

## CASE: SPEECH RECOGNITION SOFTWARE FOR SUBTITLING OF VRT PROGRAMMES



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By the end of 2014, 95 per cent of all Dutch language TV broadcasts of the VRT (the Flemish public radio and tv broadcaster) must be subtitled to make them accessible to the deaf and hard of hearing. So states the management agreement between the public broadcaster and the Flemish government. For news and current affairs programmes, the figure is a full one hundred per cent. “This would be totally impossible without speech technology,” says Gunter Saerens, head of T888, as the subtiting service is called, in reference to the teletext page.

The VRT has been using speech recognition software from Nuance since the very first version came onto the market in 2001. Dragon NaturallySpeaking is used for the subtiting of Het Journaal, current affairs programmes such as TerZake and De Zevende Dag, broadcasts of sporting events such as the Tour de France, the Olympics, the FIFA World Cup, classic cycling races, and so on. Some fifteen people use the software.

Even with the technological assistance, there are usually at least three people needed to do the job: a so-called respeaker, a proofreader and someone they call the “broadcaster”. The respeaker says everything out loud that he or she hears and sometimes makes minor corrections. The proofreader checks the output of the respeaker and corrects where necessary. The broadcaster then ensures that the subtitles appear on the screen at the right moment. Sometimes, for instance with a live report from a Tour de France stage, there are only two people at work: a respeaker and a broadcaster. Very occasionally, mainly with tennis matches, a respeaker does the job completely alone.

“This way of working results in very accurate, polished subtitles,” says Saerens. “With experienced resparkers especially, the number of mistakes during a broadcast is very limited.

According to Saerens, the software seems to be a bit more accurate with each new version. “Many words that used to cause problems are now recognised flawlessly. In addition, the lexicon that the software comes with as standard is much more extensive. Finally, the speed with which the text spoken in is processed has also increased substantially. It always remains to be seen whether the new version will be compatible with the software being used for the subtiting itself. This generally does require some modifications, but these are usually very limited.”



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The subtitles of the VRT enjoy an excellent reputation abroad. They are at the forefront, both in terms of the quality of the subtitles and the number of hours broadcast with subtitles. Only the BBC is reportedly doing even better.

To maintain the quality of the subtitles at this high level, the broadcasters are being thoroughly prepared by Saerens' team. So for example, they will enter the names of all the cyclists beforehand, so that the software already recognises them. They will also go over the cols, the start and finish places, other important place names, tourist attractions along the route and the main wines of the region, since there is a good chance that the commentator will mention them at some stage. For a programme like De Zevende Dag they will do that with the names of the guests who are appearing for the first time, the vocabulary associated with the topics discussed, and so on.

“Dragon NaturallySpeaking enables us to provide high-quality subtitles for the required number of TV programmes with a relatively limited crew. We are very pleased with how the software has continued to evolve over the years, with the technological basis remaining intact, so that we can integrate the new versions into our systems quite easily.”

Gunter Saerens, Head T888, VRT