The Future is Here!

by Mollie Isaacson

Cross psychology, linguistics, computer science, and more than eight years of research together and you get a revolutionary breakthrough in the field of Artificial Intelligence.

John Rittinghouse, an expert Chinese linguist and software engineer, who holds a Master of Arts in Psychology, teamed up with *Al Braaten*, another Software Engineer, to create an English to Chinese Mandarin Software Translation System that is capable of translating conversational and technical English to Chinese Mandarin with what is claimed to be an extremely high degree of accuracy.

"The secret", says John, chairman of the board for Computer Linguistics International, Inc., "is that our system is not a simple word substitution process as are so many of those developed by our predecessors. Our highly proprietary system uses extensive rule-based processing techniques to perform very accurate translations in precise Chinese grammar". He went on to say that this system had been extensively tested on over 1,660 grammatical constructs and syntactical variations with a sustained accuracy rate of over 96%.

John had me sit down in front of the computer to demonstrate the system. The minimum system requirements, he explained, were an IBM PC or compatible 80286 based system with a hard drive, an Enhanced Graphics Adapter and monitor, a 1.2 megabyte floppy disk drive, MS Dos 3.3 or higher, and 640K of random access memory, a configuration that was quite common in the business world, he assured me.

The main display on the screen consisted of five areas. At the top was the Chinese character display window where the translated characters were seen. Below, a blue area showed the English input. Below the English, there was a green window used to display Chinese romanisation and tone indicators.

"The romanisation and tones provide meaning and allow even the most hesitant linguist to speak with a very high degree of accuracy.", said John. The blue window at the very bottom of the main display showed messages and prompts. On the right side of the screen were bright, red boxes that indicated the

function of each of the function keys, one through eight, on the keyboard.

To enter an English phrase, I pressed the space bar on the keyboard and an input window was immediately displayed. John typed in a sentence and in a flash the screen printed out the translated sentence in Chinese characters. He went on to explain how it also allowed me to select a choice of romanisation systems. The available options were the default PinYin used in mainland China, the older Wade Giles system, or the newer Yale system. John explained that these were the three most common systems in use today. "The program can even determine the correct punctuation for you most of the time.", John went on to say. Then, I pressed the TAB key and the computer spoke Chinese in perfect, native Mandarin voice!

The goal is to have two laptop computers hooked together, where one person speaks English and the other speaks Chinese, but neither speaks the other's language, and allow them to communicate effortlessly.

"To process files, we put the system into File Mode by pressing the F2 key. This allows the system to process large files at rates in excess of 140,000 words per hour." said John. From there, John explained the fields can be either printed out or exported to most Chinese word processing systems that support the common GB file formats, where the linguist can perform final touch-up work.

John also informed me that the system could output to several different printer types and even included a built-in invoice tracking feature.

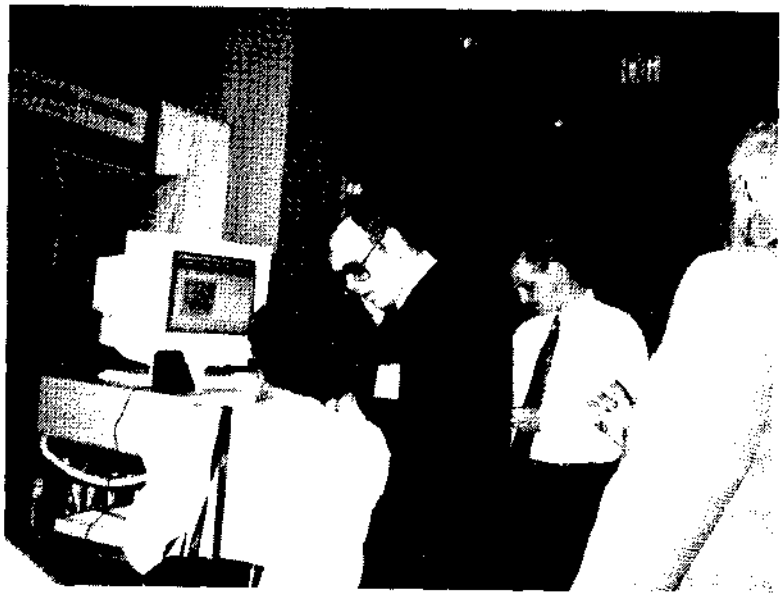
John is no stranger to the translation community. He has interpreted for the president of the People's Republic of China, Tang Shangkun, and for many other civilian and military dignitaries, and this experience is coupled with expertise in technical translations. Incidentally, John is also fluent in Thai and intends to convert this system to that language in the future.

Al Braaten, John's associate, provided much of the assistance necessary to complete this system. "I could not have done this without Al's help.", John said. Al, the quieter of the two, went on to explain that the first release of their product, called the Custom Translator, became ready to ship in June of 1991. The Custom Translator contains a dictionary of approximately 105,000 entries, with additional software provided to maintain the dictionary. If this is not enough, there is a Chinese to English version of the program that is nearing completion. "The goal", said John, "is to have two laptop computers hooked together, where one person speaks English and the other speaks Chinese, but neither speaks the other's language, and allow them to communicate effortlessly." To me, this sounds like Captain Kirk on the bridge of the starship Enterprise, start date 20743.52, but to John and Al, it's here now.

John's first public exhibition of the translations system was at the annual convention for the American Translators Association, held in Salt Lake City, Utah in October. He was delighted at the reception his peers gave to his system. It was, according to the convention director, *Bill Fry*, the hit of the show.

John's quest is to capture the Chinese translation market by providing the highest quality translations in the world in the fastest times imaginable. He recently entered into a joint venture agreement with the Hong Kong based corporation Aaron Ferer & Sons Co. (HK) Ltd. The agreement provides for the establishment of eight more Asian offices throughout China, Singapore, Taiwan, and Hong Kong during the next year. "Eighty-five percent of all technical information is published in English", said John. "Our plan is to open the lines of communication between the one third of the world who speak Chinese and the fourth of the world who speak English.

To that end, he is in the process of finding suitable business partners to cover the spectrum of bilingual communications needs using his new technology.



John Rittinghouse demonstrating at ATA convention, Salt Lake City