YO, computer!

More and more machines can understand English. It's a technology people are talking about.

By Gayle Sims

Inquirer Staff Writer

This story was written by Gayle Sims, a staff writer for the Philadelphia Inquirer. The article discusses the increasing capabilities of technology in understanding human language, particularly in the context of voice recognition. The piece highlights how machines are becoming more adept at processing natural language, a significant advancement in the field of artificial intelligence.

The article mentions the development of a 100,000-word dictionary, which is a considerable achievement in natural language processing. It also touches on the practical applications of this technology, such as its use in various industries like healthcare, where it can facilitate better patient records management by allowing users to update records through voice commands.

The passage emphasizes the importance of continuous speech recognition, which involves the computer's ability to understand and respond to spoken language, eliminating the need for users to pause between words. This technology is seen as a breakthrough that is rapidly shifting the way machines interact with humans.

Overall, the article underscores the transformative potential of these advancements, suggesting that the future of technology and human interaction is poised for even greater integration and ease of use.
Computers understand English

COMPUTERS from F1 uses a voice-activated computer made by Dragon Systems. The technology will improve, she knows, but she's already in love with "Dragon."

What is sort of lovely about the Dragon is that, first of all, writing is such an isolating thing, and having 88 is such an isolating thing, and then you come to this Dragon and suddenly you have this companion who writes with you. And I feel very bonded to this spirit. I just love him."

Although she knows it's just a coincidence, the machine's mistakes often come out sounding funny.

"He says funny things all the time and now he has started to become my unconscious and has started to comment as I write.

I was giving a demonstration, saying, 'How the Dragon will show off what he can do...'. You...can...see...he...is...very...smart...and...also...very...dumb,' she said into the microphone.

"When I said dumb, Dragon typed out.

It was the kind of eerily appropriate mistake that lends some people to think of their computers as human.

"The other day I wanted to say the word meany," Winer said. "He did not want to say that word. It was perhaps too unrefined for him. So I said, 'Begin spell mode: Tango Echo Echo. November Sierra.' When I got to Sierra, he (displayed) meany, but he had offered meany-meany. I wanted to pitch his little computer book."

For now, the technology is hard work. The first review that I wrote [using Dragon] took me 2½ days. This usually would have taken me a half-day," said Winer, one of four reporters at Newsday now using voice-activation.

"It is a different part of your body than it would to express yourself through your fingers...I get tired really fast and then I start to stutter and he starts to mishear me and we both get cranky and have to take a nap."

This year, consumers have gotten a sampling of some of the simple tasks that voice-activation can already do. There is Spurt's new voice phone card, boosted by Candice Bergen, that lets you dial a number by simply saying, "Call home."

And there's the device that lets you program your VCR by telling it to "Record Fox 10 p.m." The commercial, with Monty Python's John Cleese, uses a process designed by Voice Activated Technology, the California company that last fall came out with the Voice Organizer, a voice-driven date and phone book.

Thus, in some parts of the country, automated teller machines are recognizing people's voices rather than their secret numbers.

Voice-activated cellular phones are now an option for cars built by Rolls Royce and Lincoln. And Sony is testing a car stereo that your voice can tell to turn on and change channels. Besides being fun, the products are being touted as safety features.

Compton's Encyclopedia, already on compact disc with an enormous amount of data, will soon come out with a voice-activated version.

And voice-powered computer games are just around the corner.

Dr. Reese says that the voice-activated computer has revolutionized the time it takes to get out patient reports. "It used to take two days to get a dictated report back from the typist. Now we have it in two or three minutes."
How Voice Technology Is Growing

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(source: Voice Information Associates)

"We are in a transition state right now," said William Meisel, editor of Speech Recognition Update News. (The field even has its own newsletter.) "In 1992 the sales of voice-activated products were in narrow niches. This year, speech recognition is making major inroads."

The arrival of test generation by taking is the result of research over two decades, much of it at Carnegie Mellon University in Pittsburgh. The first voice-powered personal computers, in the mid-1980s, had limited vocabulary (1,000 to 10,000 words). Sold for about $2,000, and were used by people with handshoes so debilitating that they could not work otherwise. This group, has often pioneered new technologies.

Today, the major companies producing large-vocabulary voice-recognition systems for the mass market are IBM, Dragon Systems of Newton, Mass., and Kurzweil Applied Intelligence of Waltham, Mass.

All voice systems work by converting sound into the digital language of the computer and then into commands understood by the system. This is done by means of a digital signal processor (DSP) chip. Five years ago, the DSP was expensive, inaccurate and placed a tremendous burden on the computer. Today it is more accurate, does not need a super-sensitive microphone, and is so cheap that it is becoming standard equipment in some PCs.

"The holy grail in speech recognition has been ... unlimited vocabulary, true independence and continuous speech. The Pentium chip has allowed us to have everything except the continuous speech," said Bernard Bradstreet, CEO of Kurzweil.

Continuous speech — the ability to talk at a normal speed, rather than one word at a time — is the technology's last hurdle.

"If we don't have continuous speech, in the Pentium generation, then it will be in the following," Bradstreet said.

The computer's inability to understand speech at a conversational speed frustrates many users.

Hidetaka Nosaka, the owner of Eurosoft Inc., a Baltimore language translation firm, first saw the IBM Personal Dictation System at the American Translators Association meeting in November. Nosaka, who was working 12 to 14 hours a day typing his translations into a computer, immediately saw how the software could give him relief from repetitive stress-injury.

The computer even has its own newsletter. (The field even has its own newsletter.) "In 1992 the sales of voice-activated products were in narrow niches. This year, speech recognition is making major inroads.

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