

New Dutch-English system

A machine translation system for Dutch to English translation has been developed by a UK translation company, Hook and Hatton Limited, of Northampton.

Director *Terence Lewis* explained to Language International how the system came to be created.

"Hook and Hatton Limited," he explained, "was set up by my brother *Dae Lewis* and me to supply specialist language services to the chemical industry." The company enlists the services of practising and retired chemists and chemical engineers for this work, which mainly involves translation and technical writing.

"The basic algorithm for the Dutch-English translation system was designed by me. However, as I am not a trained programmer I brought in coding developed by freelance programmers for some of the modules. My son *Chris*, who has taken computer programming courses, also helped me." The dictionaries have been compiled and are continually being added to by Hook and Hatton's staff. They use simplified coding which is then converted into the code used by the program.

"I have spent most of my working life (25 years) in the language industry; as a Unesco translator, as a dictionary editor for Harrap, and as a freelance translator. My interest in machine translation grew out of the practical experience of translating and editing hundreds of pages of highly repetitive engineering specifications." The program was initially developed to translate such specifications (which are written in very simple language).

"For obvious commercial reasons, I am unable to describe the actual program in any great detail. However, I can say that it has been specifically designed to translate from Dutch to English and 'to be aware' of the particular differences between the two languages." The program is based on traditional approaches described in the literature, although some aspects, such as homograph resolution, have been built on known AI routines.

"The program uses a large dictionary of phrases and even complete sentences taken from a corpus of Dutch scientific and technical documents and a single word dictionary in which syntactic and some semantic information is provided. The grammar applies the information taken from the dictionaries to generate the English sentences. However, stock scientific sentences such as 'the liquid is heated to a temperature

of are simply pasted straight in from the phrase dictionary without any further analysis or processing, the argument being, why run the risk of incorrect analysis (and that does happen!) when the sentence is correct in the first place.

"At present the system's database enables it to deal with general scientific texts or texts in the fields of chemical engineering and computer science. The program runs on a 33 MHz 386 PC with 4 Mb or RAM and a 200 Mb hard disk."

Mr Lewis is reluctant to give a face-to-face demonstration, but is prepared to demonstrate the capabilities of the system via modem.