



SPEECHWORKS

REPORT CREATION & DISTRIBUTION UTILIZING VOICE RECOGNITION AND STRUCTURED REPORTING



SPEECHWORKS utilizes natural language and voice recognition to create structured radiology reports. Its ease of use and efficiency contribute to the quality of the report and radiologists' acceptance. Report distribution is via the web, fax and/or email, as per ordering physician and location preferences. Sold as a modular solution, an institution or group can purchase only the components they need for local workflows.

STRUCTURED REPORTS

SpeechWorks' design criteria are to produce a standardized and codified report that addresses the fundamental challenge of providing intelligent reports to an EMR. By creating a report whose key findings can be entered into a database, radiology results can contribute to the integrated patient record, CCR and assist with outcome analysis.

REPORTING WORKFLOW

Patient demographics and study information is derived from the DICOM information culled from the DICOM storage of studies, an optional HL-7 interface or data entry into the workflow server. The user can select the study from the SpeechWorks worklist, which is a browser-based application, or via integration to a DICOM workstation utilizing a published API. Reports can be entered by one of the following methods or combination of methods which are actively selectable:

-  Selection of macros or canned reports
-  Voice Dictation and transcription
-  Voice Recognition
-  Typing

The user can sign the report, save as preliminary or, for residents, save for review with a radiologist. Once signed-off, the report can be faxed or emailed to the location of the ordering physicians or, with additional integration, sent via HL-7 to information systems.

When used with BRIT's Vision workstation (Version 3.6 or later), key images, length, angle measurements and other information, such as date of comparison studies viewed, automatically transfer into the report.

When used with BRIT's UrgentWorks, the history of urgent findings is automatically appended as an addendum to the report.

VOICE RECOGNITION AND LEARNING

The Voice Recognition engine maps to a subset of the radiologist's vocabulary based on body region and organ type, providing enhanced recognition. Users can add vocabulary words and these can be shared amongst their group or universally. When radiologists make changes, they can select whether they want to incorporate the changes into a training event. They can also revert to an older recognition profile. The audio file produced is stored in the database, accessible by a transcriptionist over the web. The radiologist's profile updates as the transcriptionist corrects the report.

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MACROS

Macros are stored based on body region, modality type, CPT code, techniques, findings, impressions, groups and users. User definable report sections can also be created that may be included in the database but excluded from the final report, such as “Student Comments” or “Teaching Files”. The macros can be used as building blocks to assemble a report or the user can simply “sign” a report that contains the default building blocks, plus the information that is auto-added to the report from the workstation. This creates a one-click normal unique to that study. Anytime during the dictation process, a user can select text and save it as a macro; there is no need to go to another part of the application.

REPORT LAYOUT

Report layout is configurable for each facility by the system manager via a drag and drop GUI. Additionally, the system manager or each user (when used with Roentgen Works web viewer) can establish user-specific layouts, so reports are always viewable in a user preferred format.

REPORT DISTRIBUTION

User and location preferences determine delivery methods for receipt of reports. Reports can be sent via fax, emailed or with additional options, returned via HL-7 or viewed via the web. Report formats include TXT, PDF, HTML or XML.

HIPAA SUPPORT

HIPAA support is provided by:

- User authentication
- Screen blanking after configurable time period
- History of access
- Ability to hide user name / ID from transcriptionist

SYSTEM REQUIREMENTS

One Microsoft Vista or Windows 7 machine is required per location for voice recognition.

Note: a browser and Internet connectivity are required – call for latest browser recommendations.

Minimum Hardware Specifications

Items	Application Server: Java based	Voice Recognition Server	User Interface: Transcriptionists and Radiologists -Browser Only
Processor	Pentium II or equivalent	Pentium 4 with dual processor	Pentium 4
Memory	4 GB	2 GB	2 GB
Graphic resolution	N/A	N/A	1280 x 1024
Audio Interface	N/A	N/A	Transcriptionist: Speakers Radiologist: Microphone Both: Optional Foot Pedal

* Up to 4 radiologists can share one VR server. Radiologists must have a microphone. Hand held and headset microphones are available.