

## Printer Friendly Version

WEB LINK - <http://www.expresscomputeronline.com/20050314/technology01.shtml>

## Application

### The digital agent

*Are 'mature' speech recognition technologies posing a threat to call centre executives? Srikanth R P analyses the issue*

India's sunrise call centre industry could face a new threat. It is not a country, say a China or Philippines, but technology that is a cause for concern. Speech recognition technologies, which were considered to be of little use when responding to customer queries, have finally come of age. These are being deployed by large organisations such as Bank of America, Citigroup, Kodak, Prudential, Verizon, Quest, MCI, T-mobile, American Airlines and Continental Airlines to handle customer queries. The fact that speech recognition is maturing rapidly will ensure that it has to be considered as a threat to Indian call centres. This is spelt out in a report by analyst firm, Datamonitor. It says that over 95 percent of communications take place over the telephone in a call centre. In this scenario, speech automation can be a viable long-term alternative to call centre agents based in offshore locations.



Daniel Hong, Voice Business Analyst at Datamonitor and author of the report says that the cost of servicing a call via speech automation is approximately 15 to 25 percent of the cost involved when it is farmed out to an Indian agent. Compared to IVR systems that bombard users with a never-ending series of menus, speech recognition takes the user's voice input and replies to queries. Current speech recognition engines promise a recognition rate of over 90 percent. That's good enough to answer routine queries. In such cases, you could ring your bank and say 'check balance' and it will prompt you for a unique identification number, authenticate and speak out your balance.

In the past, speech recognition failed to take off because of a machine's inability to make sense of voice input. This was due to the limited voice samples and dictionaries of speech recognition engines. This problem has been overcome with today's speech recognition engines having vocabularies of over 40,000 entries covering most commonly spoken words. Beyond this, vendors are gathering statistics on likely responses to certain questions. This data is used in improving accuracy.

### Silencing obstacles

The next big barrier is cost. This barrier has also been taken care of by the adoption of open standards such as VoiceXML and call control extensible markup language (CCXML). Similar to XML, which is used to tag data, VoiceXML permits the tagging of voice commands. So if you tell the speech recognition engine, 'Please tell me my account balance', it will mark out the words 'account balance' from the sentence and deliver the information to you. Prior to VoiceXML, each vendor had a proprietary language, pushing up development costs as there were limited number of developers and no portability across applications. Compared to this, VoiceXML can hook into CRM or ERP systems.

### Moving upstream

Today's speech recognition engines perform three types of tasks. The first is call routing where the engine identifies what's required by a caller and quickly routes the call to the right person or department. The next category is 'transactional calls' where the application collects specific information and returns a standard answer. A 'check balance' query is an example of a transactional call. The third category, which is the most difficult and is still an area where work is in progress, consists of 'knowledge-based calls'. Take a query such as 'Why is my printer not printing properly'. The correct response to this query could range from installing a printer driver to changing the toner. While answering such a query is complex, the time taken by the agent to resolve the call can be cut down if the speech recognition engine asks the caller the model of the printer and the problem he or she faces. Most speech recognition engines can capture and transcribe this information and pass the same on to a specific agent. Even as the agent sees the query popping up on his screen, the engine simultaneously draws up a list of possible answers from the CRM or knowledge management system. This cuts down call resolution time.

The fact that speech recognition technologies have matured to a point where they can handle the most complex of calls can be gauged from the applications for which they have been deployed. Comments Datamonitor's Hong, "Providing information and call routing have been the primary speech applications used in call centres for the last couple of years. However, we are witnessing a rise in the number of sophisticated speech applications that are being deployed." Hong gives the example of applications such as address capture, placing orders, checking inventory, tracking shipments and paying bills which are possible, thanks to speech recognition.

In the US, it is now common to find customer requests related to buying of equities and mutual funds being handled by this technology. Investors feed a scrip code or name into the system, hear the price and decide to sell or buy. The capacity to handle thousands of calls is a big plus. Customers can even check flight information and make airline, car or hotel reservations without interacting with a human agent. The technology can recognise and direct calls that it is unable to handle to human agents.

Says Ken Jackowitz, Executive Vice President & Chief Customer Officer, NetByTel, "The test of a good speech solution is to ensure that a customer may transact in whatever manner he chooses." Even if speech recognition engines can route calls to the right agent, they can cut the time taken to close a call. For example, when a call is in queue, the speech recognition engine can connect the customer to an interactive dialogue session in an attempt to address the customer's problem or to collect information related to his or her profile and the nature of the query. If the customer is happy with the response, he can simply hang up. Alternatively, as soon as the system learns of the availability of an agent, it takes the first call from the queue and connects the said call to the agent. At the same time, it also sends the captured information to the agent while the call is still in queue.

Says Prashant Lamba, Director, Phonologies India, "Agent assistance can be requested for at any time during a call. The call is routed to an agent with all the information of the caller and the nature of the query."

These solutions give companies the facility of writing automated scripts for call handling. For example, you can have your best agent design the script and let the speech recognition engine handle calls based on the script. Says Mickey Linn, Executive VP, Sales and Marketing, Ocwen Financial Corporation, "The maturity of the technology comes across when we handle complex mortgage queries using automated speech recognition systems." Ocwen has developed its own product christened 'ACCES' that companies can use to customise scripts and push information to agents as soon as a customer call can be identified on the basis of a telephone number or any other unique identification. Linn says that accuracy in handling calls is mandatory as even a single mistake can get a company sued. Currently, Ocwen uses this system for its own call

centre, handling close to a million calls a month. As the speech recognition system keeps on storing and indexing information to the backend database, it aids in building a knowledge management database. Comments Linn, "As my best agent designs the script, training call centre agents is faster and more effective."

### **Replacing human agents**

With speech recognition technologies moving up the maturity curve, will human agents be replaced? Says Hong, "There are cases where speech has replaced agents, however, the impact is minimal. Speech technologies will essentially improve productivity but as the technology matures, we expect that speech will replace more call centre agents." Hong says that the emergence of a converged IP network and uptake in self service technologies, the need for a large number of call centre agents will diminish. Datamonitor believes that the future will see the role of a call centre agent become more specialised as these agents act in conjunction with speech recognition systems. In the Indian call centre space, services such as account information, data entry (name or address change) and basic technical support can be done by speech recognition engines.

Lamba of Phonologies says, "Speech recognition will enhance the productivity of call centre agents by handling routine queries. The customer service agent can focus on addressing more complex queries." Lamba says that speech recognition will also help in curbing attrition as agents can concentrate on handling complex queries and not routine calls. With most companies in the Indian call centre industry being voice-based, it is imperative for these companies to consider adopting speech recognition technologies to improve efficiencies.

[srikanth@expresscomputeronline.com](mailto:srikanth@expresscomputeronline.com)