The others

Use of personal computers for translation and publication of an anesthesia textbook

HIROTAKA KAYAMA[1], YASUNORI IWASE[2], YOSHIO KINEFUCHI[1], and KUNIO SUWA[3]

Departments of Anesthesiology, [1] Tokai University School of Medicine, [2] Dokkyo University School of Medicine, [3] University of Tokyo Faculty of Medicine, 7-Hongo, Bunkyo-ku, Tokyo, 113 Japan

Abstract: We used personal computers extensively for translating and publishing in Japanese an anesthesia textbook originally written in English. The procedure included optical character recognition, scanning of figures, use of computer translation, use of electronic mail and computer type-setting. While these have individually been done previously, this is probably the first time they have been combined in the publication process of any medical textbook published in Japanese. The advantages of combining these technologies are good exchange of information among individual authors/translators, rapid translation process, preliminary visualization of the final product, and overall high quality of the published book.

Key words: Book translation, Computer, Electronic mail, desktop publishing (DTP)

Introduction

The aim of this communication is to report our own experience of using personal computers extensively for translating and publishing in Japanese an anesthesia textbook originally written in English. Under the current system, writing and publishing books in Japan and in Japanese is a fairly slow and tedious process. A book may be written using electronic media, but then the manuscript is usually printed on paper and sent to the published. The publisher works on the printed manuscript, corrects spelling and grammar, then sends it to the printing company. The printing company does the provisional typesetting of the text, prints the galley, sends it to the author. The author does the proofreading and sends the corrected galley back to the publisher. Finally, the printing company combines the graphs and

figures with the text, prints them, and produces the final product, a book. In the case of translation, it becomes even more complex. While the text is separately translated, the figures and tables are separately set, often redrawn. All these extra processes require extra time and extra cost.

Procedures and method

The four authors of this paper wished to translate a textbook written by Gravenstein [1]. A publishing company in Japan, Sogo-Igaku-sha, negotiated with the original publishing company through an agent. A final agreement was reached at the end of October 1993. We then aimed to publish the Japanese version at the time of the 41st Japan Society of Anesthesiology, held in the middle of April 1994. We had 5 months for the entire procedure.

An optical scanner was used to scan the entire book, the text part of which was converted to computer text files with the use of character recognition software. They were sent by commercial electronic mail (e-mail) to the four translators who worked on the project. Three of these four used software that translates English text into Japanese. These computer-produced Japanese texts were then edited manually to improve the Japanese while referring to the original English text. These Japanese texts were then collected by the senior translator (KS) again by electronic mail, and were corrected for their grammar and content. They were then e-mailed back to individual translators, modified to their liking, then e-mailed back to the senior translator.

In the meantime, two of the authors (HK, YI) worked on the figures. They produced computer files from scanned figures. When necessary, they translated words and phrases into Japanese, manually. Finally, text files and figure files were combined by using typesetting

software. The senior translator added a translator's preface and postscript, and the final file was completed to go to printing.

Results

The Projected and actual schedules are shown in Table 1. We are ahead of schedule almost all the time. Various equipment and software were used in the process as listed in Table 2, not to mention the accumulated know-how of individual participants. Considerably more was required than we originally planned or envisioned. The book was printed and delivered to bookstores by the end of March 1994. Our goal of completing it before the JSA Annual meeting was accomplished.

Table 1. The projected and actual schedules. Dates indicate deadlines

	Projected	Actual
Half of translation	Nov. 30, 1993	As planned
The other half done	Dec. 31, 1993	Dec. 20, 1993
Check by senior translator	Jan. 31, 1994	Jan. 15, 1994
Provisional (DTP) (DTP demo)	Not planned	Jan. 29, 1994
Editorial meeting	Not planned	Jan. 29, 1994
(discussion on the Japanese title of the book etc.)		
DTP	Feb. 28, 1994	As planned
Printing	Mar. 31, 1994	As planned

DTP, desktop publishing.

Table 2. Equipment, software, and networks used

Personal computers and peripheral devices
Computers: Macintosh, various models
   NEC PC9801 series, various models
Modems: various models
Scanner: Macintosh/Epson
Printer: Macintosh NTX-J laser printer
MO (magneto-optical disk) for final production

Network system
   Nifty-Serve (commerical service)
Software
   Text-processing software
   (Word processor or text editor software)
   Optical character recognition software
   Scanning software
   Translation software (English to Japanese)
   Dictionary software (English to Japanese)
   Telecommunications software
   Archiver software
   Typesetting software
   Printing software

Discussion

Speed was probably the most important and impressive achievement. Sharing the writing or translation of a book always adds extra time, sometimes enormously. Even though this book is small (174 pages in its final form), it usually would take 1 whole year to complete under the Japanese book-producing process. We feel that it is a good achievement to complete it in 5 months and to have made it available for the big convention.

The most important device achieving this speed was probably the e-mail network. It always takes a few days for any information exchange using regular mail. Also, we all belong to big institutions where the delay in the intra-institutional mail is significant. Furthermore, some of the information can be exchanged efficiently only using electronic media. If, for example, the text is sent in diskette format, it would have added extra time to be made available for the computers of the individual participants.

We believe that the quality of the book is very high. Very often, translated Japanese text is not of such high quality, mainly because individual participants do a poor job and the senior editor does not have much time allowed to work on the translated texts and to integrate the individual parts of the translation. Thanks to the speed of all participants involved and to the e-mail network we all had plenty of time to complete and check our own work as well as making productive comments upon others' work. The senior editor also had sufficient time to work on the manuscripts.

The price assigned by the publishing company was equivalent to US$25. The average price of Japanese medical textbooks is around US$0.2 per printed page, and it is somewhat more expensive for translated books. The price of this book, therefore, is probably less expensive than that of regular books of this nature. It is not quite as inexpensive as we hoped, however.

We may comment on the use of translation software. English-to-Japanese translation software programs are still in their incipient phase. We attempted to use them for various purposes before, such as translating abstracts from scientific journals. The final Japanese text had been of such poor quality that we never came to think of its serious use. This time, however, it proved to be quite useful. There are probably several reasons. For one thing, the original text was written in very simple, concise English, and the software could produce somewhat better Japanese. For another, we knew and understood the content much better than we do abstracts. Finally, it was easier to work on a long file such as a book than to work on many short abstracts of great variety.

Optical character recognition proved to be more useful than we originally thought. The original English text

was read into the computer as editable text, and this enabled us to use translation software. Whenever we worked on our Japanese text, we always had the original text available in the same computer, sometimes on the same screen. We could also use a computer dictionary, which is much easier and more efficient to use than a dictionary in ordinary book form. Altogether, it facilitated our work considerably.

References

1. Gravenstein JS (1990) Gas monitoring and pulse oximetry. Butterworth-Heinemann, Boston