

Noord-Limburg Hospital Foundation, Pathology Unit

# *Efficiency through speech technology*

The Dutch Noord-Limburg Hospital Foundation (Stichting Ziekenhuizen Noord-Limburg) has recently boosted its performance by implementing speech technology in the Pathology Unit. The hospitals in the Foundation are now capable of working much more efficiently since the MediSpeech® speech technology system from G2 Speech has been coupled to the hospital's Pathology Information System (Palga). This improvement has been made possible through cooperation with G2 Speech.

## **Pathology Unit**

The Noord-Limburg Hospital Foundation comprises two hospitals: the St. Maartens Gasthuis in Venlo and the St. Elisabeth Ziekenhuis in Venray. The total capacity of the two hospitals together is approximately 740 beds. The Pathology Unit is housed in the St. Maartens Gasthuis, but it serves both hospitals. In Venray there is only an autopsy room. The Pathology Unit employs two pathologists and nineteen analysts/laboratory staff. The unit performs at least 250 post-mortems, 12,000 histological examinations, 15,000 cytological cervix examinations, 4,000 non-gynaecological cytological examinations and 400 punctures every year.

## **Speech technology as a solution**

Due to the shortage of secretaries the Pathology Unit was not capable of meeting its reporting requirements. Dr Wouda, pathologist: "We thought that speech recognition might offer

has proven to be a reliable supplier for the medical world."

## **The system**

MediSpeech® offers several possibilities. In this case six dictating stations have been created at the department. Two of them are hands-free dictating stations in the pathologists' rooms and



*The pathologists' room is working with a speechmike, a barcode reader and MediSpeech within a Palga system.*

a solution. After a market search G2 Speech turned out to be the only supplier of the sort of comprehensive and integrated system using speech technology we required, i.e. one that would fully integrate with the Palga system. As a result G2 Speech came up with the MediSpeech® system. All in all, G2 Speech, who are also a Philips Speech Processing technology partner,

there is a third one in the macroscopy room. The post-mortem rooms in Venlo and Venray have been fitted with a wireless headset for dictation and the sixth dictating station is in a scientific assistant's room. However, the digital files dictated by the scientific assistant are not converted into text by the speech recognition system but they are typed into the Palga system by secre-



taries. The dictated texts can be edited further on six work terminals: four in the secretaries' office and two in the pathologists' rooms. After a half-day training session the pathologists and secretaries were ready to start working with the system. Two weeks later they had fully mastered it.

### The work process

The computerization process in the department was boosted by the activities of G2 Speech. The way of working has further been improved by the introduction of a barcode reader. A barcode sticker representing the examination number is attached to the request form and scanned using the barcode reader. This links the number to a digital file. After the pathologist has stated his findings, the text resulting from the speech recognition program is distributed to the secretaries' department through the network so that the secretaries can check the text against the sound file. Any failures are corrected and the reports are sent to the Palga system over the network again. According to Wouda this work process is faster and involves a lower error risk. "It also allows us to give priority to reporting so that we can win even more time. The system learns from its own mistakes, so that the recognition percentage gradually improves. The support by G2 Speech is very good and in case of problems their helpdesk is

always available. G2 Speech can then access the server by telephone to identify and correct failures. The MediSpeech® system is regularly updated as well. Actually, I must admit that more often than not problems are due to the hospital, and not to G2 Speech," says Wouda.



*The macroscopy room is equipped with a wireless headset and a footpedal.*

### A full service package

G2 Speech offers solutions for all hospital departments. Every department where people dictate texts will eventually benefit from speech recognition. This will significantly improve the efficiency of the work performed in hospitals. The St. Maartens Gasthuis is now all ears for speech recognition! In fact Wouda can draw only one conclusion: "Once you have started working with the system, you see that it is paying off almost immediately. The entire department is now working more efficiently, so we are very happy with G2 Speech."

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