**speechTECHNOLOGY**
MAGAZINE

# Most Innovative Solutions Awards

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*Speech Technology Magazine* (STM) is recognizing companies using creative speech-service applications. Organizations worldwide are increasingly using speech to improve customer service, increase revenues, empower workers and introduce other creative solutions. According to recent research from Harris Interactive and Nuance, nine out of 10 consumers think speech recognition is a better alternative than touch-tone systems. Another study from Gartner Custom Research and SpeechWorks found that 90 percent of caller respondents said they would be either more or equally comfortable the next time they used a speech recognition interface based on increased awareness of what to expect from the speech experience. In addition, The Zelos Group reports that the market for enterprise and telco-grade voice processing infrastructure will grow from $250 million in 2002 to $600 million in 2007.

We have recognized solutions that have impacted organizations in ways that are innovative and unique. These solutions are changing the way companies do business and proving that speech will play a major role in a company's customer service, marketing and sales strategy. From a speech-enabled automated banking machine to a customer service portal to corporate dialing systems, these solutions are empowering organizations in innovative ways. Many of these companies will discuss their thoughts about using speech solutions at SpeechTEK 2003.

## AT&T's Automated Help Desk



AT&T's Automated Help Desk is a natural language spoken dialogue application, using large vocabulary speech recognition and text-to-speech technologies, along with natural language machine learning techniques. Customers can speak naturally and engage in meaningful dialogue with the system for product information, software installation and other technical support, and access to sales representatives.

According to Mazin Rahim of AT&T: "At inception, there was minimal speech input data available to design and train the system. New algorithms for speech recognition and natural language understanding were developed to leverage the information obtained in Web data and incoming e-mails about the nature of incoming customer inquiries. The technology components were assembled from other AT&T voice-enabled systems and a new dialogue manager technique was developed to enable easy changes to the application over time. As customer calls are received, the technologies continuously improve the system's performance. Web-based tools monitor, log and report detailed call analysis and statistical information."

## BBC Technology

BBC Technology, the division that provides technology services to the BBC, has introduced Telephonetics' ContactPortal to more than 20,000 BBC employees across its London sites. The system enables employees to make calls by saying the name of the person they want to be connected to.

According to Chris Bell of BBC Technology: "This was a business efficiency initiative to improve the service offered by switchboard, as well as containing operating expenditure. For BBC London staff, it now means that they have an alternative to looking up directory entries or contacting the switchboard when needing to call colleagues, thus saving time and money. The feedback so far has been very positive with staff appreciating the new facility."

## Bell Canada

As part of its mission to be 'Better, Faster and First,' Bell Canada has implemented a speech persona by the name of Emily, developed by Nuance Communications to be the automated voice portal for 310-BELL(2335) customer services.

According to John Sheridan of Bell Canada: "In years to come we'll look back and see that Emily was one of the very important steps we took to bring simplicity to customers. She's proof that technology can be used to make things easier for customers, not more complicated. Emily is a symbol of change for the company and its customers and we expect that she'll become the inspiration for re-inventing the ways in which we serve our customers."

## Blackfoot Telecommunications Group

Blackfoot Telecommunications Group has launched Telelogue's Voice Directory Assistance (VDA) to provide 411 services to its subscribers with live operator services when needed. The Telelogue service runs on a system collocated at an operator services company's central office and integrated with its proprietary technology platform.

According to Michelle Rush of Blackfoot: "Our company chose to implement a speech application because there are significant cost advantages and efficiencies to an automated service. Telelogue has achieved a product which personalizes the service in such a manner that end users do not realize they are speaking with a mechanized system. Telelogue's VDA has handled more than 10,000 listing requests and has fulfilled 58 percent of all calls requesting a business or government listing."

## Cellcom

Cellcom, a large Israeli mobile operator, has upgraded the corporate address book from its original Intranet HTML version into a speech-driven service using Natural Speech Communication's (NSC) ASR product, which enables easier communication between employees. The service is running as an "all-in-one-box" solution including telephony interface, NSC FPCI board running ASR channels and the application.

According to Michael Rotem of Cellcom: "Cellcom is a mobile operator that is constantly looking at new technologies and new ways for revenue generation. The company believes speech-enabled services will help reduce operational costs and create new revenues. The service enabled a better and easier communication between employees."

## CIBC

In October 2002, CIBC introduced Audio Access Automated Banking Machines (ABMs) as part of its plan to expand barrier-free access and upgrade ABM service. A total of 600 Audio Access ABMs will be in place at more than half of CIBC branches by September 2003. Audio Access ABMs allow customers with visual impairments and the elderly to plug personal headphones into an audio jack and follow voice instructions using Speechify Solo in English or French for completing any ABM transaction using the number keypad.

According to Domenic Ciccone of CIBC: "Meeting the accessibility needs of all of our customers is one of CIBC's highest priorities. Our goal of making an Audio Access ABM available at all of our 1,100 branch locations will help make it possible for more than three million Canadians with visual impairments to enjoy greater independence in managing their finances by banking at ABMs conveniently and with confidence."

## Davey Tree

Davey Tree updated its paper and faxed-based expense and reporting system with a VoiceXML-based solution powered by Vocalocity. Now Davey Tree's field service crews use cell phones to call into an automated system that walks them though a series of steps to record their daily activities.

According to Thomas Countryman of Davey Tree: "Our field management will no longer need to spend part of their weekend time checking time reports and compiling reports to pass on to upper management. This gives them more personal time to spend with family, hobbies and other things besides work. They can now log onto a Web site, check the timesheets, make changes if necessary and approve them. Once they are approved, their work is done."

## Domino's Pizza

Jacent recently launched OrderStream for Domino's Pizza, a voice-ordering solution for automating takeout and delivery operations. The solution allows Domino's customers to place orders over the telephone without a human CSR. Orders are then sent into the restaurant's point-of-sale system.

Dan Lewis of Domino's Pizza adds, "At first, I was worried about what they (the customers) would think, so I called them and asked. About 80 percent said they liked it and would use it again, 10 percent said they loved it and now use it exclusively, and a minority of customers were unsure or didn't want to use it."

## DYMO

DYMO, a manufacturer of electronic and PC-based label makers, deployed Tell-Eureka's LevelOne Virtual CSR self-service solution to resolve common technical support problems. Now callers can follow step-by-step troubleshooting instructions from the automated LevelOne system freeing live agents to concentrate on more complex problems. LevelOne streamlines processing by interfacing directly with Dymo's call tracking system. According to Joseph Horvath of DYMO: "Our technical support team was fielding a significant number of repetitious hardware calls. Our simple troubleshooting steps would clearly either resolve the problem over the phone or result in a repair/return authorization of the product. Because we had recently redesigned our RMA system we were well prepared to introduce and integrate a self service speech solution which would deliver value to our customers while at the same time automate a somewhat repetitive task and free our agents to handle more challenging issues. Technology will finally allow us to manage the Web and speech content with a single interface reducing the cost of ongoing maintenance."

## Ford

The Ford Model U Concept Sport Utility Vehicle, with speech technology powered by SpeechWorks, is focusing on a more "conversational" approach to speech recognition in the vehicle. This new SUV allows the driver to interact in a more dialog-oriented fashion. System functions that can be controlled include navigation, cellular phone, entertainment, climate control, the retractable roof and personalization preferences for additional drivers.
According to Bryan Goodman of Ford: "From a usability standpoint, we wanted a system that was easy to use and easy to learn so that it could be useful whether it's a vehicle you've driven every day for years, a rental car or a brand new car you just drove off the lot. It also allowed us to push the envelope in terms of what user-interface technology is capable of in a fairly realistic system that's not light-years away. It was built as a technical and design exercise to show possibilities for several decades to come."

## Lloyds TSB

Lloyds TSB group has made its employee share scheme registration a completely paperless process. SRC's hosted speech service handles three types of share schemes and enables callers to register, choose investment options and select how dividends are paid. The service enables adherence to strict U.K. financial authority regulations.
According to Chris Bush of Lloyds TSB: "Lloyds TSB is using the service to cut out expensive paper processes, and offer staff a viable alternative to Web-based registration. Using call center agents is more expensive and runs the risk that an agent may discuss choices with an employee contravening regulatory guidelines. The speech recognition service has improved efficiency dramatically and cut down on the number of queries our support team has to deal with."

## Mashreqbank

Based in the UAE, Mashreqbank's IVR service now offers Toll Free Voice Recognition Banking in both English and Arabic. The system has been designed with a keypad navigation breakout for noisy environments and the control always remains at the callers command. According to Karan Kapur of Mashreqbank: "This is an unparalleled 'hands-free' convenience to existing customers and new prospects. Over 50 percent of the annual 3 million - plus inbound calls are already serviced end to end on IVR. Voice recognition menus now take caller convenience to the next level. Migration to voice navigation is taking off, the market is global, and this shows it can be done successfully in any language and for a varied audience. With a more natural interface, more calls can be migrated from live person support to the IVR."

## Microsoft

With Fonix VoiceDial, users can dial any phone number by voice on the Pocket PC Phone Edition. It has a small memory footprint and no voice training is required.
According to Jeff McKean of Microsoft: "Fonix VoiceDial offers Pocket PC and Smart Phone users a natural and intuitive user interface. It is a valuable application that takes advantage of the features of Windows Powered

devices. Fonix VoiceDial is a great example of a company that has capitalized on the Windows Powered software to create a solution that makes devices not only easier to use but safer in many situations, like dialing a phone number while driving."

## Property24

Property24 is offering househunting by phone for the local real estate market in South Africa. Named Property24 Voice, this service brings the availability of an Internet home search within reach of anyone with an ordinary landline or cell phone with technologies from VoiceGenie, SpeechWorks and Intelleca Voice & Mobile (Pty) Limited.

According to Richard Gahagan of Property24: "Our estate agent clients are looking for simplicity, low cost and value add. The Property24 Voice service offers just this. The Property24 Voice value add is often used by subscribing agents to differentiate their service to the home seller over what non Property24 agents can offer. By building a service that fits in with an estate agent's daily routine, takes minimal time and effort and reaps the reward of homebuyer referrals for the agent, the Property24 Voice service streamlines property listings."

## Ramapo Radiology Associates

Dragon NaturallySpeaking from ScanSoft with VoiceOver tools from Voicebrook allows radiologists to focus on patient care with a prompt diagnosis, and eliminates time-intensive administrative tasks. The solution includes a medical vocabulary and complete customization, allowing Ramapo's radiologists to create personalized documentation.
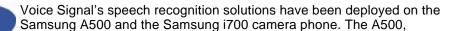
According to E. Ross Weinstein, President and CEO of Voicebrook: "Speech recognition solutions can effectively replace traditional transcription, speeding response to referring physicians, a key service differentiator. Document Creation in real-time can be achieved without significantly altering the radiologist's daily workflow. In addition, speech recognition software is never sick, doesn't take vacations, and never has personal problems. About the only thing that voice technology software has in common with a transcriptionist is that it can talk back to you."

## Samsung

Voice Signal's speech recognition solutions have been deployed on the Samsung A500 and the Samsung i700 camera phone. The A500,

dialing solution, and the i700, distributed by Verizon, has a full featured, voice activated phonebook. All the voice activated features are supported by speech output, so that the phone is capable of being used more safely in a "hands free/eyes free" mode.

According to Peter Skarzynski of Samsung: "Consumers now demand single handheld devices that meet their complete voice and data management needs. By combining the features of Samsung's wireless phone technology with Voice Signal's speech recognition technology, consumers now have the power to stay in touch conveniently and accurately through hands-free communication. The enthusiastic response to the speech recognition applications on the A500 and the i700 reinforces our conviction that speech recognition is a highly valued application to end user."

## SingPost

After the introduction of speech recognition from SpeechWorks to SingPost's Postal Code Helpline, automation rates rose to more than 70 percent, up from 30 percent using the touch-tone system. This illustrates the high level of customer satisfaction by allowing customer service representatives to concentrate on more complex inquiries.

According to Olivia Chua of SingPost: "We decided to use speech recognition technology to enhance and improve the previous touch-tone system which was quite complex. Due to there being more than 3,700 street names in Singapore, too many options had to be keyed using the telephone keypad. With the speech-activated Postal Code Helpline, callers simply speak."

## Thrifty Rent-A-Car

Thrifty Rent-A-Car offers a speech-activated reservation line, powered by SpeechWorks, for rate-check offering both personalization with Loyalty Program member rates as well as the ability to transfer reservation callers to live agents with intelligent screen pop. The system has a vocabulary recognition of 70,000 words including dates, times, car sizes, city names and airports, as well as utilizes natural language and "barge-in" capabilities.

According to Bob DuPont of Dollar Thrifty Automotive Group: "Thrifty gets a large volume of customers who call simply to check car rental rates (at the same time they're calling our competitors, to make sure they're getting the best deal) they may have no intention of booking at the time of their initial call. It's been an effective way for us to keep our call center costs down. It frees our telephone sales agents to focus on those customers who want to actually book a car (and are not just rate shopping) and also frees them to focus on better selling our product."

**Ticketmaster**

Based on the Edify multi-channel solution and leveraging SpeechWorks' OpenSpeech Recognizer software, Edify provided Ticketmaster with a speech-enabled call management system.

According to James Boyce of Ticketmaster: "Ticketmaster recognized the importance of moving beyond touch-tone and traditional call center. The company now successfully manages from 10s of thousands of calls per day throughout its worldwide call centers. By completely automating more than one-half of the incoming inquiries, Ticketmaster has provided a streamlined user interface into their system, enhancing customer service."

**Time Customer Service**

Time Customer Service (TCS), the magazine fulfillment center for the Time Inc. family of magazines, needed to reduce overall costs within their call centers. NetByTel developed an automated name and address capture module that allows callers to freely speak their new name and/or address with responses from the automated agent. This has automated some of the most repetitive calls that come into the TCS call centers.

According to Paul Dixon of TCS: "The most important thing during the implementation was that we wanted to keep the customers' needs at the forefront of everything we developed and deployed. Our customers want to make their name and address changes quickly and as easily as possible, so we knew we wanted an application that would walk the customer through the process in a straightforward and easy manner. The customer experience is key to our success, so we never let that out of sight during the entire implementation."