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Computer Aids in Translation

Introduction

An international group of experts, under the auspices of FID (International Federation for Documentation) and AILA (International Association of Applied Linguistics), is preparing a report on *Computer Aids in Translation* to assess the state of the art and to establish guidelines for research and development in the area.

The theme includes all uses of computers for translation purposes, ranging from computer-based text editing for translators and revisors, to machine translation, unaided by human intervention.

At a meeting arranged by the KVAL Institute for Information Science (Stockholm, Sweden) over the weekend of 7—10 September 1979 at the Chateau d'Hanzinelte near Brussels, nineteen experts from nine countries outlined the present situation and made forecasts and recommendations for future efforts. The results were presented at a panel discussion sponsored by the Association Belge de Documentation at the Bibliothèque Royale in Brussels on 11 September 1979. We here briefly summarize the conclusions.

What computers can do now

Provide general word-processing capabilities for editing and revising texts, such as are becoming common in newspaper publishing houses;

Provide facilities for instant access to a variety of information required by translators: terminology banks, dictionaries, translations of similar texts, and reference materials;

Provide means for easier communication between translators, terminologists, and other experts, presently available, at best, using telephones, conversations, and postal services;

Produce rough translations, quickly and without human intervention, that can be used for current awareness programs;

Provide adequate translations in narrowly constrained fields with specialized language use (such as weather reports) with the intervention of translators for difficult sentences, thereby relieving the translators of the tedium of repetitive material.

We conclude that substantial savings can be achieved immediately in comparison with current translation practices. These savings are available using existing techniques, particularly if adequately combined. We note that they are presently being used by some organizations and are open to inspection.

Critical areas for basic research

Investigation of the actual process of translating;

Development of criteria and procedures for evaluating the quality and functional adequacy of translations;

Study of the characteristics of language used by professional groups or otherwise for special purposes that require translation.

Most promising directions for research and development

Encouraging developments are expected in the area of refined combinations of machine and human cooperation, rather than attempts at complete automatization. Mere post-editing of machine output does not seem to be a realistic way of producing adequate translation.

A computational system of modular model can make profitable use of the advanced mechanical translation designs which exist already in prototype or are being developed.

Modern "interactive computing" differs greatly from conventional computer processing. It makes possible "fail-soft" systems in areas previously beyond the reach of computers. In a suitably designed fail-soft system for translators, responsibility and control of all processing remains with the translator, and the machine simply increases his productivity. Such systems allow small-scale experiments and the collection of valuable, but hitherto unavailable, information on the methods and work habits of professional translators.

Conclusions

The consensus of this international group of experts is that fully automatic, high quality translation is not feasible in the foreseeable future. Fully mechanized translation will have to be restricted, as it is today, to very specialized and highly stereotype kinds of text or to applications where quality requirements are exceptionally low.

However, there are highly promising prospects for successful combinations of human and machine. Thus, while there are several areas for immediate application of techniques that are well known but little used today, support for long term and high risk experimentation and for fundamental research must be intensified if there is to be future improvement.