1.1 ALVEY AND MACHINE TRANSLATION

The Alvey Programme is a Government sponsored scheme for stimulating IT research. Begun in 1983, this five year programme is due to end soon though work on some projects may continue to 1990.

The programme is divided into major areas of interest. Machine Translation comes under the heading of Intelligent Knowledge Based Systems (IKBS). Speech Recognition and Speech Synthesis come under Man Machine Interface (MMI). The following extracts from the 1987 Annual Report of the Alvey Programme may interest readers and hopefully send them looking for a copy of the report and the "Poster Supplement" which has a one page description of most of the Projects.

PROGRESS REPORT By the Director, B.W.Oakley.

Under IKBS

"3.13 One field that I consider deserves special attention in a future programme is that of Natural Language. The eventual applications of the subject are so wide that one can envisage a major industry evolving, for the conquest of natural language processing will give computers the power to undestand meaning — not just to recognise words. There are aspects of the subject such as adaptive dialogues that show promise of short-term applicability. But in general it is a very difficult subject, and not one that is likely to be solved in the short term. It is, par excellence, an example of a subject that demands a multidisciplinary approach. By that I embrace linguistics and lexicographers, philosophers and psychologists as well as logicians, computer scientists and mathematicians. It is one of the few subjects I know in the IT field that really would benefit from concentration primarily in one or at the most two largish centres of excellence. I have my own views where such a centre should be, but I will leave that for my successor to determine."

Under MMI

"3.17 It was a mistake to gather under the Man/Machine Interface heading topics that do not have all that much in common, when some parts of the subject have much in common with other parts of the programme. The speech part of the programme has brought the limited effort in the UK together, which must be welcomed. The market for relatively limited-vocabulary, limited-domain speech recognition is now developing, but there is still much to be done before the error rates in connected-dialogue, unlimited-domain speech recognition systems become acceptable. This will require considerable progress in natural language work. For the future I would reduce the effort on front-end signal processing, perhaps tackling the subject on a European basis, but would increase the effort on natural language processing."

Within each main area of the programme there are Research Clubs to collate and spread relevant information for the benefit of a wider audience. In the IKBS programme there is a Speech and Natural Language Club. Its work was reported as follows.

"This club is chaired by Mr John Holmes, an independent consultant, and for IKBS it centres on the issues of natural language understanding and processing, for which Dr Karen Sparck Jones of Cambridge University is the co-ordinator.

The main natural language application projects are progressing well, with the Japanese translation project (IKBS 022) having developed a research prototype with plans for exploitation, and the NATTIE consortium (IKBS 105) having completed an initial core language engine. The main outputs during the year have been from the natural language tools project; two of these finished (IKBS 027 and 008) and the parser, morphological (word form) analyser and lexicon are now available from AIAI for use in further natural language projects. The third tools project (IKBS 021), to produce a grammar and extensive supporting wordlist, will be completed during the coming year. Three other research projects have continued including the simulation of human error patterns using a parallel distributed processing system."

The "Poster Supplement" to the Annual Report gives an outline of most projects, their current state and who is working on them. This is a list of the projects listed in the IKBS Speech and Natural Language Group.

IKBS 004 Natural Language Front End to Databases (No Poster).

IKBS 008 Dictionary, Analyser for English Language Processing.

IKBS 010 Natural Language Generation from Plans.

IKBS 011 Experimental Investigation of Computational Approach to Text Processing.

IKBS 019 Automatic Natural Language Research.

IKBS 021 A Computational Grammar of English.

IKBS 022 Read & Write Japanese Without Knowing It.

IKBS 027 A Parsing Tool for the Natural Language Theme.

IKBS 089 The Organisation of Computer Lexicons.

IKBS 096 A Natural Language Interface to an Intelligent Planning System.

IKBS 105 Natural Language Club (The NATTIE Consortium)

IKBS 113 Extending and Applying the GPSG Parsing Tool: Parallelism and Concordancing (No Poster).

The Alvey Programme has also published the following reports on Natural Language research;

IKBS Research Theme Workshops *Natural Languages I* (November 1983)

IKBS Special Interest Groups Reports *Natural Language Workshop on Linguistic Theory and Computer Applications* (September 1985)

Proceedings of the Workshop on Formal Semantics in Natural Language Processing (March 1987)