Speech Recognition and Digital Dictation

PathSpeech is an advanced digital dictation and speech recognition solution developed in response to pathology’s increasing demand for quality, efficiency, and turnaround time improvements. It supports the delivery of digital pathology in line with the principles of interoperable IT connectivity, essential for the drive for greater efficiency highlighted in Lord Carter’s report and the QIPP agenda.

Streamlining the dictation process, PathSpeech allows the user to not only dictate their findings, but also process them to the right people inside or outside the organisation; vital with the prevalence of networked pathology services over multiple sites.

PathSpeech creates the ideal dictation and speech processing solutions for the pathology environment employing an advanced workflow management system for digital dictation and speech recognition.

Facilitating the Adoption of Optimised and Modern Workflows

Customers currently using analogue dictation methods will be familiar with the inherent challenges and limitations experienced. PathSpeech provides a modern and optimised workflow alternative to analogue techniques marking the end of loss or broken tapes and poor sound quality. PathSpeech also delivers support over geographical boundaries, provides security and backup features and enables the assigning of priorities; all absent within analogue workflows.

CliniSys fully understands that workflows and working practices differ from customer to customer. To support our customers, PathSpeech has been developed to be extremely flexible and totally configurable to individual needs. An example of this flexibility can be seen in the two options for speech recognition; Front-end and Back-end. Deployments are free to use a combination of these processes based upon the user and environment.

Front End Speech Recognition

The clinician dictates information which is processed by the speech recognition engine and appears directly on the screen for immediate checking and sign off.

- Greatest benefits for report availability and cost savings
- Often used when no secretarial support is available
- Gives ability to use standard reports/templates
- May requires change in working practise for clinicians

Backend Speech Recognition

The clinician dictates information which is processed by the speech recognition engine. Reports are then reviewed and validated by the medical secretary.

- Easiest adoption – especially in large scale projects
- No change in the clinicians working habits required
- Increase of transcription productivity
- Significant benefits over digital dictation with regards to cost savings and speed
- Can serve as an interim step for some users to move

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Proven to Support Increases in Productivity and Decreasing Backlogs

In general, implementations of speech recognition and digital dictation solutions embracing modern workflows have returned an increase of productivity by approximately 60% and have shown a decrease of operational backlogs by up to 80%. When used in conjunction with the adoption of Lean workflows, PathSpeech facilitates a more productive and appropriate use of personnel. Revenue savings have been identified as a result of a reduction in the medical secretarial team. Turnaround times for reports are reduced through the voice files being available much faster and clinicians are afforded the ability to mark records with a prioritisation.

Improved Performance & Efficiencies with Increased Secretarial Productivity

The old process of hand written forms being passed to secretaries for transcription increases delays and introduces the possibility of transcription errors. PathSpeech seamlessly transfers the translated sound file and empowers the clerical team to simply replay, listen, review, pause and correct where required before validating the data and transferring the record to the LIMS.

Ensuring the Quality of the Digital Dictation Process

PathSpeech harnesses the power of SpeechMagic™ from Nuance and incorporates vocabularies and terminologies specific to pathology. It attunes rapidly to its users, background noise and local dialects and readily delivers a 98% accuracy level with crystal clear sound quality.

The improvement of patient care is of paramount importance and the PathSpeech features delivers a high level of reporting confidence and quality through the removal of transcription errors.

The digital dictation and speech recognition process is only truly successful when fully integrated with your Laboratory Information Systems. This is necessary to ensure that all of the relevant patient demographics are automatically attributed to the report. CliniSys is the prime contractor for the complete end to end solution covering all deployment, integration and support activities ensuring interoperability and traceability with all CliniSys LIMS.

### Key Features

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<th>Feature</th>
<th>Benefit Summary</th>
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<tr>
<td>Optimises secretarial and administration team resources</td>
<td>Cost savings through reduction in effort and increased productivity</td>
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<td>The end of lost or broken analogue tapes</td>
<td>Quality and patient safety improvements by eliminating transcription errors</td>
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<td>Flexibility of front end and back end speech recognition options</td>
<td>Supports clinical excellence through adoption of modern and Lean workflows</td>
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<td>Reports easier to prioritise and available much faster</td>
<td>Improved patient care through service efficiencies and reduction in turnaround times</td>
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<td>Fully integrated with the LIMS with comprehensive audit trail</td>
<td>Greater IT connectivity and traceability supportive of the QIPP agenda</td>
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<td>Allows clinicians to be remote from secretarial team</td>
<td>Supportive of growing prevalence of multi-site networked pathology service</td>
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Architecture Overview and Workflows

PathSpeech’s architectural design provides a central server based solution and saves server based imprints of the users’ voice recognition files rather than onto local PCs. This removes the limitations seen in over the counter retail boxed products which are loaded onto individual PCs and are trained to individual users. PathSpeech is a truly scalable and networkable solution supporting clinicians and secretarial teams working at separate and remote locations.

Being a departmental and/or Trust wide solution, PathSpeech is supportive of the evolving workflows seen as a result of the increasing prevalence for multi site pathology services.

Example Workflow

Other Features

- Ability to integrate and review all associated results into the patient record
- Use of online and batch speech recognition
- Direct authorisation by doctor
- Standard reports per individual doctor
- Clear view about the status of each document
- Doctor is able to change the status after a report has been dictated
- Multiple input devices (Microphone, digital pocket memo)
- Possibility to dictate/review by phone
- Referring physicians are able to look into the results before reports are finalised
YOUR HEALTHCARE SOLUTIONS PARTNER

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