

# Speech Recognition

Natural language understanding embedded in the workflow.

Making the move to speech recognition doesn't require a change in RIS or PACS, since eRAD's Speech Recognition Module can seamlessly integrate with third-party systems.

In imaging and radiology practices nationwide, productivity, patient satisfaction and reimbursement are all closely tied to timely, accurate reports. Speech recognition technology drastically improves report generation workflow with faster turnaround and lower costs.

eRAD brings an industry-leading speech recognition program—M\*Modal—to your practice, so that radiologists, transcriptionists, clinicians and technologists can collaborate and communicate without bottlenecks. You drive the quality of your business, with measurable improvements in productivity, report turnaround time, cost effectiveness, quality and patient outcomes. Structured reporting comes with user-defined macros, which can be mapped or associated to trigger by patient, facility, modality, body part, reading and/or referring MD. Users can easily voice-navigate standard text blocks, numeric fields and pick-lists with speed, accuracy and control.



## Natural language understanding

Natural, conversational speech becomes electronic documents that are structured, clinically encoded, searchable and shareable. eRAD goes beyond word string translation to sophisticated speech understanding. The radiology-specific lexicon self-learns, not only from your speech but from thousands of radiology clinicians worldwide, which adds up to hours saved in report turnaround times.



## Embedded dictation

Time spent on double or triple iterations is revenue lost. Dictate directly into the eRAD reporting workflow while you scroll or manipulate images. Or integrate with a third-party system. Physicians can record, edit and complete their own documents or send for editing / transcription, via eRAD's robust editor's workflow.



## Voice navigation

Use voice commands to automate frequent tasks, such as inserting text, navigating report blocks and using pick-lists. Voice commands can be customized and organized by modality and body part.



## Anywhere narration

M\*Modal can process speech from any source—PCs, traditional phones, smartphones, dictation stations—which makes remote collaboration a reality. Your cloud-stored profile roams with you, so any user-defined changes auto-populate on any workstation—no more loading from a thumb drive.

"As a result of Speech Recognition, our turnaround time is cut in half, at least. Within 24 hours of implementation, all of our doctors were self-signing. The first day we rolled it out, we were getting STAT reads back to our clients within 20 or 30 minutes. We actually had half a dozen clients call to ask us what had changed. It's a straightforward way to increase our efficiency while decreasing our costs."

**Brian Huff**

*IT Director*

Southeastern Overread Services  
Greensboro, NC

"We had quite a list of criteria for our next system, and in our evaluation eRAD stood out as one of the few able to satisfy our needs. One of the biggest factors was that eRAD had previous interface experience with Athena, and they had the dictation, transcription and speech recognition built right into the PACS viewing software— so we didn't have to purchase a third-party system and go to the trouble of integrating and supporting it."

**Martha Mastroberti**

*Manager*

Healthcare Informatics at VMG

## Speech Recognition

### The M\*Modal Speech Understanding advantage

Once the gold standard, conventional speech recognition is no longer sufficient for today's clinical documentation challenges. That's why we created a more intelligent alternative. eRAD's Speech Recognition is based on M\*Modal's advanced speech technology which transcends simple health speech recognition to achieve true medical Speech Understanding™. Developed over a decade ago and refined through steady technological advancement and the accumulated experience of 200,000 physicians, M\*Modal Speech Understanding technology is much more than automating voice-to-text rendering. Unlike simple speech recognition, Speech Understanding recognizes the meaning and syntax of the dictation, not just the individual words or word strings. With the benefit of contextual understanding of a document's meaning, physicians can dictate in a normal, "conversational" mode—without needing to follow particular speech structures or provide verbal cues to the engine.

- A true Cloud-based solution
- Conversational speech with the highest accuracy
- No need for restrictive voice commands for punctuation or formatting
- Out-of-the-box effectiveness from day one
- Automatic and continuous learning system
- Creating structure from the narrative
- Information-driven workflows
- Unstructured data analytics



### Portability

Users get fully integrated M\*Modal voice recognition via both cloud and local VR engines. The cloud server enables roaming profiles, i.e., users access their profiles at login from anywhere. eRAD's Speech Recognition module is easy to install and access from its self-contained web-client for remote access from any workstation connected to the Internet.



### Integration

eRAD's Speech Recognition module integrates with third-party RIS, PACS or EHR systems using Web Services and HL7 platforms. It supports multi-site, multi-tenant architecture with a modern user interface.



### Performance

Users can report using full interactive mode or—for those not ready to make the leap to self-editing—in batch mode, where recognition is done in the background and sent to an editor for review. Native report templates are provided, as well as macros for custom reports. eRAD's Speech Recognition module supports multiple input devices (such as Xkeys integration), allowing speechmike buttons and external keyboards to be mapped to user-defined commands.



### Compliance

Core measurements are automatically reported for Meaningful Use, and eRAD's Speech Recognition module supports HIPAA compliance even across distributed sites and high volumes.