



# SpeechMagic™

Productivity jumps up to 7% across hospital group

After a good experience at its flagship hospital in Vejle, the Danish hospital unit Sygehus Lillebaelt is rolling-out speech recognition in all of its five hospitals.

### Establishing a central service structure.

#### Speech recognition at Sygehus Lillebaelt.

Sygehus Lillebaelt is one of four hospital units in Southern Denmark. It consists of five hospitals with a total of 700 beds. The hospitals were brought together through two mergers of formerly independent hospitals. Merging the institutions has led to central administrative structures, in particular to a joint facility management with the aim of making useful and productive IT solutions from individual institutions available to the whole hospital network. There is a joint electronic patient record (EPR) in place: the solution IPJ from Acure, an IBM subsidiary.

Lillebaelt's facility management is now equipping all hospitals in the network with speech recognition technology.

The goal is to streamline patient care by making information instantly available, to reduce costs by reducing workload for the secretaries and to make using the EPR more efficient for doctors and other care providers by offering not only the possibility to create documents but also to navigate through the EPR by speech. More than 65,000 in-patients and another 425,000 out-patients per year are expected to benefit from these innovations.

### Integrating speech recognition with the EPR

Speech recognition was first installed at Vejle Hospital, the unit's largest facility, in September 2006. Now again, Max Manus, Nuance's Scandinavian partner, has been put in charge of extending the implementation to all hospitals in the network. The aim is to offer a centralised speech recognition infrastructure for all five hospitals on three servers. The solution that is currently being implemented is based on Nuance SpeechMagic 6.1.

### Project deliverables:

- Streamline patient care by making information instantly available
- Reduce costs by reducing workload for the secretaries
- Make using the EPR more efficient for doctors and other care providers by offering not only the possibility to create documents but also to navigate through the EPR by speech

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CASE STUDY | SYGEHUS LILLEBAELT

## Project facts:

- Five hospitals with 700 beds
- Part of the South Denmark Health region
- Almost half a million patients per year
- Central EPR solution implemented
- Nuance SpeechMagic integrated into EPR by Max Manus
- Support for various reporting workflows (frontend, backend, self correction) as well as voice-based EPR navigation / control

## Project results:

- 5-7% estimated productivity increase at some sites
- Savings of several million Danish crowns
- Doctors can control the EPR by voice
- Use of EPR is encouraged
- Typists receive training on the job and have been promoted to more interesting positions

In addition to Vejle hospital, where all doctors are already using speech recognition, there is one department in the remaining four hospitals that has already gone live with speech recognition and another four departments that are currently running pilot projects. It is expected that speech recognition will be available for all 600 doctors in the five hospitals by the end of 2011. Initially, there will be 570 licenses with an option to increase the number to 670.

## Giving doctors a voice in the EPR

The key success factor is a deep integration of speech recognition into the existing information system, in this case the IPJ EPR. It allows doctors to use the EPR with very little need to click any buttons. They can jump from one field to another by voice command, the recording process is also voice-controlled. Doctors thus become the "voice commanders" of their EPR, which encourages and facilitates EPR adoption.

*"With speech recognition doctors are more or less obliged to finalise documents immediately. Relevant data is instantly available in the EPR. Documents are not forgotten somewhere on the doctor's desk or unavailable to assistant doctors. The availability of documents creates a lean workflow with a number of benefits, especially a reduction in bottlenecks that again and again had previously led to delays in patient care."*

**Kenneth Seerup Jørgensen, Facility – and ICT-Manager, Sygehus Lillebaelt, Denmark**

"It is clear that a speech recognition project with this level of integration is challenging to realise. But the effort is certainly worth it, because it results not only in economic benefits for the hospital provider but also in higher staff satisfaction. It is essential, though, that the IT department has the full backing of its hospital administration, including a readiness to make the use of speech recognition obligatory for the medical staff and to ban or mostly ban conventional dictation.", says Kenneth Seerup Jørgensen.

The hospital management has estimated that speech recognition has led to an increase in overall annual productivity of 5% to 7% in some departments and hospitals of Sygehus Lillebaelt. Vejle Hospital in particular has been able to save several million Danish crowns per year, mainly because the number of typists was considerably reduced; they received training on the job and qualified to work, among others, as IT assistants, registrar specialists or quality assistants. The majority consider their new job more interesting than the transcription job they had before.



*"Speech recognition is one of several tools that allows us to treat more patients in a given time."*

**Kenneth Seerup Jørgensen, Facility – and ICT-Manager, Sygehus Lillebaelt, Denmark**