

# Speech Recognition Software and Medical Transcription History

## A TIMELINE OF SPEECH RECOGNITION

- 1936** AT&T's Bell Labs produced the first electronic speech synthesizer called the Voder (Dudley, Riesz and Watkins). This machine was demonstrated in the 1939 World Fairs by experts that used a keyboard and foot pedals to play the machine and emit speech.
- 1969** John Pierce of Bell Labs said automatic speech recognition will not be a reality for several decades because it requires artificial intelligence.
- Early 1970's** The Hidden Markov Modeling (HMM) approach to speech recognition was invented by Lenny Baum of Princeton University and shared with several ARPA (Advanced Research Projects Agency) contractors including IBM. HMM is a complex mathematical pattern-matching strategy that eventually was adopted by all the leading speech recognition companies including Dragon Systems, IBM, Philips, AT&T and others.
- 1971** DARPA (Defense Advanced Research Projects Agency) established the Speech Understanding Research (SUR) program to develop a computer system that could understand continuous speech. Lawrence Roberts, who initiated the program, spent \$3 million per year of government funds for 5 years. Major SUR project groups were established at CMU, SRI, MIT's Lincoln Laboratory, Systems Development Corporation (SDC), and Bolt, Beranek, and Newman (BBN). It was the largest speech recognition project ever.
- 1978** The popular toy "Speak and Spell" by Texas Instruments was introduced. Speak and Spell used a speech chip which led to huge strides in development of more human-like digital synthesis sound.
- 1982** Covox founded. Company brought digital sound (via The Voice Master, Sound Master and The Speech Thing) to the Commodore 64, Atari 400/800, and finally to the IBM PC in the mid '80s.
- 1982** Dragon Systems was founded in 1982 by speech industry pioneers Drs. Jim and Janet Baker. Dragon Systems is well known for its long history of speech and language technology innovations and its large patent portfolio.
- 1984** SpeechWorks, the leading provider of over-the-telephone automated speech recognition (ASR) solutions, was founded.
- 1993** Covox sells its products out to Creative Labs, Inc.
- 1995** Dragon released discrete word dictation-level speech recognition software. It was the first time dictation speech recognition technology was available to consumers. IBM and Kurzweil followed a few months later.
- 1996** Charles Schwab is the first company to devote resources towards developing up a speech recognition IVR system with Nuance. The program, Voice Broker, allows for up to 360 simultaneous customers to call in and get quotes on stock and options... it handles up to 50,000 requests each day. The system was found to be 95% accurate and set the stage for other companies such as Sears, Roebuck and Co., and United Parcel Service of America Inc., and E\*Trade Securities to follow in their footsteps.
- 1996** BellSouth launches the world's first voice portal, called Val and later Info By Voice.
- 1997** Dragon introduced "Naturally Speaking", the first "continuous speech" dictation software available (meaning you no longer need to pause between words for the

computer to understand what you're saying).

- 1998** Lernout & Hauspie bought Kurzweil. Microsoft invested \$45 million in Lernout & Hauspie to form a partnership that will eventually allow Microsoft to use their speech recognition technology in their systems.
- 1999** Microsoft acquired Entropic, giving Microsoft access to what was known as the "most accurate speech recognition system" in the world.
- 2000** Lernout & Hauspie acquired Dragon Systems for approximately \$460 million.
- 2000** TellMe introduces first world-wide voice portal.
- 2000** NetBytel launched the world's first voice enabler, which includes an on-line ordering application with real-time Internet integration for Office Depot.
- 2001** ScanSoft Closes Acquisition of Lernout & Hauspie Speech and Language Assets.
- 2003** ScanSoft Ships Dragon NaturallySpeaking 7 Medical, Lowers Healthcare Costs through Highly Accurate Speech Recognition.
- 2003** ScanSoft Closes Acquisition of SpeechWorks International, Inc.
- 2003** ScanSoft closes deal to distribute and support IBM ViaVoice Desktop Products.