MACHINE TRANSLATION IN SAUDI ARABIA

Mahmoud Esma'il Sieny, Ph.D.
Translation Centre, King Saud University

It is a well known fact that machine and machine aided translation have been gaining ground at the various public and private institutions since the mid-seventies in many parts of the world. People are realizing that only with the help of computers can they cope with dazzling burst of information and the computer age. For more than a decade some governmental institutions in Saudi Arabia have been interested in computer applications in the field of translation. For example, since the late seventies both the University of Riyadh (now, King Saud University) and the Saudi National Center for Science and Technology (now, King Abdul-Aziz City for Science and Technology) have been investigating the possibilities of using computers in the translation of English texts into Arabic. This interest gained momentum since 1933, when both started some actual work in this direction.

1.1. The University of Riyadh:

In the late seventies the University thought of MT as an essentially engineering and/or computational issue; hence, help was sought from the College of Engineering. But around 1984 it came to realize that it was more of a linguistic, more specifically a computational linguistic problem. A linguist was assigned the responsibility of looking into the subject. By then, the University had already made arrangements with the University of Grenoble in France to train one of the lecturers in the College of Arts in the area of MT, since Geta was already involved in developing a pilot project to translate English into Arabic. In my capacity of supervisor of the project I tried to look into the various systems that had developed English-Arabic programmes. Since the University was not quite convinced of the viability of English-Arabic MT systems, all of which were originally developed for other language pairs, it did not take any practical steps in this direction. However, a committee was formed to look into setting up a terminology data bank. A Translator was also sent to the University of Manchester Institute of Technology to study for an M.A. in machine translation. For some reason or another, the mission was aborted at the insistence of the student.

A new Translation Centre has just been established. One of the responsibilities of this Centre is to develop machine aids to translation, including a term bank and a computer aided translation system. It is our hope that more practical steps will be taken in the direction of MT.

1.2. King Abdul-Aziz City for Science and Technology:

In the late seventies KACST (then, SANCST) sponsored an investigation into the possibilities of MT. But this interest lay dormant for a while until SA1ICST appointed two linguists from King Saud University in Riyadh as part-time consultants for the MT project in 1983. Two lines of approach were suggested to SANCST: the establishment of a terminology data bank and convening an international meeting on computer-aided translation. The present writer's plan for the terminology data bank was approved, and preliminary work was initiated in June, 1983. After a visit to various term banks in Europe and extensive discussions with the experts at those banks, we started actual work on the term bank, dubbed BASM (an Arabic acronym for "the Saudi Terminology Data Bank"). Since SANCST had already developed software for its bilingual data bases, this was adapted for BASM purposes. By September of 1983 an experimental version, with 600 terms in the four languages of BASM (Arabic, English, French, German) was developed. The program was further refined later on.

Presently, BASM has more than two hundred thousand terms in the four languages covering a wide range of scientific and technical fields.

The meeting on MT was convened in March, 1985. Eminent experts and scholars from around the world (Japan, Hong Kong, Britain, France, Canada and the U.S.A.) were invited to talk on the subject and for consultation sessions with a team of Saudi linguists and computer specialists. The proceedings were later published under the title, STUDIES ON MACHINE TRANSLATION. In the absence of adequate follow-up the MT project is temporarily dormant at KACST.

2. Other Governmental Agencies:

Late in 1934 and early in 1985 SANCST conducted a survey to find out the various governmental agencies in the Kingdom that were interested in MT. Three agencies were found to be interested in the field, King Saud University, the Presidency of Civil Aviation, and the National Guards. The latter two apparently had feasibility studies done for them. It seems the results of the investigation were not convincing enough for them to implement or practically pursue MT.

Other agencies, such as the Ministry of Finance National Information Center, have shown interest in and/or investigated the possibilities of making use of MT in the past few years. However, I have not seen any concrete steps towards adopting or developing MT taken by any so far.

3. Computational Linguistics:

Before we leave the Saudi scene let me point out that re-

search in Arabic computational linguistics has received an increasing attention in the past few years, as witnessed in the proceedings of the last two conferences held at King Saud University in April, 1987(sponsored by the College of Computer Science) and King Fahd University of Petroleum, March, 1989 (llth National Computer Conference").

4. Outside Saudi Arabia:

Among the other Gulf States, Kuwait has been showing an increasing interest in both MT and computational linguistics. In fact, in April, 1985 the Kuwait Institute for Scientific Research hosted a workshop on Computer Processing of the Arabic Language. "The University of Kuwait and KISR (Kuwait Institute for Scientific Research) as well the IBM Scientific Center in Kuwait have been doing interesting work in the area of Arabic computational linguistics. Mention should also be made of Al-Alamiyyah computer company, based in Kuwait, which has been doing interesting work in the field. It has developed a very sophisticated Arabic morphology analyzer and the first spell-checker for Arabic.

The Scientific Studies and Research Center of Syria has been fairly active in the area of Arabic speech synthesis and recognition. The Center sponsored a few interesting "Summer Sessions" dealing with informatics and Arabic linguistics.

We should also mention the conference related to computational linguistics and MT that was held in Tunisia in March, 1983. Some interesting papers in the area of Arabic computational linguistics were also read at the conference sponsored by the Linguistic Society of Morocco in Rabat in October last year.