

MEETING WITH THE SPONSORS

research were in a better position to decide what kinds of meetings should be held and when, than those outside the field.

5. It was also suggested that communication with the Meetings Committee under Leon Dostert is necessary and desirable in connection with all meetings relating to mechanical translation which come to the attention of workers in the field.
6. It is the responsibility of the professional research personnel to arrange meetings, but the sponsors also have a legitimate concern with arrangements for meetings.

NATIONAL BUREAU OF STANDARDS PRESENTATION

Thursday, 21 July, 9:00-10:15 a.m.

ALT

Dr. Alt began his presentation with general commentary on the NBS' approach. He said that their project has not been working on a dictionary, which they feel would have to be re-worked before long and hence would prove to be wasteful. They have concentrated on grammar which they feel should be worked out first, although semantics is also an important consideration. Economy has been stressed in their approach, and they aim at translation rather than research for its own sake. They consider themselves an intermediate-range project and favor conventional grammar. The basis of their method is expounded in an NBS Report by Ida Rhodes, distributed about a year ago, which will appear in a coining issue of MT

According to Dr. Alt, the NBS machine code is divided into two major parts. The first part is further sub-divided into (a) dictionary look-up and (b) the morphology of individual words. The second part of the machine code is sub-divided into (a) profile, (b) primary syntax, and (c) English.

NATIONAL BUREAU OF STANDARDS PRESENTATION

The second part considers complete sentences only.

Dr. Alt then elaborated on Part I, first noting that morphological approaches of most research groups are equivalent. He stated that their process of making a very compact stem dictionary means more machine time and additional morphological analysis but saves storage space. In their proposed dictionary, storage is arranged by roots. The machine stores lists of prefixes and suffixes. A list of endings indicates those parts of speech and inflectional paradigms with which each ending can go.

Dr. Alt explained Part II of the machine code, as he directed the attention of the group to the NBS handout material. He said that the general procedure was iterative and involved a series of predictions, divided among glossary predictions, grammar predictions, and a few others. Each prediction is assigned an urgency number, and when the prediction is satisfied, it is erased. Unsatisfied predictions are erased if their urgency is low. Those possessing high urgency numbers are kept until the end of the iteration and serve as criteria of the goodness of the translation. Concerning Part II (a), the profile, he explained this procedure as a preliminary determination of the boundaries of the clauses and phrases of each sentence. This knowledge is imperative for syntactic analysis, since predictions can be made only within individual clauses.

Dr. Alt's final point, in discussing the handout, concerned the concept of "Hindsight", which is a part of the general procedure serving as follow-up for the prediction. There were four kinds of hindsight:

- (i) no match between the Foresights and the morphology of an occurrence (symbolized by 'H₀')

NATIONAL BUREAU OF STANDARDS PRESENTATION

- (2) too many such matches (symbolized by 'H₂')
- (3) doubtful choices (symbolized by 'H₁')
- (4) any morphological alternatives left over (symbolized by 'H₃')

UNIVERSITY OF WASHINGTON PRESENTATION

Thursday, 21 July, 10:45-12:00 a.m.

SWARM

Dr. Swarm opened his presentation by announcing that the main goal of this project is to develop some thoughts and schemes for evaluating translation, rather than translation itself. He continued with a brief discussion of the following:

- (1) the 650 Lexicon Format
- (2) the 650 Tag Form
- (3) Format for 13,000 Form Lexicon for *IBM 709*

Dr. Swarm then presented his handout, Kernel Analysis in Translation, and Translation Evaluation. He indicated that 2500 kernels had been analyzed so far. He added that the twelve most frequent Russian kernel structures account for approximately fifty percent of the occurrences.

He mentioned the fact that they are presently preparing a 13,000 Tag English dictionary, on which he spoke briefly. He then turned the presentation over to his colleague, Dr. Lytle.

LYTLE

Dr. Lytle proceeded to discuss the project's current work, insofar as the problems of multiple meaning are concerned. The human translator resolves most multiple meaning problems by looking at the context, and it would be desirable to achieve the same process by mechanical means.