

## LogoVista Conquers Japan

**Don't tell Language Engineering Corp's Glenn Akers that Japan is a closed market. His company's English-Japanese machine translation system is enjoying growing popularity on the far side of the Pacific.**

When Apple's PowerPC-based Macintoshes were introduced to an eagerly awaiting world on the 14th of March, LogoVista E to J, an English-to-Japanese machine translation system, was used by Apple as one of a dozen or so native Power Macintosh applications to demonstrate the capabilities of this exciting new generation of personal computers. During the main introductory event in New York City, LogoVista E to J was used in conjunction with a beta version of Caere's OmniPage OCR system to scan a document announcing the Power Macintosh and to translate it into Japanese. As LogoVista E to J worked its way through the document to oohs and ahs from the audience, the Apple Evangelists gushed, "machine translation is one of the Holy Grails of computing. Never before has there been a machine translation system operating at this level on a personal computer." Apple sales and marketing in the US continue to demonstrate LogoVista E to J as one of the most noteworthy applications available exploit the powerful new Motorola microprocessor at the heart of the new Macs.

LogoVista is the product of a joint venture established by Language Engineering Corporation, based in Belmont, Massachusetts, and the Japanese firm Catena. As Japan-watchers will know, Catena is the owner of the Computerworld franchise in Japan and, among other things, brought the translation package STAR on the market. Occasionally, LogoVista is mistakenly referred to as an upgraded version of STAR, but LEC's founder and director Glenn Akers emphasizes that the two products are quite separate: STAR was developed in Japan, while LogoVista development (technical dictionaries excepted) takes place in Belmont. Of the two, LogoVista is the more sophisticated system, and when Catena closed Catena Resource Laboratories, the developer of STAR, around a year ago, it offered LogoVista E to J as an upgrade path to STAR users.

The LogoVista joint venture is a three-way partnership between LEC, Catena, and Risosha, a Japanese printing company specializing in electronic printing. LEC markets the LogoVista system in the US, but Akers concedes that there is a relatively small market for LogoVista here; the bulk of the sales of the package are in Japan. LEC offers a large range of domain-specific dictionaries to supplement the 100,000 word system dictionary; at last count there were twenty-two, good for a total of more than half a million entries. These specialized dictionaries are compiled by LogoVista in Japan.

It may seem unusual to develop a predominantly text-oriented program for that most graphic of computer platforms, the Apple Mac, but Akers points out that the Mac has been a great success in Japan for many years and Catena is a major distributor of Macs there. Only with the release last year of DOS/V and the more recent introduction of the Japanese version of Windows has the PC begun to enjoy the kind of popularity it has almost everywhere else in the world. While the Mac version is a priority for LEC – and the Power Macintosh version is surely to be a magnificent boost – the company has developed Unix, Windows, and Windows NT versions as well. LogoVista has been well-received in Japan; Akers says recent sales have exceeded the expectations laid down in LogoVista's business plan.

While many of the several dozen Japanese MT systems which have been developed over the years have their origins in the work of Professor Makoto Nagao and his proteges at the University of Kyoto, LogoVista is a clear exception. This system is based on the research of Susumu Kuno, a linguist who has been at Harvard University since the early 1960s. Akers, who himself has a PhD in linguistics from Harvard, states flatly, “there is no one who knows more about parsing English and the structure of Japanese than Kuno. We’re building on his shoulders.”

LEC has translated several reviews of LogoVista E to J which have appeared in the mainstream Japanese computer press, and while a review in the Japanese Mac Life is hardly the final word on the subject, reviewers are generally positive and reveal they have an understanding of what the system might be suitable for. Writes Itsuo Ohba in the December 18, 1993 issue of The BASIC, “the price for this professional translation system is an attractive ¥194,000. It goes without saying that the prospects will be dimmed for other systems which cost several million yen.” Ohba, who is a translator, said he was extremely impressed with LogoVista and wrote that its reputation as the best English-to-Japanese translation system available in Japan was “well-deserved.”

Whereas North American and European developers now expend a lot of time and effort developing sophisticated file filters to enable users to run formatted DTP files directly through translation systems, this has been less of a priority for LEC. The reason for this, explains Akers, is that the Japanese DTP market is still lagging behind that in the West. There is a Japanese version of PageMaker for the Macintosh but not a Macintosh version of Framemaker or even Microsoft Word. For DOS machines, the overwhelming leader is Ichitaro, Akers points out, but there are no English documents in Ichitaro format since it is a Japanese WP. For Unix machines, there are now Japanese Frame and Interleaf versions, but both are relatively recent, and do not have large customer bases.

The upshot, says Akers, is that LEC has concentrated its resources on developing the MT core, and to enhance the user interface based on requests from its users. “They have not asked for Interleaf or Frame yet,” he says, “but have asked for SGML.” LEC plans to offer that in version 2.5 of LogoVista E to J.

Akers is convinced that although the market for machine translation for publication purposes (where DTP formatting is a real issue) is very large in Japan, there is an even larger market and need for MT systems for information access. In this case, format preservation is not an issue, but intelligibility without pre-editing or post-editing is mandatory. “In this respect,” says Akers, “our system performs without pre-editing at a level comparable to the best systems with pre-editing.” Pre-editing, he adds, is “simply not useable for someone who does not know the source language well.” Based on his experiences, Akers finds that “the Japanese are the most sophisticated users of MT in the world. It is the most developed MT market in terms of the number of competing products, interest in MT, and use of MT.”

While clearly its flagship product, LogoVista E to J is not the only LEC package on the market. The company has also launched a line of inexpensive multilingual correspondence packages, for the Mac, DOS/V, and NEC DOS. Using the familiar boilerplate/template approach, users with no knowledge of a foreign language can produce “grammatically correct and culturally appropriate” letters. LEC offers Japanese, Spanish, and French versions of Ambassador for producing letters to and from English and a Japanese/French version. The company also provides contract R&D in NLP for private companies and government organizations, with expertise in the development of large-vocabulary speech recognition for English and Japanese, among other things.

Akers is aware of the perils of mis-marketing machine translation, a technology which has not always enjoyed impeccable credentials, whether in Japan, the US, or Europe. Previous to establishing LEC as a consultancy in 1985, he worked for Kurzweil AI, Bell-Northern Research, Verbex, and DEC in various aspects of speech recognition, text-to-speech and NLP research. At Kurzweil, Akers saw firsthand how previous inept efforts to market early ASR systems seriously muddied the waters. “We discovered that people who had already been hyped ASR were not receptive,” recalls Akers. “There were people who got burned by speech rec the first time around, and you knew that you would have to wait until these people were long gone before you could ever get your foot in the door of those companies

again.” Akers finds this to be true for MT as well. “It doesn’t matter with what language pair a person has experience with. A single bad experience taints the whole field.”

While it might seem a hindrance to be developing Japanese translation systems outside of Japan, the concentration of development efforts in the US and marketing efforts in Japan is a highly effective one. “With the universities here, the Boston area offers a great pool of creative talent,” says Akers. “We have no trouble attracting talented engineers and linguists for projects which are certainly out of the ordinary.” While LEC does undertake some marketing in the US, Akers seems happy to leave the bulk of those activities to his Japanese colleagues. Says Akers with a sigh of incredulity, “do you have any idea how much it costs to market a product?...”

Prices: LogoVista E to J, US\$1995; domain-specific dictionaries, US\$495-US\$995. Ambassador, US\$295

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