AI/Esperanto
translator
passes first test

The biggest hurdle in machine translation (MT) is ambiguity: how to get a computer to identify the right meaning of a given word or phrase.

Most linguists will admit that for a computer to correctly translate certain words in certain contexts it needs "real world knowledge." Such knowledge is one of the essential features of Artificial Intelligence (AI) expert systems.

BSO, a Dutch software developer, has been developing a machine translation system called Distributed Language Translator (DLT) which incorporates AI "real world knowledge." Funded by BSO and the Dutch government, the Dfl 15 million (US$ 7.2 million) project also makes novel use of an Esperanto interlingua.

DLT was recently put throught its first critical test by an American team at Brigham Young University, led by linguistics professor Alan Melby. The team input text samples previously unknown to the system.

These text samples were drawn from a corpus of UN and EC documents amounting to 500,000 words. The samples themselves had 480 different words.

Those words were supplied to BSO, in addition to another 320 random words added as a safeguard. This list formed the real world knowledge base. Researchers at BSO input not only the translation for each word, but also the appropriate combination of concepts. A dog might "bark," for instance, but never "delegate."

Five hundred thousand word combinations derived from the original 800 words were entered.

Test results heartened BSO researchers. "It is already clear," stated project head Toon Witkam, "that the system chose the right translation more often than expected and with a remarkable degree of confidence."

The system still has problems. Software bugs increased the error rate. And the DLT is still slow. But BSO expects to overcome these problems through reprogramming and the application of new technology, using CD-ROM and parallel processing.

The first commercial application, an English to French translator, is scheduled for release in 1992.