Overcoming the Digital Divide between Phonetic and Ideographic Languages

In the year 2000, the Mori led government in Japan adopted a ‘Basic Strategy for IT’ policy which involved the formation of an advisory committee. One can immediately see from even a cursory examination of the committee’s recommendations that nothing particularly innovative has been proposed. Rather the recommendations are highly imitative of American and European policy several years ago. As for infrastructure-building, the most praiseworthy aspect are the proposed subsidies for IT-based training courses. For the Japanese who tend to have little experience of having used a keyboard, these courses will be highly useful.

The above title is the official title I was assigned for this conference, but I must at the outset say that the actual practice and development of information technology was much less influenced by public sector policy and more the result of the desires of the people themselves. The culture of the people, as end-users, was a more decisive factor in determining the trajectory of development. In what follows, we will discuss particular aspects of Japanese IT in the context of minimizing the domestic digital divide.

1. DIGITAL DIVIDE AND KEYBOARD ALLERGY

In my keynote address, I wish to discuss some aspects of Japanese IT in relation to overcoming the digital divide between the Roman-alphabet-based West and ideogram-based East Asia. This has been a very serious, almost insurmountable, disadvantage and handicap for East Asians in catching up computer-Internet system.

The alphabet-based keyboard was a bottleneck for Japanese seeking to access the Internet. Indeed, it was a problem for all East Asians who use ideograms, as they get used to alphabet much later than their counterparts in European countries. According to a UNESCO survey of computer literacy in the late 1990s, the Japanese people are far behind Europeans or Americans, simply because the average Japanese person is ignorant of the alphabet-based keyboard up until high school time.

Although the Japanese government has recently started teaching English (or, at least the alphabet) at primary schools, the digital divide between alphabet-friendly Western countries and ideogram-using East Asian countries still cannot be reduced to zero. The average Japanese has, until recently, little to do with the
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alphabet-based typewriter, due to the lack of opportunities to use English in his or her daily life. Unless students possess their own typewriters or personal computers, official school training in English or on a PC does not mean much in terms of the overall promotion of computer usage in Japan.

Rather, the Japanese have been strong in developing the non-keyboard area of the IT revolution: namely audiovisual media, cartoons, videocassette recorders, fax machines, console games, etc. They have been weak in the development of software that relied on the use of a keyboard.

2. THE DOUBLE REVOLUTION OF THE WORD-PROCESSOR

Up until the 1970s, I doubted that a word-processor capable of generating Chinese characters would be possible. The introduction of a two-byte system by East Asians made it possible for Chinese characters to be written on a word-processor and for other developments to be contemplated. The Japanese word-processor was invented in 1979 and in general use from around 1984, thanks to the installation of a phonetics-ideogram conversion system.

While those in the West experienced a more step-by-step transformation from handwritten to mechanical means (via the typewriter) and then a second move to electronic means, East Asians experienced a double revolution, jumping from handwritten to electronic communications without taking the intermediate step of typewriting, once the transformation of ideograms on word-processors became possible.

Such a double revolution is really significant in East Asian history but people had to overcome an extraordinarily high barrier. For ordinary people, there had been no need to use typewriters or PCs in their daily life. Only small numbers of specially-trained typists (usually women) used the cumbersome Japanese typewriters for producing official documents. Unlike her Western counterpart, the average Japanese woman used neither a typewriter nor a word-processor in the office. Few could overcome the double revolution involved in learning to use a PC.

3. LATE BEGINNING OF THE INTERNET

The NTT establishment was slow to realize the importance of Internet communication. For them, it was only a vehicle for private communication amongst academic researchers. Jun Murai and his academic associates experimentally connected with the world-wide Internet in 1984 and its usage soon spread throughout the Japanese scientific community.

In 1985, Nifty Serve and other companies started provider services for the personal computer network. Japanese computer hobbyists communicated amongst themselves in the Japanese language without being connected to the international Internet, while scientists opted to use it and communicate in English. It was only in early 1992 that Japanese PC networks became connected to the Internet.

The commercial use of the Internet began around 1995. The catch-cry for PC manufacturers was ‘Let us play with and enjoy the Internet!’ Scientists and