Electric Word 19, May-June 1990; p.14-15.

"When I went for the interview, I started explaining the characters, trying to show that I was capable of teaching this unusual man my language. In fact I was already at work since Toma was storing away everything I said in a critical way."

Eriko Akazawa: Systran Star and Knight of Jeida

Systran Corporation's chief linguist, Eriko Akazawa, now sits on the Japanese Electronics Industry Development Agency (JEIDA) machine translation R&D round table, which makes her the first female "Knight of the JEIDA." It's a long way from teaching Japanese in the back of a car, as Andrew Joscelyne discovered.

As a student, Systran Corporation Development team manager and chief linguist Eriko Akazawa hardly imagined that one day she would be a businesswoman in the machine translation (MT) field.

But a combination of serendipity and personal dynamism led her far from her native Shinshu region to end up sharing ideas on how to produce an English-Japanese module with the fabled inventor of the Systran automatic translation system, Peter Toma.

Following a spell in California during her undergraduate studies in psychology, Akazawa returned to the Tokyo Women's University before embarking on research in clinical psychology in San Diego. At San Diego she also followed courses in cognitive science, "since I was really interested in how the brain works in problem solving."

Job hunting in the campus newspaper one day, she flashed on an ad for a Japanese teacher. A few days later she was giving language lessons to maverick information scientist Peter Toma, who – for sound business reasons or for the sheer challenge – had decided to learn Japanese.

With his spare moments getting increasingly rare, the lessons took place in the back of Toma's car while cruising the Los Angeles highways on the way from one meeting to another. "Peter had also decided to learn Arabic at the same time, so there would be two language teachers sitting in the back while he was driving. Sometimes he'd speak Arabic thinking it was Japanese and vice versa. Crazy days, but the man was clearly a genius."

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« Akazawa was so taken by the very particular intellectual needs of Peter Toma that in 1980 she joined the team working on the Japanese language module for the Systran translation system at the World Translation Center in La Jolla, California. With Toma in the process of selling-off Systran development rights for different language pairs to outfits in the US and elsewhere, she also stepped right into the world of business.

RIGHTS OF PASSAGE

In Japan, Sadao Kawasaki, the CEO of Iona (a major Japanese cosmetics company) founded Systran Corporation in 1979. Five years later he bought-out the rights to develop, use and license Systran for *any* language pairs in Japan and other parts of Asia. Kawasaki also helped Toma retrieve the North American rights for the language pairs he had bought-out.

"There has been some confusion about Systran rights," says Akazawa. "Since the worldwide rights for Systran are divided between the Gachot Group and Systran Corporation, these two owners of Toma's brainchild are now working toward a practical, straightforward structure for potential customers."

Eriko Akazawa returned to Tokyo in 1984 from the World Translation Center, where she had helped develop the first versions of the English-Japanese and Japanese-English programs. She now became chief linguist at Systran Corp., where she began to supervise the marketing of the translation system.

"One of our most interesting clients has been Arthur Andersen Inc., the leading accounting firm," says Akazawa. Anderson needed to translate into Japanese their METHOD/1, a computerized system for a business environment incorporating some 600,000 English words accompanied by figures and diagrams.

According to Andersen's Ryozo Akiyama, Systran did not save them much money, but the company was impressed by the MT speed, the consistent deployment of specially tailored terminology, and the fact that corporate material could be stored for facilitating later updates.

As for the Japanese-English system, Eriko Akazawa received a welcome Christmas present in December 1985, when the US government negotiated a licensing agreement with Systran allowing any US agency or organization to use it.

Systran got a nice deal, which is ongoing: they released the latest version of the program to California-based LATSEC, which sets up development contracts with the US government, while retaining the right to take advantage of any development work performed by the government systems engineers – classified material apart.

Six months later in June 1986, the European Commission signed a deal to put Systran online as a Japanese-English translation service of Japanese science and technology databases.

MORE BANGS TO THE BOOK

Rather than independent syntactic rule modules, massive dictionaries of various specific kinds are the heart of Systran's complex architecture – the long-haul option for system developers, with all that coding of morphological, syntactic and semantic information.

Beyond the general list of 50,000 basic words, the Japanese module already packs another 250,000 science and technology terms which were in many cases imported (some "as-is," others converted to Systran's syntactic/semantic formatting) from another termbase.

To make the effort effective in terms of cost and labor, says Akazawa, Systran automated the conversion and incorporation as much as possible and used "paraprofessionals" to check for accuracy.

Another major database which has been incorporated into Systran format is a 250,000-term medical terminology base, developed by Tokyo University's Professor Narimitsu Kaihara (coordinator of the Society for the Study of Medical Engineering's Electronic AI Dictionary).

"Ideally this kind of agreement will be followed by others," says Akazawa, "the aim being to expand Systran's dictionaries in areas such as economics and finance up to a million terms over the next few years. Remember that Systran's remarkable processing speed is hardly influenced by a drastic enlargement of term dictionaries."

For all this activity at Systran's downtown Tokyo headquarters, Eriko Akazawa can never forget that the system she manages – like Weidner's Japanese-English system bought four years ago by cement company Bravice – has US origins.

"Systran is a 'foreign' system in a country where a number of major computer companies have developed their own commercial MT systems, and this means that unlike them there can be no real government support for any of our development costs," she says.

However, against the odds, and unlike her competitors at Bravice, Akazawa has been invited onto the Japanese Electronics Industry Development Agency (JEIDA) MT round tables on research and development where the rich history of Systran has been taken seriously.

"I'm not only the sole representative of a 'foreign' MT system in a very them-and-us, corporate-minded country; I'm also the only woman in the group as well!"