



## Delivering Information for Quality Healthcare



In many parts of the world Radiologists are a scarce “resource”;

Australia is no exception. Radiology Providers need to provide fast report turnaround times. Using Speech Recognition together with an Integrated Reporting System, Nambour Hospital in Queensland, Australia has reduced turnaround time for Radiology reports from an average 33 hours to less than 5 hours – a drop of 85%.

“Public Radiology in Queensland is faced with a shortage of Radiologists to do the reporting”, explains David Ward, Director - Medical Imaging Services, Southern Cluster, Sunshine Coast - Wide Bay Health Service District. The Radiologist shortage led to significant delays in our report turnaround times, “In the past, some reports would take 6-7 days to be produced”, David says. Of course Radiologists are only one component of the delay, another component was the time taken for the Audio Typist to transcribe the dictations and produce the reports. Nambour Hospital was experiencing transcription backlogs common in the Healthcare Industry. Nambour turned to Soliton IT, a Nuance integration partner, to evaluate the potential of Speech Recognition technology which “many people tried 10 years ago with unsatisfactory results”.

### A decade later, a world away

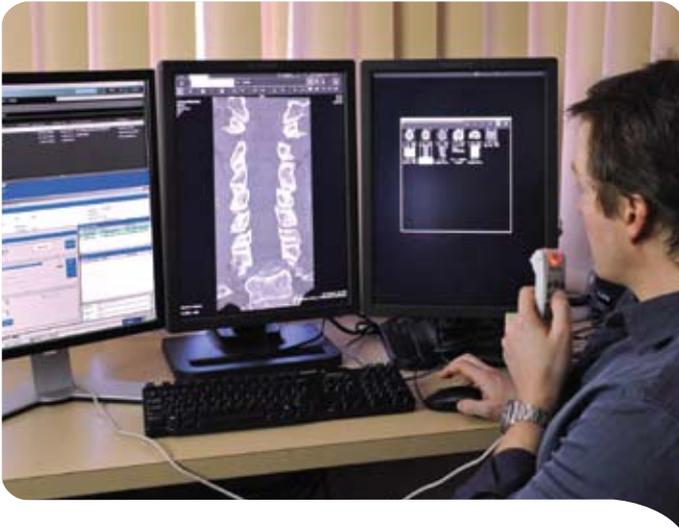
The Speech Recognition technology of today is very different from that which was available ten years ago. The first programs didn’t deliver on their promise. Today, they do. In many European countries, for example, more than 50% of Radiologists are working with Speech Recognition – as are two out of three in North America. Speech Recognition can support the Radiology Workflow, especially with regards to faster turnaround times for reports – but it isn’t the answer to all challenges.

### Key benefits

- Integrated RIS/PACS/SR system, minimising risk of error
- Improved report turnaround by 85%
- Massive efficiency gains in the Reporting and Transcription processes

# NAMBOUR HOSPITAL, QUEENSLAND, AUSTRALIA

CASE STUDY



“Some people think it’s the answer to all their problems, it’s not. We don’t believe that Speech Recognition will completely replace Audio Typists, but it makes them much happier people”, David says. Previously the Transcriptionists were constantly fighting with a backlog of tapes and later audio files waiting to be typed. “They never had a sense of achievement. They left on Friday evening, knowing that on Monday morning the piles will have increased. It was demoralising”, David Ward says.

## Creating system unity

Nuance Speech Recognition technology, SpeechMagic, together with the Soliton IT Reporting Workflow Solution, was implemented for Radiologists at Nambour. Centrally installed and managed, the system was expanded into

both Caloundra and Gympie Hospitals, so that all our Radiologists are working with Soliton IT powered by Nuance Speech technology. A key benefit is the HL7 interface to the Radiology Information System (RIS) and the Desktop Integration with the Picture Archiving and Communications System (PACS); it eliminates what David Ward says was once “the number one major risk for potential error”: the possibility of a Transcriptionist typing the wrong report for the wrong patient “Thanks to the integration with the PACS and RIS, image, report and patient file are one single unit and it is virtually impossible to mix them up.”, David underlines. Radiologists can choose between Digital Dictation and front-end Speech Recognition on a case by case basis if they wish. Speech Recognition importantly also enables Radiologists to produce and distribute an authorised report after-hours and during weekends. “We have a number of young Radiologists who embraced the Speech Recognition enabled Reporting system and encouraged others to come on board. We didn’t have any acceptance problems,” says David. What surprised David Ward was the ability of the Nuance Speech Recognition engine to learn and adapt to the Users. Recognition accuracy is constantly being improved and a site-specific vocabulary and context is being developed.

## Factual decision support

“In the past a Radiologist’s main task was to dictate reports.” Today they spend an increasing amount of their time consulting directly with their colleagues and assisting them in managing their patients” says David. Today they have multi-disciplinary team meetings in which Radiologists get together with Surgeons, Technologists or Medical Students to discuss their patients diagnostic imaging findings and are involved in treatment option decisions. The rapid report turnaround time facilitates faster clinical decision making and improves Patient Management. “The Soliton system is working fantastically well. The features and the improved integration is making everyone’s life so much easier”, concludes David.

He is not the only one...

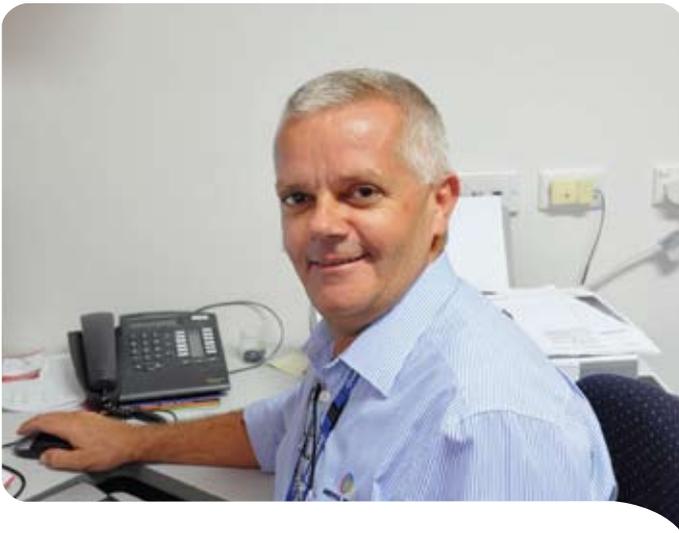
“Both the Consultant Radiologists and Registrars are very happy with the product. It has especially improved our after-hours report turnaround times, and is easy to use. The Speech Recognition integrates well with Workflow Manager, and has in fact converted sceptics in this technology into Users”, highlights Dr Troy Stapleton, the Director of Radiology, Southern Cluster, Sunshine Coast - Wide Bay Health Service District. “Accurate and rapid diagnosis is one of the keys to improving Patient Management and thanks to the new system we have achieved a marked reduction in our report turnaround times.”

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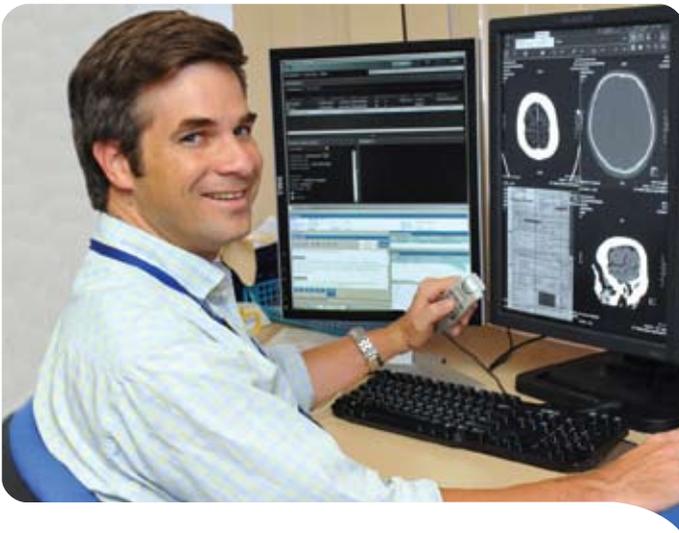
“From a clerical point of view, the Soliton IT solution, powered by Nuance’s SpeechMagic has contributed to a less stressful environment, allowing a Typist to be redeployed within the Medical Imaging service to help in other clerical areas” adds Nonie Allen, the Nambour System Administrator. “The implementation of Soliton IT and SpeechMagic has improved the productivity and services and it has boosted the staff morale.”

With the message spreading into other organisations, Radiology Speech Recognition in Australia has the potential to experience the same adoption rates as in Europe and North America.



*We were anticipating issues around the change process and user adoption, but the opposite occurred. Staff endorsement was and is outstanding. Initially we introduced speech recognition to enable Radiologists to produce reports during after-hours. Now, the technology is happily and effectively used during business hours as well.*

**David Ward**, Director - Medical Imaging Services,  
Southern Cluster Sunshine Coast - Wide Bay Health  
Service District



*Clinicians referring patients for an MRI, Ultrasound or CT are now able to view the report on their system within one or two hours on average.*

**Dr. Troy Stapleton**, Director of Radiology, Southern  
Cluster, Sunshine Coast - Wide Bay Health Service District

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CASE STUDY



Fully Integrated Speech Recognition Solutions powered by SpeechMagic

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