



## Marienhospital Gelsenkirchen: Digital Speech Processing as a Strategic Success Factor

At Marienhospital Gelsenkirchen, Germany, the digital speech processing system was implemented hospital-wide by St. Augustinus Gelsenkirchen GmbH; this had a significant impact on optimising the document creation processes. After merging the hospital with Sankt Marien-Hospital Buer, both clinics are now organising speech processing together. Due to the very positive experiences of the radiologists, the use of speech recognition could also be extended in future.

Marienhospital Gelsenkirchen is a modern emergency clinic with 562 beds. It was 2007 as the responsible persons at the university teaching hospital of Duisburg-Essen decided to implement a digital speech processing system hospital-wide. After setting a work group for optimizing the document creation the product 'MBS easy' of Kuhlmann-Informationen-Systeme (the basis for SpeechMagic Solution Builder of Nuance Healthcare) was selected. Since October, 2007, the solution was implemented gradually at Marienhospital, first within a pilot installation in the urology department and then in other wards. In 2008 the rest of the specialty departments and the operating rooms were fit up. Kerstin Plewa, head of the typing pool, was responsible for the project taking care of the electronic dictation in conjunction with iMedOne from the very beginning.

### Radically improved document management

In Gelsenkirchen, since the summer 2008 speech processing has been performed digitally-only. Today, the hospital has 141 dictation workstations from which 53,000 documents are produced digitally every year. "This project is a great success for us. Document management has been improved radically", says Carsten Hessling, Organization/ Data Processing Manager at St. Augustinus Gelsenkirchen GmbH.

### Highlights

- Remarkable process optimisation due to electronic dictation
- SpeechMagic Solution Builder, from Nuance, integrated into iMedOne from Tieto
- 141 dictation workstations/53,000 digital documents per year
- Merging the IT infrastructure: central success factor

# DIGITAL SPEECH PROCESSING AS A STRATEGIC SUCCESS FACTOR

## CASE STUDY | MARIENHOSPITAL GELSENKIRCHEN



Kerstin Plewa, Typing Pool Manager,  
St. Augustinus Gelsenkirchen GmbH

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However the implementation of the digital speech processing system at Marienhospital was only the beginning for Hessling. After merging with Sankt Marien-Hospital Buer in 2007 he is now facing the task of merging the IT technologies of both hospitals together. The first step is already done. Since the beginning of this year Sankt Marien-Hospital Buer is working with the hospital information system, iMedOne from Tieto, already used in Marienhospital Gelsenkirchen for some time. Hessling: “The next step is to implement digital speech processing in another clinic as well, and we are now analyzing whether both hospitals should use the same typing service”.

Merging the IT infrastructures is an essential success factor for him. The document management is an important section. Hessling: “Only if we manage to build an efficient digital document management system for both hospitals can we achieve optimal clinical processes”.

### Good experience with speech recognition

In the future, speech recognition could also become a bigger issue in Gelsenkirchen: “In radiology we have been using speech recognition successfully for several years. In my opinion we could use it in other places as well”, Hessling says. In 2004, the department of radiology integrated SpeechMagic (at the time a product of Philips; the division now belongs to Nuance Communications) into RadCentre from iSoft. Every year eight physicians dictate 5,000 to 10,000 radiology reports using speech recognition. Hessling: “The positive feedback from radiology was an important factor as we decided to implement digital speech processing clinic-wide” .

Kerstin Plewa also considers the hospital-wide change to digital speech processing as a great success. “Previously our physicians dictated about five to six reports on a cassette that was sent by interal mail to the typists. This was very complicated and often caused delays, especially, if the cassettes were ready after the last mail had been sent at 2 p.m. “. Today you can process the medical reports from all wards in parallel as they are created digitally. The transcriptionists immediately see the dictations listed that still need to be edited. The sound quality is better and now doctors seldom have to deal with enquiries from transcriptionists.

The doctor can see the status of their dictations listed anytime. Completed documents can be forwarded and printed out without problems. “Today we are able to share the completed reports directly with almost all patients leaving the hospital”.

### Success needs deep integration and an overall concept

Through digital speech processing dictation is now more accepted, too. Previously in cardiology, for example, you typed most reports yourself. This has changed: “In 2007, during the whole year, we only received three dictations from the cardiology department. In the first six months after implementing digital speech processing there were already 1,800 of them from this department”, Plewa tells. The deep integration of digital speech processing into the hospital information system is one of the reasons for the high acceptance among doctors.

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Carsten Hessling, Organization/Data Processing Manager,  
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Every document to be created can be retrieved by clicking the mouse or via a dictation device buttons directly from the patient record. The completed documents are stored directly with the case.

Integration is important, but also everything else connected with speech processing must be right. In the run-up to the implementation with the HIS, Kerstin Plewa created about 200 templates that can be used by the doctors. This, in addition, accelerates the whole document management process. Hessling: “Digital speech processing is only one side of it. Not until the standardization of the medical reports and integration with the HIS are done is the whole thing is complete”.

## Participating solution providers and partners:

### Nuance:

- Provider of speech-enabled solutions for healthcare
- Developing and implementation of SpeechMagic Solution Builder

**Tieto:** With iMedOne one of the leading HIS providers in Germany

**T-Systems:** ICT solutions for healthcare. System integrator and operator of hospital IT

## Working with SpeechMagic: individual guidance on speech recognition

SpeechMagic Solution Builder is stable, scalable, and is ideal for a fast integration in a clinical environment.

Please contact us to discuss your individual needs and to obtain a temporary roll-out concept:

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## About Nuance Healthcare

Nuance Healthcare is a division of Nuance Communications, the leading provider of speech processing and imaging solutions. Nuance Healthcare offers the largest portfolio of speech-enabled solutions for medical documentation. Our vision is to push the acceptance and use of EPA/HIS systems in order to maximize the returns of technology investments.

The experience speaks for itself™

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