

Digital dictation and speech recognition

MedSpeech is developed by the Stockholm-based company Euromed Networks AB. The company has extensive experience of the provision of digital dictation and imaging software, providing a total of 20,000 licences both to primary and secondary care.

The system was developed with the clinical end-user in mind, in terms of meeting stringent security requirements, whilst being extremely easy to learn how to use. The end-user will experience immediate results in terms of efficiency and documentation turnaround time.

Swedish healthcare is centralised, with hospitals being fewer but overall larger than their UK counterparts. The hospitals often have hospital-wide EPR systems, and sometimes allow associated clinicians outside the hospital to access patients' records. This includes access to the digital dictation system. Being able to track who has been accessing what dictation, at what time and from where is essential.

MedSpeech meets and exceeds Swedish stringent IT requirements, and has been rolled-out enterprise- and hospital-wide, with 45 of Sweden's 62 hospitals having installations of MedSpeech as their digital dictation system. This dominance is also mirrored in the primary care sector, with 110 care centres also using the system.

The regional healthcare authority Region Skåne, in southern Sweden, currently has an installed user base of more than 5,000 licences. There are five different EPR systems that are integrated with MedSpeech, and the advantage of having the same dictation system has meant that

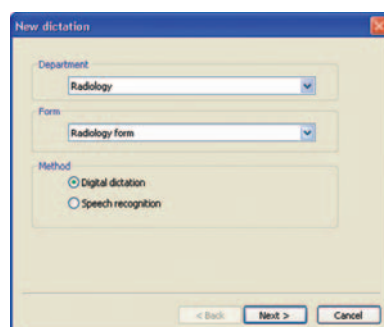
turnaround time of dictations has been greatly reduced.

MedSpeech was recently awarded Sweden's UsersAward certification, where three sites were selected at random and evaluated. The feedback regarding MedSpeech was overwhelming, specifically pointing out the ease of use and superior functionality.

Integration and ease of use

The key factor to get the end-users to accept the new dictation system included tight integration with the EPR system used. In order to create a new dictation, an author must first log-in to the EPR system and select which patient to work with. MedSpeech can then be started. Depending on the EPR/HIS/RIS system's context management capabilities, it is not possible to switch patients until the ongoing dictation is either finished or suspended. This eliminates the risk of mixing up patients' records.

A user may create a dictation either by digital dictation, when a secretary later types the report, or by using speech recognition. If the latter method is used, the words dictated will appear immediately, and corrections can be made at a later date. It is also possible to create a dictation on a portable digital recorder, and then later import it to MedSpeech.



Increasing productivity while decreasing cost...

A user may choose what method is to be used for each dictation

Experiences from implementing digital dictation in Swedish healthcare settings:

- Implementing digital dictation in a healthcare setting is far more efficient and less costly than traditional techniques;
- The medical secretaries feel that they now have better control of their work, better sound quality, and feel less stressed;
- The dictation backlog can be greatly reduced, and dictations labelled as 'high priority' can be typed out faster than before;
- Managers can plan typing staffing needs based on statistics, rather than assumptions based on verbal reports;
- Integration is key when introducing digital dictation in a new setting. This includes proper context management to reduce risk of patient record mix-ups;
- The technique has created new possibilities for medical secretaries to work outside of the hospital, for the same facility, or for private entrepreneurs;
- Speech recognition should be introduced gradually, and should not be a method forced on the end-users;
- Use of tethered dictation devices is preferred to portable devices that can easily be lost, and requires the user to dock the device regularly.

Case Study: HCA International evaluation and selection

HCA International introduced PACS to their London-based hospital group in late 2006. The group comprised six major hospital locations and five diagnostic out-patient centres where imaging was acquired and distributed. Further sites are coming online in the near future.

As an organisation, HCA wished to improve on disparate distribution of digital dictation applications and provide a central solution, the benefits of which were already obvious to the users – having images available anywhere in the organisation gave real benefit to radiologists who worked across various sites and improved reporting turnaround.

Given the significant number of new players in the market, the Imaging Informatics team was charged with investigating possible options as soon as the project was ready to move forward. A timely introduction to Euromed Networks led to the opportunity to participate in a pilot study.

HCA completed three pilots with different products.

Items key to the decision-making process were:

- A vendor with proven success in a variety of healthcare settings;
- A software solution that used set standards and could integrate with existing technology;
- A product to streamline the process and increase productivity;
- A system with flexibility to accommodate different learning curves and preferences;
- A vendor willing to consider how their product can be utilised in other applications and disciplines;
- A vendor prepared to work in partnership to improve the product.

"One of the key advantages that led to the selection of MedSpeech was the scalability of the product and the long-standing track record of

successful implementations of hospital-wide roll-outs in Sweden and Scandinavia. Their team demonstrated skills and commitment to the key integration issues that enable us to fully utilise the MedSpeech product with our existing HIS, RIS and PACS systems", states Kaye Bonython, HCA International Programme Manager for Imaging Informatics.



The result has been better than anticipated acceptance, as more radiologists are moving swiftly to speech recognition as their preferred option, primarily as we offer them the 'mix and match' option of self-correcting or send-to-secretary correction.

There will be continued monitoring of the implementation, and outcome measures will be assessed over time, but it is anticipated that all sites will be operational by the end of the summer. Given the amount of training required to the 150-plus radiologists across a geographic spread, we feel that this will be an excellent result.

We are already commencing work with some other areas within some of our sites so that specific clinics will be able to avail themselves of the digital dictation solution soon after the site Imaging Department goes live. The extension of speech recognition to these and other hospital areas is anticipated to be approved as a separate project from 2009.

"Speech recognition has advanced from an administrative technology into a widely adopted tool that contributes to improving patient safety and treatment results. We are pleased to see

that hospitals, clinics and even entire NHS trusts are acknowledging the critical role of industrial grade speech recognition for accurate, convenient and efficient information capturing", says Gary Williams, Sales Director United Kingdom, Philips Speech Recognition Systems.

MedSpeech has been seamlessly integrated with SpeechMagic, the industrial grade speech recognition technology from Philips. "As a result, we choose to integrate with SpeechMagic because the product offers many possibilities in terms of workflow, as well as supplying the best speech recognition engine on the market, with 25 recognised languages, 150 conText and over 8,000 installations in more than 50 countries", stated Ander Stöt, MedSpeech Product Manager.

In 2008, Phillips' speech recognition company was presented with Frost & Sullivan's Global Excellence Award.

Euromed Networks has also been involved in the UK PACS User Summit in London (25th February 2007) and featured in the programme dedicated to digital dictation and speech recognition systems, interoperability issues and EHR in the UK. This meeting attracted a wide range of participants from across the UK, representing imaging and other clinical interest areas.

Euromed Networks will be present at Harrogate Computing Healthcare Conference between 21st-23rd April 2008.



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