Foreword

Computer aids to translation, of one kind or another, have been available now for more than 25 years. At the time the first primitive machine translation (MT) systems were demonstrated in 1954, translating Russian scientific articles into atrociously garbled English, the air was full of optimism that within a few years, given a bit more linguistic knowledge and larger machines, human translators could all turn to literature, leaving the machines to grind out the more mundane translations of parliamentary proceedings, training manuals and economic reports.

Translators themselves may have been somewhat skeptical, but the linguists and computing specialists were not to be deterred. Only in the late 1960's did MT specialists fully realize that understanding and modelling the translation process is one of the major challenges of twentieth-century science, as elusive as the proverbial cure for the common cold. Despite the recent efforts of researchers in artificial intelligence, there has been only limited progress in endowing machines with the background knowledge required for understanding and translating typical texts. The few cases where reliable MT appears feasible today are limited to very stereotyped technical domains, where word-sense and text structure are not subject to serious variation. Since no all-purpose translation device appears to be on the horizon, it is safe to assume that ten or even twenty years from now, humans will still be bearing the brunt of the translation load.

Now that the limits of possible machine translation are becoming clearer, we are entering a period of intense development of computer aids designed to make the best and most efficient use of human *and* mechanical capabilities. The wide range of proposed and existing systems can be divided into two main categories, those for humain-aided machine translation (HAMT) and those for machine-aided human translation (MAHT). The first category can be subdivided according to the type of human intervention in the mechanized translation process. In the HAMT of very restricted sublanguages such as weather reports it is possible to design systems which translate flawlessly the sentences which are "accepted" by the grammar, leaving only "unusual" sentences (those outside the analysis capabilities of the system) for the human. This possibility does not exist for most varieties of language. A typical translation program will mistranslate (in a way undetectable by the machine) a certain percentage of the sentences that the grammar can recognize. Most MT systems must therefore be *post-edited* by a human revisor. Human intervention may also include *pre-edition* to provide supplementary information in a text or regularize unusual or difficult sections into machine-recognizable form. Another possibility is *interactive guidance*, occurring when a human operator replies to a request by the machine to provide further information or make a choice among several possibilities before returning the control to the machine for further processing.