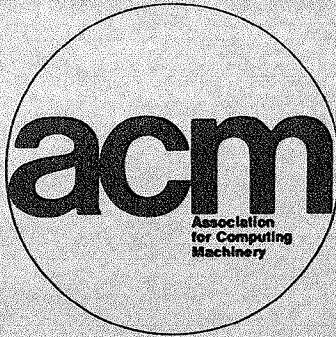


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# SIGCAPH NEWSLETTER

A Quarterly Publication of the  
ACM Special Interest Group on Computers  
and the Physically Handicapped Appearing  
in Both Print and Braille Editions.

MARCH 1975 - Number 15

COMPUTERIZED BRAILLE PRODUCTION

PROCEEDINGS  
of the  
First International Workshop  
Münster, Germany  
March 1973

Organized by  
The Computing Center of the Westfälische Wilhelms-Universität

Sponsored by  
The Association for Computing Machinery  
The American Foundation for the Blind  
Westfälische Wilhelms-Universität

Financial Support of  
IBM Germany

Edited by  
R. A. J. Gildea  
G. Hübner  
H. Werner

## CHAIRMAN'S MESSAGE

The next SIGCAPH business meeting and technical session will be held at ACM '75, 20-22 October 1975, in Minneapolis. There will be no business meeting or technical session of SIGCAPH held at NCC '75 this spring.

This issue is being devoted to publishing the proceedings of an international workshop on Computerized Translation of Contracted Braille in different languages. This meeting was held in 1973 and was jointly sponsored by SIGCAPH, University of Munster, American Foundation for the Blind and IBM, Germany.

A second international workshop was held in Denmark in September 1974, sponsored by the Danish Society of the Blind. Eight countries were represented at each workshop with seven attending both meetings; East Germany attending only the first workshop and Canada attending the second.

The Danish Society of the Blind is planning to publish the written contributions to the second workshop. This will be a limited production and those interested in obtaining a copy of the proceedings may correspond with the Danish Society of the Blind.

I am pleased to announce that I believe some progress is being made in the search for a new SIGCAPH Chairman. Hopefully, in the next issue it will be possible to announce the rest of the details on this once the ACM president, Jean Sammet, has reviewed and given indication that she will probably approve the appointment.

Due to the size of this issue and the attendant costs in braille, there will be no Braille edition. The associate editor, Dick Snipas, is planning to request Recordings for the Blind in New York City to make an audio copy of this issue. Those wishing to obtain more information about the audio copy should write to Dick to see what progress he has made.

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TABLE OF CONTENTS

FOREWORD . . . . . i

PREFACE . . . . . i

P. W. F. Coleman, Some Reflections on the Current State of Automatic Braille Translation . . . . . 1

R. A. J. Gildea, Automatic Braille Translation in the United States . . . . . 5

J. E. Sullivan, DOTSYS III: A Portable Braille Translator . . . . . 7

R. A. J. Gildea, Remark to the Paper of J. E. Sullivan . . . . . 13

L. C. Leffler, The Argonne Braille Translator . . . . . 14

M. Truquet, Automatic Translation into French Grade 2 Braille . . . . . 19

M. Vliegthardt, Automatic Braille Translation in the Netherlands . . . . . 24

M. Leringe, The State of Computerized Braille Production in Sweden . . . . . 26

J. Vinding, Computerized Braille Production . . . . . 28

H. Werner, The Historical Development of Automatic Braille Production in Germany . . . . . 34

B. Eickenscheidt, The Braille Translation Program of Münster University . . . . . 37

K. Britz, Some Aspects of German Contracted Braille . . . . . 43

H. Jakob, Braille Production in the German Democratic Republic . . . . . 45

W. A. Slaby, The MARKOV System of Production Rules - A Universal Braille Translator - . . . . . 46

H. Kamp, Gaining Production Rules for a MARKOV Braille Translation Algorithm . . . . . 53

LIST OF PARTICIPANTS . . . . . 55

## FOREWORD

This Newsletter contains the lectures given at the Braille Workshop which took place in Münster, Germany, from the 21st to the 23rd of March, 1973. It is published as a preversion of the planned special report within the series of SIGCAPH Newsletters, which is to contain both the lectures and the discussions. Due to technical difficulties, the editing of that report has been delayed.

## PREFACE

These proceedings contain a collection of papers that were presented during a workshop, held at the Computing Center of the Münster University of the spring of 1973. Most pertinent to the workshop was the question of how computers can be employed for the automatic transcription of texts into Braille, in order to reduce the costs incurred by Braille-printing, and to reduce production time. Also this would result in now making available to the blind texts required only in small production runs.

As is made clear by the papers, attempts to develop appropriate computer programs have been quite successfully going on for a number of years at various locations and for several languages. Personal contacts between some of the work teams - especially during the past few years - led to the realization that an interchange of research results was urgently needed and a coordination of development activities would be unavoidable, if the objectives were to be attained in the shortest possible time, and unnecessary parallel efforts were to be eliminated. Thus, the subject of working towards increasing the commonality of Braille translation techniques was adopted for this conference.

Thus, during a visit of one of the editors in the United States in 1972, the decision was made to invite all the teams working on this problem to a workshop at Münster, Germany, with the aim of presenting the achievements attained thus far, of jointly evaluating the realizable possibilities, and of determining details of future cooperation. The latter will require as a basis the establishment of a documentation center and an interchange of information at regular intervals.

After the participants who represented research teams from eight nations (Denmark, the Federal Republic of Germany, France, the German Democratic Republic, the Netherlands, Sweden, UK and USA), had given their reports on the status of their work, a vivid discussion ensued. This discussion resulted in the following findings:

Prerequisite for an economical, computerized production of Braille is the standardization of the necessary hardware. Thus, the standards and proposed standards for Braille and brailling equipment which have been used in the United States will be distributed to the participants of this conference.

Thereupon, a link to present printing techniques, which nowadays are computerized as well (computer typesetting), must be established in order to enable the computer to transcribe texts into Braille and emboss them without human intervention. This constitutes a particularly important economization effect which should result in considerable savings in time and expenses.

The team operating at Münster University will continue to work on the formalization of the description of the translation rules in the sense of MARKOV system, which probably will substantially facilitate the application to other languages.

All agreed that a highly useful exchange of information occurred. The participants agreed to attempt to identify those rules in the different languages which are semantically-oriented or pronunciation-oriented that would cause problems for computer translations. For the immediate future the University of Münster will serve as a clearing-house for distribution of material prepared with respect to the translation of inkprint to Braille.

Last but not least, plans were made to hold workshops at regular intervals in the future.

Thus we hope that our work will not only lead to further results soon, but that it will encourage governmental and charitable institutions to support our efforts in helping a small group of handicapped people.

We have particular reason to express our sincere gratitude to IBM Germany for the support of our work at Münster. Jointly with the American Foundation for the Blind, IBM Germany has made it possible to conduct this symposium.