

SUMMARY OF THE PROCEEDINGS
OF THE WAYNE STATE UNIVERSITY CONFERENCE
OF FEDERALLY SPONSORED
MACHINE TRANSLATION WORKERS

Held At
Princeton Inn, Princeton, New Jersey
July 18-22, 1960

Sponsored Jointly By:

National Science Foundation

and

Office of Naval Research, Information Systems
Branch

The idea of holding a meeting, devoted to a consideration of immediate problems confronting machine translation workers, had occurred to a number of us as early as the Fall of 1959. The idea gained impetus and grew in the course of informal discussions among some of the participants at the Machine Translation Conference sponsored by UCLA, February 2-5 of this year. It was then felt that what the machine translation field needed, above all, was for a number of investigators to get together in order to take inventory of the actual work being carried out in the field, and to lay a foundation for possible future exchange of concrete results. It was thought necessary to make the number of participants as small as possible in order to achieve positive results. It was thus decided to limit the meeting to representatives of federally sponsored machine translation groups only.

Accordingly, a request for financial assistance to defray the expenses of this meeting was directed to the National Science Foundation and the Information Systems Branch of the Office of Naval Research, both of whom granted generous support to the meeting. An organizing committee for the meeting, consisting of Harry H. Josselson, Sydney M. Lamb, and Victor H. Yngve, was formed. This committee held a meeting in Detroit in the middle of June, at which time the agenda for the meeting was drawn up.

The conference was held at Princeton Inn, Princeton, New Jersey, July 18-22, and was devoted largely to technical discussions of comparing and exchanging the work of the various machine translation groups up to date. Participants were asked to come to the meeting prepared with handouts, if possible, to explain in detail the codes, formats, decks and other pertinent material, that are available for distribution. The proceedings were summarized and are being distributed in the hereinenclosed form.

The committee is deeply grateful to all those, both workers and sponsors, who took the trouble to attend the meeting, and whose presence and dedicated efforts made this session the success that it was, at least in the opinion of those who participated, as exemplified by the following comments:

"I should like to express, somehow, in a public way, (our) appreciation of the meeting, which, in (our) opinion, was the best since the 1956 meeting at M.I.T., which indeed it resembled."

"Congratulations on a very successful meeting."

"I want to thank you for your hospitality at Princeton. The Wayne Conference was undoubtedly the most enjoyable that I have attended, and doubly so because of the opportunities it afforded for exchanges of information."

Thanks are also due of course to the National Science Foundation and the Information Systems Branch of the Office of Naval Research, for their generous support, financial and moral, as well as all the other sponsors who contributed so actively and fruitfully to the success of the meeting.

It is hoped that this modest beginning augurs well for future profitable exchanges of views and information in the machine translation field in this country and abroad.

September 1960

The Organizing Committee,

Harry H. Josselson

Sydney M. Lamb

Victor H. Yngve

CONTENTS	PAGE
WORKING MT CONFERENCE PARTICIPANTS..... (names and addresses)	1
AGENDA FOR PRINCETON MEETING.....	3
GEORGETOWN UNIVERSITY PRESENTATION.....	5
MASSACHUSETTS INSTITUTE OF TECHNOLOGY PRESENTATION.....	6
BERKELEY PRESENTATION	8
CAMBRIDGE LANGUAGE RESEARCH UNIT PRESENTATION	10
WAYNE STATE UNIVERSITY PRESENTATION	12
CENTRO DI CIBERNETICA DI MILANO PRESENTATION	13
RAND CORPORATION PRESENTATION	14
MEETING WITH THE SPONSORS.....	16
NATIONAL BUREAU OF STANDARDS PRESENTATION	18
UNIVERSITY OF WASHINGTON PRESENTATION	20
UNIVERSITY OF TEXAS PRESENTATION	21
UNIVERSITY OF INDIANA PRESENTATION	22
OPEN DISCUSSION SESSION	23
(Chairman: Sydney Lamb)	
INFORMAL SESSION CALLED BY MISS MASTERMAN	25
OPEN DISCUSSION SESSION	26
(Chairman: Victor Yngve)	
CHARTS DICTIONARY AND GRAMMAR CODING STATUS	27
CHART: ANALYZED TEXT,	28
HANDOUTS	29

WORKING MT CONFERENCE PARTICIPANTS

Princeton Inn
Princeton, New Jersey
18-22 July 1960

Dr. Franz Alt
Applied Mathematics Division
National Bureau of Standards
Washington 25, D. C.

Miss Amelia Janiotis
Department of Slavic and Eastern Languages
Machine Translation
Wayne State University
Detroit 2, Michigan

Dr. A. P. R. Brown
Machine Translation Research
Georgetown University
1715 Massachusetts Avenue
Washington, D. C.

Mr. C. Douglas Johnson
Computation Center
University of California
Berkeley 4, California

Dr. Silvio Ceccato
Via Generale Arimondl 13
Milan, Italy

Dr. Harry H. Josselson, Chairman
Department of Slavic and Eastern Languages
Wayne State University
Detroit 2, Michigan

Dr. Douglas Ellson
Department of Psychology
University of Indiana
Bloomington, Indiana

Professor Sydney Lamb
Computation Center
University of California
Berkeley 4, California

Mrs. Joan Frye
Machine Language Translation Study
Box 7980, University Station
The University of Texas
Austin 12, Texas

Dr. David Lieberman
Massachusetts Institute of Technology
Room 20 D - 102
Cambridge 39, Massachusetts

Dr. Gordon Goldstein
Information Systems Branch
Department of the Navy
Office of Naval Research
Washington 25, D. C.

Dr. Dean Lytle
College of Engineering
University of Washington
Seattle, Washington

Dr. Kenneth Harper
Mathematical Analysis Department
The RAM) Corporation
Santa Monica, California

Mrs. Margaret Masterman Braithwaite
Cambridge Language Research Unit
20 Millington Road
Cambridge, England

Dr. Paul W. Howerton
Central Intelligence Agency
2430 E. Street, N. W.
Washington 25, D. C.

Mr. Scott A. McGall
U. S. Army Signal Research
and Development Laboratory
19 Madison Avenue
Long Branch, New Jersey

Dr. Leroy Meyers
Applied Mathematics Division
National Bureau of Standards
Washington 25, D.C.

Dr. H.W. Swarm
College of Engineering
University of Washington
Seattle, Washington

Mr. Roger Needham
Cambridge Language Research Unit
20 Millington Road
Cambridge, England

Dr. Victor H. Yngve
Massachusetts Institute of Technology
Room 20 D - 102
Cambridge 39, Massachusetts

Mr. Eugene Pendergraft
Machine Language Translation Study
Box 7980, University Station
The University of Texas
Austin 12, Texas

Dr. Marshall Yovits
Information Systems Branch
Department of the Navy
Office of Naval Research
Washington 25, D.C.

Mr. Oskar Reinson
Rome Air Development Center
Griffiss Air Force Base
Rome, New York

Mr. Michael Zarechnak
Machine Translation Research
Georgetown University,
1715 Massachusetts Avenue
Washington, D.C.

Dr. Richard See
Program for Documentation Research
National Science Foundation
Washington 25, D.C.

Mr. Ted Ziehe
Mathematical Analysis Department
The RAND Corporation
Santa Monica, California

Agenda for Princeton Meeting

Monday

A.M.

10:30-12:00 Informal discussion of common problems.

P.M.

2:00-4:00 Opening Session: Administrative Matters. (for Sponsors only)
Chairman: Richard See

Tuesday

A.M.

9:00-10:15 Chairman: Sydney Lamb
Georgetown University
10:45-12:00 Massachusetts Institute of Technology

P.M.

2:00-3:15 Chairman: Harry Josselson
University of California at Berkeley
3:45-5:00 Cambridge Language Research Unit

Wednesday

A.M.

9:00-10:15 Chairman: Victor Yngve
Wayne State University
10:45-12:00 Centro di Cibemetica di Milano

P.M.

2:00-3:15 Chairman: Harry Josselson
RAND Corp.
3:45-5:00 Meeting with Sponsors

Thursday

A.M.

9:00-10:15 Chairman: Sydney Lamb
National Bureau of Standards
10:45-12:00 University of Washington
University of Texas
University of Indiana

P.M.

2:00-5:00 General Topic: Discussion of Possibilities of Coordinating
Formats for Future Work

Chairman: Sydney Lamb

Topic: Formats for the Future

Possibilities:

- a) semantic coding
- b) programming languages
- c) others

Friday

A.M.

9:00-12:00

General Topic: Discussion of Possibilities of Coordinating
Formats for Future Work

Chairman: Victor Yngve

Topic: Possibilities for the Interconvertibility of
Present Materials, Codes, and Formats.

- a) dictionary (including grammar coding)
- b) text
- c) programs (including dictionary lookup and syntax)
- d) others