

Is Speech Ready for Prime Time?



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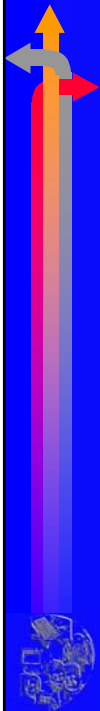
Sept. 22-25, 2004

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Speech recognition is truly a powerful technology with great potential. Despite the significant and verifiable return on investment that speech applications deliver, speech has yet not seen the wide adoption that was once forecast.

We believe that this is about to change



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CCCSpeak is an integrated speech platform which will change the standards for EMR and health industry applications

CCCSpeak sets new standards for price-performance and introduces new tools that address much of the complexity of speech deployment

As a result, we expect speech to finally become a mainstream technology

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After decades of research and innovation, speech recognition is ready for practical application (when done correctly).

Today's state-of-the-art speech recognition engines, like Dragon Naturally Speaking can produce 95 to 99 percent accuracy.

Continuous advances in microelectronics, have increased the power of computers to the point where they can handle even the most sophisticated algorithms involved in speech processing.

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To truly become part of our everyday lives, a technology has to be widely available, simple to use and implement, add quantifiable value, and be somewhat reasonably affordable.

Speech has been the domain of a few and its application remains complex, time consuming, and expensive.

As a result, only relatively few early adopters have been able to benefit from speech-enabling their applications and even they struggle.

For the vast majority of healthcare, speech hasn't arrived yet -- the Jury is still out.

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Today, Speech is still a Niche Market

The early vendors of Speech Recognition did everyone a disservice.

People pushing Speech Recognition oversold saying how easy it was to install, to use, and how you could virtually replace transcription today.

Easy???
More Efficient???

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In CCCSpeak we've attempted to mask the complexity of implementing and using speech, streamlined the process, and voice activated much of Logician, and yes, you will be more efficient

BUT...

Users still need to perfect their speech skills by practicing, becoming more comfortable with how the system works, adding words on the fly, correcting and adapting their vocabulary.

With CCCSpeak a User can typically become proficient within a month's time.

We are hoping by combining EMR Applications with Speech that we will finally make Speech Recognition a truly mainstream technology.

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What is CCCSpeak?

If you look around your organization, opportunities for speech-enabling business processes abound everywhere!

CCCSpeak is not just the Speech enabling of Logician, but much, much more...

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CCCSpeak was designed to be a Business Application with a speech front end.


Escalate Prompts (Assumptions based on a given)

Where Application Logic does not parallel either

- Business Logic
- Operational Logic
- Your Own Personal Workflow Logic

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RESULT:

You now have the choice and the power to compensate, to control, and to personalize your computer interaction experience.

This results in Ease of Use, and a much more satisfying user experience.

Speech makes implementing and using EMR a more “turnkey” experience.

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There are 5 levels to Successful Speech Recognition

- SYSTEM
- APPLICATION
- SPEECH ENGINE
- LANGUAGE MODEL AND VOCABULARY
- MICROPHONE

Each serves as a major point of failure

Speech is the Diva of applications

Failure to understand this is what causes Speech to succeed or fail..



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LEVEL 1 -- SYSTEM:

Minimum Hardware Requirements: Pentium III 600MHz, 256MB RAM, Soundblaster-compatible 16-Bit plug-and-play sound card. USB Port for the USB microphone, 6 GB or greater Hard Disk Availability.

For Optimal Performance, we recommend a Pentium III/IV with 700 MHz and 512 MB RAM, 10 GB or greater Hard Disk Availability.

Note: Xircom Network Interface Cards may cause conflicts with speech engine and are not recommended.



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LEVEL 2 -- APPLICATION:

Microsoft Visual Studio: one of the most powerful and widely used programming environments, to open up the power of underlying speech technologies/engines, for easy integration with third-party extensions and add-ons.

.NET Framework: again, a whole set of technologies for building applications in a distributed and modular fashion, perfect for integration with third-party components, which are an integral part of every voice application

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LEVEL 3 -- SPEECH ENGINE:

Dragon 8 (December 2004): the latest generation of speech engine with a whole set of new features designed for enterprise speech deployment.

LEVEL 4 -- VOCABULARY AND LANGUAGE MODEL:

Dragon Medical Vocabulary Plus CCCSpeak Enhanced Vocabulary/Language Model

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LEVEL 5 -- MICROPHONE:

Can I use my own speech microphone or headset?

This can be best determined by testing your microphone or headset. With each User License, we've included the Philips 6274 USB microphone that provides superior audio fidelity, microphone buttons optimized for ease of use with CENTRICITY (Logician) functionality.

Users have experienced good results with this microphone and have found that it can improve accuracy by 50% over standard microphones. This microphone may give preferable performance over and above the microphone you are currently using.

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Together,

these components deliver the most complete development platform for speech, second to none in the industry.

Speech applications are at the intersection of many different technologies such as Interactive Speech Recognition (CCCSpeak), batch based speech recognition (PLUS), EMR databases, Internet, Email, just to name a few, and are inherently complex.

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What is CCCSpeak PLUS?

CCCSpeak PLUS includes everything that comes with CCCSpeak -- plus a Voice Recognition Transcription Application used for batch dictation. This is intended for users wishing to use hand held digital recorders to support workflow mobility to provide physicians with choice.

Users who dictate letters, notes, consults, reports, etc. using a digital recorder can then use CCCSpeak PLUS to automatically transcribe the note and use voice to copy it into the EMR. No more waiting for the turnaround of transcription services !

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We're hoping that with CCCSpeak, **all of you** will be the catalyst for change -- by bringing Speech Recognition into the mainstream

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CCCSpeak Implementation



OBSTACLES/BARRIERS/IMPEDIMENTS (OBIs)

Call it what you will, these are things to overcome for successful implementation of CCCSpeak, or any EMR

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CCCSpeak Implementation


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- A High Dose of Tech, By Rob Turner, U.S. News & World Report, August 2, 2004, pp. 47-60.
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CCCSpeak Implementation

- OBI: Doctors must change how they work.
 - Two models: transcription or physician editor.
 - Physician editor model requires investment of time and effort.
 - Physician time can be minimized, but not avoided.
- Potential solution: Doctors have to be willing to adapt to the technology, and vendors have to make it easier for them to use it.

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CCCSpeak Implementation


- OBI: Unrealistic expectations.
 - Sales reps lead one to believe that we are going to purchased the EMR equivalent of nirvana.

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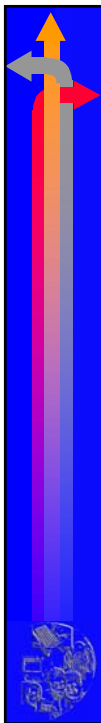
CCCSpeak Implementation



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- In reality, there are a lot of different programs and solutions that together may make up a functioning EMR system.

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