

NATIONAL BUREAU OF STANDARDS PRESENTATION

- (2) too many such matches (symbolized by 'H<sub>2</sub>')
- (3) doubtful choices (symbolized by 'H<sub>1</sub>')
- (4) any morphological alternatives left over (symbolized by 'H<sub>3</sub>')

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.

UNIVERSITY OF WASHINGTON PRESENTATION

Dr. Lytle concluded the presentation with some observations concerning the solution to semantic problems by means of coordinated and dimension.

UNIVERSITY OF TEXAS PRESENTATION

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

PENDERGRAFT

Mr. Pendergraft opened his presentation with a description of an IBM 709 computer system being programmed by the project. He explained that the system has three purposes: (a) to display generalized translation processes so that they may be tested and evaluated, (b) to assist linguists in compiling formational and interlingual data for languages to be translated by these processes, and (c) to suggest means of optimizing these processes and their data for practical applications. He elaborated on the translation process to be studied initially in the system, answering occasional questions from the group. Some of the points which received emphasis were:

- (1) A generalized translation process is a process which satisfies the translation requirements of a general theory of linguistic structure, rather than merely the translation requirements of a certain pair of languages.
- (2) The translation process being programmed is for phrase structure languages.
- (3) It contains three subprocesses: recognition, transfer, and production.
- (4) Because recognition and production are essentially inverse processes, formation data (phrase structure grammars) for the two processes may be reorganized automatically to interchange input and output languages.
- (5) Any pair of languages in the system may be translated through common interlingual data.
- (6) The process assumes an unbroken sequence of input text and then does its own "chunking" as an integral part of recognition.

Mr. Pendergraft spent the last portion of his presentation offering graphic examples of two basic phrase structure recognition processes.