#### Selected Telecommunications Devices for Hearing-Impaired Persons

December 1982

NTIS order #PB83-169292

### TECHNOLOGY AND HANDICAPPED PEOPLE

DECEMBER 1963

BACKGROUND PAPER #2: SELECTED TELECOMMUNICATIONS DEVICES FOR HEARING-IMPAIRED PERSONS



## TECHNOLOGY AND HANDICAPPED PEOPLE

DECEMBER 1982

# BACKGROUND PAPER #2: SELECTED TELECOMMUNICATIONS DEVICES FOR HEARING-IMPAIRED PERSONS

Virginia W. Stern, M.A. Martha Ross Redden, M. S., Ed.D.

Project on the Handicapped in Science, Office of Opportunities American Association for the Advancement of Science, Washington, D.C.

OTA Background Papers are documents containing information that supplements formal OTA assessments or is an outcome of internal exploratory planning and evaluation. The material is usually not of immediate policy interest such as is contained in an OTA Report or Technical Memorandum, nor does it present options for Congress to consider.



Library of Congress Catalog Card Number 82-600546

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

#### **Foreword**

Technology exerts a powerful influence over the lives of everyone, making life easier, more fulfilling, but sometimes more painful and frustrating. This statement is especially true for people with disabilities. The appropriate application of technologies to diminishing the limitations and extending the capabilities of disabled and handicapped persons is one of the prime social and economic goals of public policy.

The Federal Government is deeply involved in programs that affect the development and use of technologies for disabilities. Congress and other institutions have become increasingly interested in questions of how well programs that directly or indirectly develop technologies and support their use have been performing. The Senate Committee on Labor and Human Resources requested the Office of Technology Assessment (OTA) to conduct a study of technologies for handicapped individuals. That study examined the specific factors that affect the research and development, evaluation, diffusion and marketing, delivery, use, and financing of technologies directly related to disabled people. The problems and processes of the development and use of technologies were analyzed in the context of societal allocation of resources and the setting of goals for public policy. The main report of the study Technology and Handicapped People was released in May of 1982.

This case study is background paper #2 of the study. There will be a number of case studies published as part of the assessment, and each will be issued separately. The case studies were commissioned by OTA both to provide information on the specific technologies and to gain lessons that could be applied to the broader policy aspects of technology and disability.

Drafts of each case study were reviewed by OTA staff; by members of the advisory panel to the overall assessment, chaired by Dr. Daisy Tagliacozzo; by members of the Health Program Advisory Committee, chaired by Dr. Sidney S. Lee; and by other experts in medicine, disability policy, Government, public interest and consumer rights, and rehabilitation engineering. We are grateful for their assistance. However, responsibility for the case studies remains with the authors.

JOHN H. GIBBONS

Sen # . Willows

Director

#### Advisory Panel on Technology and Handicapped People

Daisy Tagliacozzo, Panel Chair

Department of Sociology, University of Massachusetts, Harbor Campus

Miriam K. Bazelon

Washington, D. C.

Tom Beauchamp

Kennedy Institute—Center for Bioethics

Georgetown University

Monroe Berkowitz

Bureau of Economic Research

Rutgers University

Henrik Blum

University of California, Berkeley

Frank Bowe

Woodmere, N. Y.

Jim Gallagher

Martha Porter Graham Center

University of North Carolina, Chapel Hill

Melvin Glasser

Committee for National Health Insurance

Ralf Hotchkiss

Oakland, Calif.

John Kimberly

Yale School of Organization and Management

Yale University

Robert Leopold

Department of Psychiatry

Hospital of the University of Pennsylvania

LeRoy Levitt

Mount Sinai Hospital

A. Malachi Mixon, III

Invacare Corp.

Jacquelin Perry

Rancho Los Amigos Hospital

Barbara W. Sklar

Mount Zion Hospital

William Stason

Veterans Administration and Harvard School of

Public Health

Gregg Vanderheiden

Trace Research and Development Center

University of Wisconsin

Michael Zullo

Corporate Partnership Program

U.S. Council for International Year of

Disabled Persons

#### **OTA Staff for Background Paper #2**

H. David Banta, Assistant Director, OTA Health and Life Sciences Division

Clyde J. Behney, Health Program Manager

Clyde J. Behney, *Project Director*Anne Kesselman Burns, *Analyst*Chester Strobel, *Analyst*Kerry Britten Kemp, *Editor* 

Virginia Cwalina, *Administrative Assistant*Mary E. Harvey, *Secretary*Pamela J. Simerly, *Secretary* 

#### **OTA Publishing Staff**

John C. Holmes, Publishing Officer

John Bergling Kathie S. Boss Debra M. Datcher Joe Henson

Doreen Cullen Donna Young

#### **Acknowledgments**

In addition to the advisory panel to the overall project on Technology and *Handicapped People*, a number of people provided helpful comments on drafts of this background paper. The case study authors and the staff of the Office of Technology Assessment would like to give particular thanks to the following individuals:

H. Latham Breunig Arlington, Va.

Diane Castle National Technical Institute for the Deaf Rochester Institute of Technology

Rochester, N.Y.

Sy Dubow The National Center for Law and the Deaf Washington, D.C.

Sarah Geer The National Center for Law and the Deaf Washington, D.C.

Harriet Loeb Washington, D.C,

Darld Long National Institute of Handicapped Research Washington, D.C. Bryan R. Luce Office of Research and Demonstrations Health Care Financing Administration Washington, D.C.

James C. Marsters Pasadena, Calif.

James Reswick National Institute of Handicapped Research Washington, D.C.

Reese Robrahn American Coalition of Citizens With Disabilities Washington, D.C.

Barry Strassler Telecommunications for the Deaf, Inc. Silver Spring, Md.

Don R. Warren Wisconsin Foundation for Applied Technology Madison, Wis.

#### **OTA Note**

These case studies are authored works commissioned by OTA. The authors are responsible for the conclusions of their specific case study. These cases are not statements of official OTA position, OTA does not make recommendations or endorse particular technologies. During the various stages of the review and revision process, therefore, OTA encouraged the authors to present balanced information and to recognize divergent points of view.