

# MECHANICAL TRANSLATION

DEVOTED TO THE TRANSLATION OF LANGUAGES WITH THE AID OF MACHINES

VOLUME THREE, NUMBER TWO

NOVEMBER, NINETEEN FIFTY SIX

COPYRIGHT 1957 BY THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

## *News*

UNIVERSITY OF WASHINGTON  
(from the Univ. of Washington News Service)

Research to prepare a machine for the translation of Russian into English is being conducted at the University of Washington under a contract with the International Telemeter Corporation of Los Angeles. The device is being developed by the corporation under a contract with the Rome Air Development Center, Griffis Air Force Base, Rome, N.Y.

A team of University experts under the direction of Dr. Erwin Reifler, professor of Chinese, is preparing representative samples of all language problems that may be encountered in Russian-English translation. These samples will test the ability of the machine to translate scientific and other material and to handle idioms, syntax, words with multiple meaning and other translation problems. Other principal investigators working with Dr. Reifler are Prof. W. Ryland Hill of the electrical engineering department, and Dr. Lew R. Micklesen, assistant professor of Russian.

Research by Dr. Reifler, a pioneer in mechanical translation research, and other linguists working with engineers in various parts of the world has shown that mechanical translation is possible. "Studies have now reached the stage where a machine, designed specifically for translating, can be constructed," Dr. Reifler said. "The same machine, with different bilingual memories, could be used for any set of two languages."

This will be the first practical test of mechanical translation using a machine specifically de-

## BABEL

Babel, an international journal of translation, published by the International Federation of Translators with the assistance of UNESCO, devoted its October, 1956, issue entirely to mechanical translation. Abstracts of the articles can be found in the bibliography section. The journal, a quarterly now in its second year, is devoted entirely to matters of interest to translators. Articles are included on literary translation, scientific translation in various countries, and the role of the translator in improving scientific and technical terminology. It may be obtained from Babel-Verlag, Bonn, Hausdorffstrasse 23, Germany.

---

signed for the purpose. Previous research has been done with computers designed for mathematical calculations. The distinguishing feature of the Telemeter machine is that its "memory" unit stores information photographically on a rotating transparent disc. This makes possible the storage of large amounts of information in a limited space.

The "photoscopic" device stores information in the form of 30 million minute black and white areas arranged in concentric tracks on the rotating transparent disc. Information is read by shining a light through the disc and converting the resulting alternations of light and dark to electric signals by the use of a photocell. These signals are then processed by means of conventional computer techniques.

## INTERNATIONAL CONFERENCE ON MECHANICAL TRANSLATION

MIT PLAYED HOST on October 20 to an International Conference on Mechanical Translation. This issue of MT contains the proceedings of the conference in the form of eight reports from the groups represented at the conference.

The conference was attended by some thirty workers in the field from England, Canada, and the United States. Papers were received from the group in the Soviet Union. Prof. Panov of the Academy of Sciences of the USSR had visited several of the projects a month earlier, but was unable to stay over for the conference.

The conference was preceded by four days of informal discussion at MIT's Endicott House in Dedham, a suburb of Boston. Informal papers from each of the participants were circulated prior to the discussions, which were organized around a series of panels covering a dozen or so topics. Some of the material from the informal discussions will be published in subsequent issues of MT.

## RAND Project

The Rand Corporation of Santa Monica, Cal., has announced the establishment of a project in mechanical translation. The following letter was received from Mr. David G. Hays:

"RAND has now established a small project in the area of mechanical translation in which I will be involved for a substantial part of my time during the next year. There will also be some programming and computer time available, and we hope to begin developing a file of Russian language scientific text on punched cards. Perhaps later in the year we will be able to offer duplicates of these punched cards to others who are working in the field.

The main purpose of the project at RAND is to try out some of the notions that I brought into the discussion at the conference last fall. I still believe that a great deal of statistical analysis of linguistic behavior is prerequisite to program machine translation. We do not expect to complete this kind of analysis at RAND, but we hope to make progress in development of techniques for the analysis."

## GEORGETOWN UNIVERSITY

Professor Leon Dostert announces that a series of papers dealing with various problems of mechanical translation is being prepared in mimeographed form by the staff of the Georgetown Mechanical Translation Project and will soon be available on request to others who are working in the field. Requests should be addressed to: Professor Leon Dostert  
Institute of Languages and Linguistics  
Georgetown University  
Washington, D. C.

## UNIVERSITY OF MICHIGAN

An Associated Press dispatch in the newspapers of December 11 and 12 reported the development of an electric computer which automatically translates Soviet scientific papers into English at the University of Michigan. Several statements concerning the feasibility of mechanical translation and the results achieved so far were included in the dispatch. Later, the following letter was received from Mr. Andreas Koutsoudas, one of the staff members of the Engineering Research Institute of the University of Michigan, with the request that the letter be published in Mechanical Translation.

To the Editor:

Dec. 12, '56

We wish to disclaim to our professional colleagues any responsibility for the publicity release on our mechanical translation project which was printed in today's newspapers. The implication that we are very far along toward practical translation was due to an overenthusiastic misinterpretation by a journalist.

Andreas Koutsoudas

[It is true that research in our field has been misinterpreted because of overenthusiastic claims in some press releases. Below is an excerpt from a letter received by the Mechanical Translation Project at MIT:

"I am extremely anxious to see the machine translator at MIT: I do not know whether this machine is running regularly or whether you allow visitors, but if it would be possible I would be most grateful to see it."

No, the machine is not "running regularly", but, as always, we are happy to welcome visitors.]

Editors