

Pioneering Speech Recognition

Overview

Transforming the World

Technical Breakthroughs

Cultural Impacts

The Team

In Their Words



BY THE NUMBERS

16

01/06

The IBM Shoebox, introduced in 1962, could understand 16 words: zero, one, two, three, four, five, six, seven, eight, nine, minus, plus, subtotal, total, false, and off.

When IBM introduced its first speech recognition machine in 1962, few could imagine the myriad potential applications of this technology. Today, speech recognition capabilities are embedded in many aspects of our world. It has significantly changed the way people access computing.

Many businesses today offer voice-activated service options—contact a customer service call center and you'll likely be asked a few routing questions before being sent to a representative. Answering questions through an automated system allows for more efficient call handling. Speech recognition also helps make driving safer by enabling hands-free dialing for mobile phone users, voice-activated navigation systems, and voice control and search capabilities for in-car radios.



The Shoebox

William Dersch's Shoebox listened as the operator spoke numbers and commands such as "Five plus three plus eight plus six plus four minus nine, total," and would print out the correct answer: 17.

01/04

Making computing more accessible

Speech recognition is also a key component of IBM's commitment to accessibility [[read more about the Icon of Progress, The Accessible Workforce](#)] and making computing available to populations with vision, mobility or other impairments. In 1980, IBM developed a talking typewriter for sight-impaired individuals, and the next year introduced a talking display terminal. At the time, computer displays were full of words, rather than graphics. But as graphic user interfaces grew in popularity during the 1980s, IBM developed one of the first screen readers to work with the new technology.

Roku Exhibit 1011

Roku Inc. v. Universal Elecs. Inc.

IPR2022-01289

Page 00001

In 1999, IBM introduced the IBM Home Page Reader, a talking web browser that helped users who were sight-impaired hear the full range of web-page content in a logical, understandable manner. Other products were also introduced to enable these individuals to access the vast body of knowledge available on the Internet. Software products such as IBM WebAdapt2Me and Easy Web Browsing offer the capability of having website text read aloud.

In 2005, IBM announced a new version of Home Page Reader, designed to help businesses meet both growing regulatory requirements and the needs of employees and customers who are blind, visually impaired or elderly by allowing them to navigate increasingly complex websites.

Advanced speech recognition

Today, IBM and Nuance Communications are working together on advanced speech recognition research, developing ways to incorporate IBM technology into Nuance speech solutions. The two companies are collaborating to produce more natural and intuitive voice recognition technologies and a new generation of applications for advanced, automated customer self-service and agent optimization, and for the automotive and telecommunications industries.

Technical Breakthroughs