

## Custom Speech USA™ Case Studies Dragon Server-Based Speech Recognition for Medical Query System

### Background

Biomedical informatics program wanted to switch from manual transcription of physician telephone information queries to server-based speech recognition

### Case Study

#### Vendor/Client

Custom Speech USA/Columbia University, New York City, New York

#### Overview

Columbia University in New York City includes undergraduate, graduate, and professional schools, a school of continuing education, and a medical center. Previously, the biomedical informatics department used manual transcription for physician medical information phone queries, but were considering upgrade to server-based speech recognition. After a web search, the client purchased SpeechProfessional™, which includes SpeechServers™ (Dragon) for back-end, server-based speech recognition. Ability to integrate with the biomedical UNIX workflow system through a JAVA interface was a requirement. Cost and ease of integration were also considerations. With proof of concept, the informatics program has added patented SpeechServers™ server-based training.

#### Components

- SpeechProfessional™ software suite
- Dragon NaturallySpeaking Medical 9.x dictation runtime
- Command!™ Software Development Kit (SDK)

#### Installation

SpeechProfessional™ includes SpeechMax™ text editor and custom speech processor, SpeechServers™, acWAVE™ audio conversion, other dictation and transcription utilities, and Command!™ workflow manager. The UNIX-based medical query system delivers audio files to a JAVA interface that transfers these files a Windows computer monitored by Command!™ File Monitor. Command!™ Job Processor creates a transcription job for each audio file. The workflow (1) processes them with SpeechServers™ (Dragon) using the Dragon 9.x runtime, (2) outputs proprietary session files (.ses), optional Dragon session files (.dra), and/or plain text (.txt) files, and (3) places output in a folder for JAVA interface pickup for delivery to the UNIX system. Automated training uses both verbatim text and original audio file to train the Dragon speech engine iteratively. Verbatim training text is created using SpeechMax™. Command!™ SDK provided integration tools for use with the JAVA interface. The company provided scripting for the back-end, Windows-based workflow for server-based speech recognition.

#### Benefits

- Custom integration with customer's UNIX system through JAVA interface
- Time-savings with server-based speech recognition and automated training

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We teach computers how to listen®

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