such as extracting a customer’s purchase history, fulfillment status, and recording the virtual conversation into the customer’s CRM profile. All of these features can significantly enhance both the user experience and the virtual agent’s ability to troubleshoot more complex issues.

Figure 4 Virtual Agents Offer Varying Levels Of Sophistication

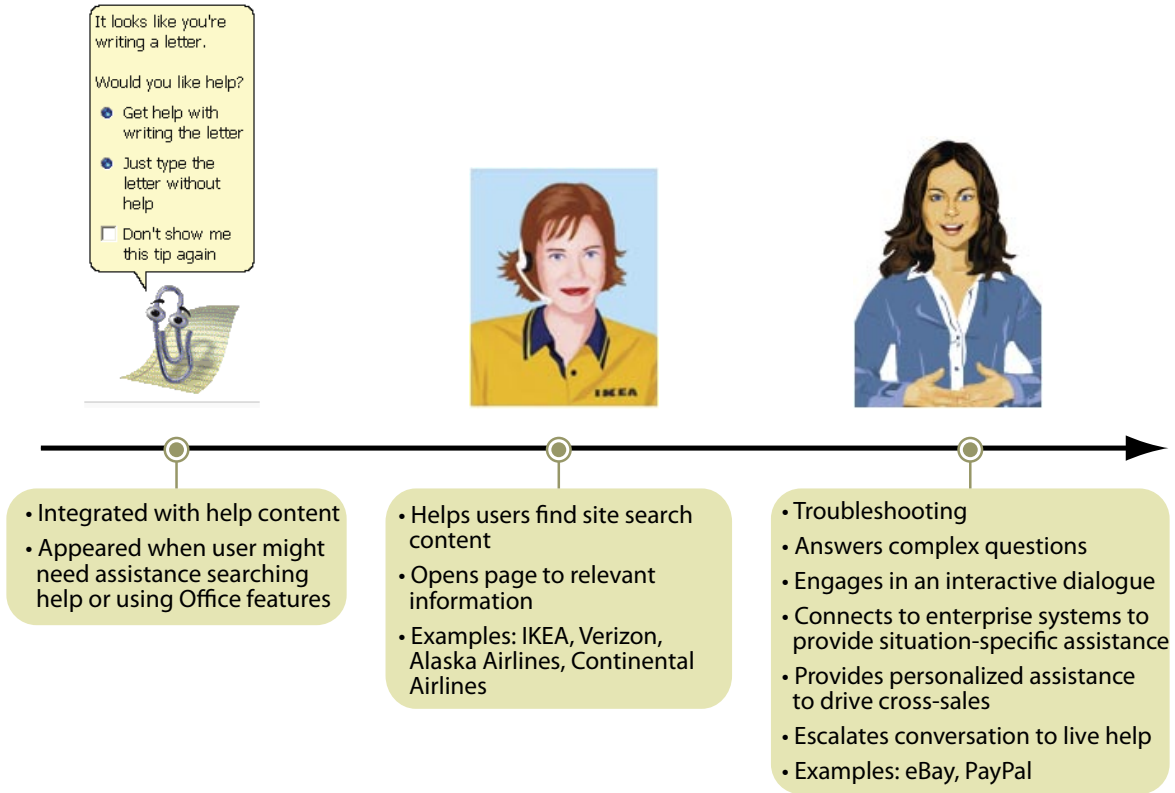
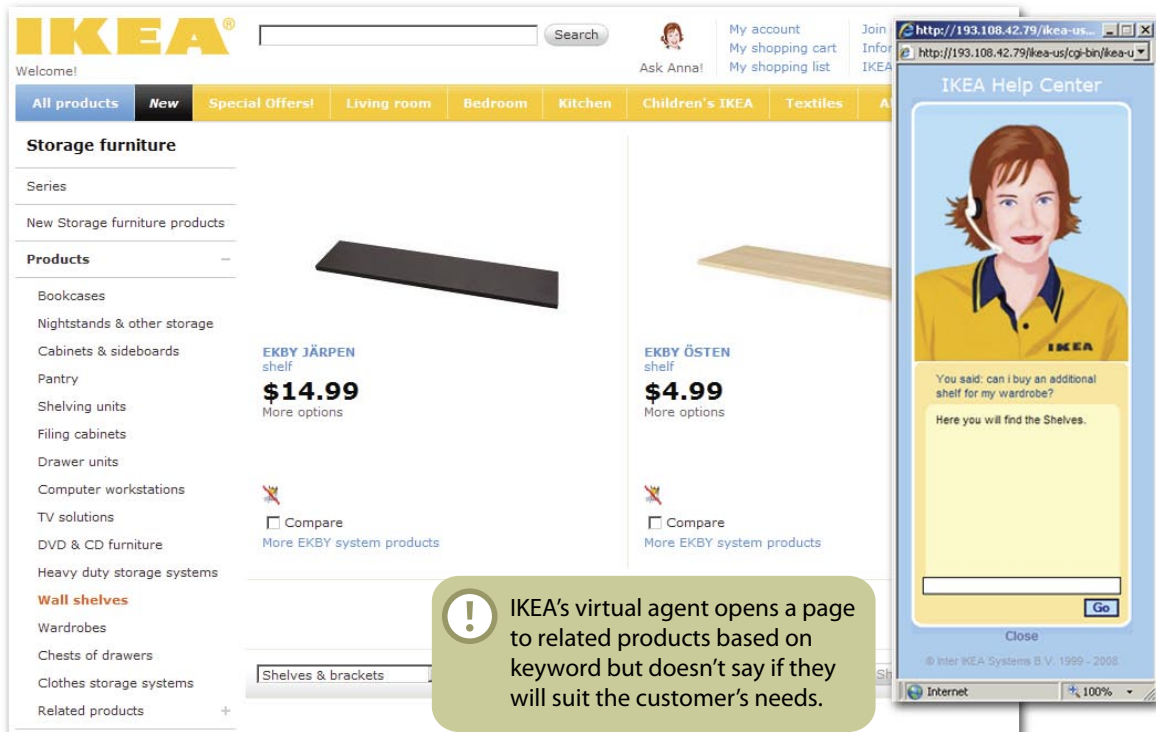


Figure 5 IKEA's "Anna" Helps Customers Find Related Information, But Keyword Search Has Limits



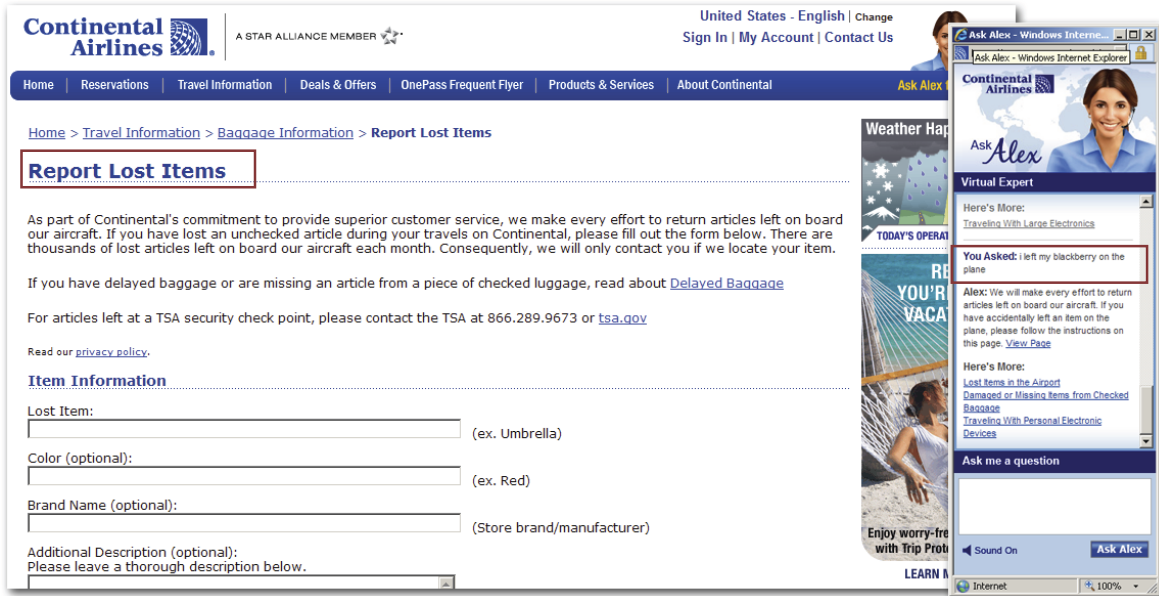
Source: IKEA Web site

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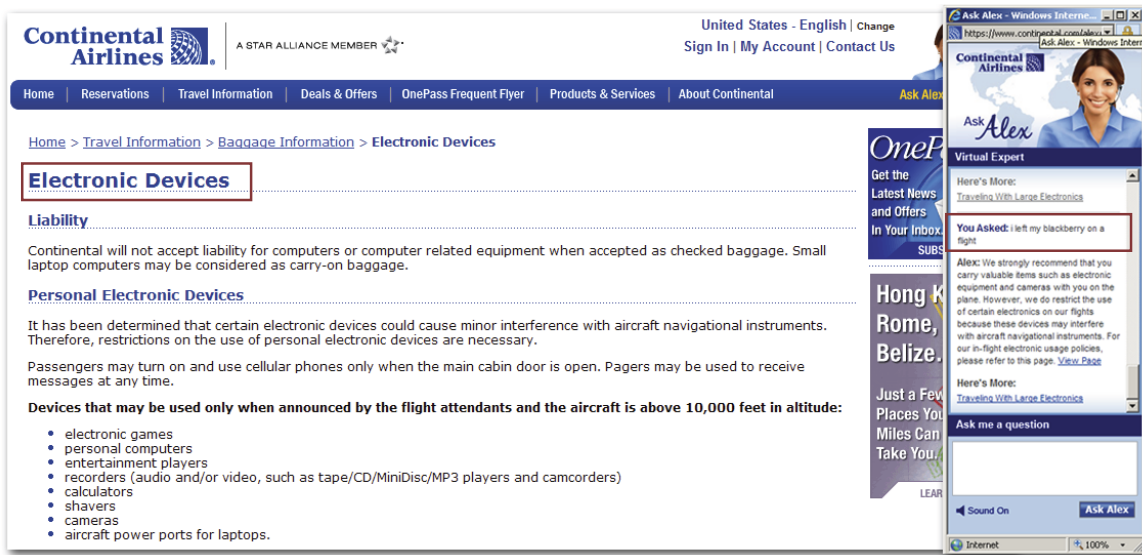
Source: Forrester Research, Inc.

Figure 6 Keyword Search Architecture Is A Limitation Of Some Virtual Agent Solutions

6-1 Natural language is a challenge with some virtual agents



6-2 A subtle variation in wording produces different (and irrelevant) results



Source: Continental Airlines Web site

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Source: Forrester Research, Inc.

Figure 7 PayPal's "Sarah" Has Interactive Dialogue To Provide Situation-Specific Assistance



Source: PayPal Web site

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Source: Forrester Research, Inc.

Virtual Agents Offer Compelling eBusiness Benefits

Virtual agent technology can provide several compelling benefits, including:

- **Enhancing the user experience.** Virtual agents engage with users by providing immediate answers without interrupting an online session. At its best, a virtual agent can provide a personalized and relevant support experience. Finaref, a French financial services company, implemented the virtuOz virtual agent solution in November 2008 and reported a customer satisfaction rate of more than 80% among its users in May 2009.³ Virtual agents' ability to positively affect user experience will be enhanced with technology developments such as virtuOz's recent feature that can embed a virtual agent into an iPhone application.
- **Reducing customer service operational costs.** Agent-assisted customer service interventions are notably more costly than self-service, with technical support telephone contacts costing \$12

and upward per contact (see Figure 8). A successfully implemented virtual agent will deflect contacts from more costly channels. Hold times will be reduced because high-volume and low-value calls will be diverted. Sophisticated solutions that include escalation triggers will transfer the conversation content to the telephone agent and shorten resolution times. Six months after its launch, Alaska Airlines reported that its Next IT virtual agent handled 3% of all of its interactions with customers, dealing with an average of approximately 6,000 queries per day (and as many as 25,000 queries per day during last winter's snowstorms).⁴

- **Increasing sales.** To date, sales objectives have not been widely adopted for virtual agents. However, as the technology becomes more sophisticated, its potential to drive cross-sales by dynamically providing personalized product suggestions will be leveraged by more companies. Finaref reported that when the virtual agent is present on the home and product pages, the overall conversion rate to purchase of the site increases by 1.8% and 2.7%, respectively.⁵ Further, when customers have a dialog with the virtual agent, they are 15 times more likely to purchase.
- **Providing market intelligence.** Analyzing conversation content between customers and virtual agents can unearth a broad range of intelligence, such as product issues, consumer sentiment, Web site issues, and gaps in marketing communications.

Figure 8 Virtual Agent Is A Cost-Effective Alternative To Agent Intervention

Customer service channel	Approximate cost per contact
Call center technical support	\$12 and higher
Call center CSR	\$6 and higher
Web chat or callback	\$5 and higher
Email response	\$2.50 to \$5 and higher
Virtual agent	\$1.00 or less
Automated speech response	\$0.50 or less
IVR touchtone response	\$0.30 or less
Web self-service	\$0.10 or less

↑
Technical complexity

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Source: Forrester Research, Inc.

WHAT IT MEANS

VIRTUAL AGENTS COULD REVOLUTIONIZE ONLINE SELF-SERVICE

eBusiness professionals have typically viewed virtual agents as a tool to guide consumers through self help content. Virtual agent technology is evolving into a proactive resolution alternative. Its ability to resolve increasingly complex consumer issues through personalized conversations and data from other enterprise applications will make virtual agents a powerful troubleshooter. This will gain favor with consumers who are craving speedy self-reliance and eBusiness professionals who are seeking to deflect agent-assisted interactions and provide a more meaningful online experience. Implementation costs and time frames depend on the complexity of the virtual agent and the extent to which it will be integrated into existing systems. eBusiness professionals — particularly those in retail and travel — should consider short- and longer-term virtual agent strategies if they:

- **Experience high-volume low-value agent interactions.** Virtual agents can reduce these higher-price transactions and reduce wait times for higher-value customer interactions.
- **Provide extensive FAQ or product content.** Virtual agents can enhance users' experiences by facilitating navigation throughout voluminous content.
- **Want to provide a more personalized online experience.** This objective requires a more sophisticated solution involving enterprise integration.
- **Offer products that have online cross-sell or upsell potential.** This, too, requires a more sophisticated solution than other objectives. The ability to cross-sell or upsell will be most successful when it is accompanied by a personalization strategy and a high level of enterprise integration.

SUPPLEMENTAL MATERIAL

Methodology

For the North American Technographics® Customer Experience Online Survey, Q4 2009 (US), Forrester conducted an online survey fielded in October 2009 of 4,653 US individuals ages 18 to 88. For results based on a randomly chosen sample of this size (N = 4,653), there is 95% confidence that the results have a statistical precision of plus or minus 1.4% of what they would be if the entire population of US online individuals ages 18 and older had been surveyed. Forrester weighted the data by age, gender, income, broadband adoption, and region to demographically represent the adult US online population. The survey sample size, when weighted, was 4,623. (Note: Weighted sample sizes can be different from the actual number of respondents to account for individuals generally underrepresented in online panels.) Please note that this was an online survey. Respondents who participate in online surveys have in general more experience with the Internet and feel more comfortable transacting online. The data is weighted to be representative for the total online population on the weighting targets mentioned, but this sample bias may produce results that differ

from Forrester's offline benchmark survey. The sample was drawn from members of MarketTools' online panel, and respondents were motivated by receiving points that could be redeemed for a reward. The sample provided by MarketTools is not a random sample. While individuals have been randomly sampled from MarketTools' panel for this particular survey, they have previously chosen to take part in the MarketTools online panel.

ENDNOTES

- ¹ Source: North American Technographics Customer Experience Online Survey, Q4 2009 (US).
- ² Next IT introduced partnerships with Alaska Airlines in early February 2008 and with Continental in July 2009. Source: "Alaska Airlines, Horizon Air Introduce Virtual Assistant at Alaskaair.com," Next IT press release, February 7, 2008 (http://www.nextit.com/Ask_Jenn_Launch.ashx) and "Continental Airlines Revolutionizes Customer Support With Online Virtual Expert," Next IT press release, July 30, 2009 (http://www.nextit.com/Continental_Airlines_Live.ashx).
- ³ In a news piece on its Web site, Finaref reports that it implemented virtual adviser "Nicolas" in November 2008, and by March 2009, it had achieved a customer satisfaction rate of more than 80%. Source: "A Virtual Adviser: Nicolas Is A Big Star," Finaref press release, May 24, 2009 (http://www.finaref.com/A-virtual-adviser-Nicolas-is-a-big.html?id_mot=).
- ⁴ Next IT reports that Alaska Airlines' "Jenn" fielded more than 4 million queries in the six months following its launch in February 2008. Source: Leonard Kile, "Speech Takes Airline To New Heights," *Speech Technology*, July/August 2009 (<http://www.nxtbook.com/nxtbooks/infoday/spechtechnology0709/#/36>).
- ⁵ A virtuOz case study on Finaref outlines the financial service's company's goals of acquisition and cross-and upselling. In addition to the virtual agent impact on sales, the case study also reports that users are six times more likely to visit the product pages and four times more likely to purchase a new product when the virtual agent is present compared with banner ads. Source: virtuoz Web site (<http://www.virtuoz.com/solutions/virtual-agents/for-sales.html>).

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