

Study of Speech and Hearing at Bell Telephone Laboratories: Correspondence Files (1917-1933) and Other Internal Reports

Compiled by Christine M. Rankovic and Jont B. Allen

During the first half of the 20th century, Bell Telephone Laboratories (BTL) carried out an extensive research program aimed at improving the quality of telephone-transmitted speech. This effort was led by Harvey Fletcher who also served as the first president of the Acoustical Society of America. The contributions of Fletcher and his colleagues helped produce not only the world's leading telephone system but also built the foundation of the field of speech and hearing sciences. An historical and technical review of this time period is documented in an JASA article by Allen (JASA, 1996, April, pp1825--1839):

JASA Article: Harvey Fletcher's role in the creation of communication acoustics

This compact disc (CD) contains nearly 10,000 pages of internal documents generated at BTL during that era. These documents were recently discovered at the AT&T Archives in Warren, NJ, and are published here for the first time. The majority of documents are scientific reports showing the extraordinary thinking and foresight of these world-class researchers. In addition to their historical importance, the documents also provide insight and clarity on topics of current interest to speech and hearing scientists.

Organization

There are three categories of documents: Correspondence Files, Historical Documents, and Laboratory Notebooks.

The "Correspondence Files" consist of memoranda and correspondence. They appear on the CD in the same order in which they were found: reverse chronological order. Most of the memoranda are concise descriptions of experiments and results. Their titles appear under Corrsp-files in the left panel of the screen. This listing also provides each document's identification (MM) number, author(s), date, and page length. Titles were created for documents without titles and these are indicated in lower case. Some documents appear twice or even three times. The longer versions usually include tables and graphs missing from the shorter versions. The entries titled "Correspondence" include notes and letters sent or received by administrators and researchers. They range in topic from equipment requisitions to discussions of project plans and experimental results.

The Correspondence Files have also been sorted by Dates, Authors, and Titles. Three key words have been extracted from the titles, and those documents are also presented under the heading:

The "Other Documents" The documents under Other Docs: are hand selected Historical technical reports that we felt are of particular interest, that were filed separately from the Speech and hearing correspondence files.

Selete "Laboratory Notebooks" of R. Galt here were chosen because they seemed the most relevant, yet comprehensible. Many others were not included because of space considerations.

All original documents are preserved at the AT&T Archives. No pages were excluded, and there has been no document editing.

Imaging

The originals were scanned at 300 dpi, 256-level grayscale and then converted to AT&T DjVu[™] format. Documents can be viewed using either the Netscape[®] Navigator or Microsoft[®] Internet Explorer[™] browser after downloading the DjVu[™] plug-in from the Internet. Download DjVu[™] by clicking on the word "DjVu".

Credits

We thank Sheldon Hochheiser, Ph.D., Corporate Historian at the AT&T Archives for his considerable assistance in locating these materials and kind cooperation throughout the project. We also thank Tom Johnson and colleagues at Root Technologies, Inc., Princeton, NJ (www.roottech.com) for their careful scanning and processing of the documents and for writing the html code used to access the CD contents. Donna Neff encouraged and supported this project from the P and P committee, while Elaine Moran provided assistance from the Acoustical Society staff. Finally if it had not been for Mary Vimmerstadt-Galt, the daughter of R. H. Galt, the colleague and prolific writer of the many notebooks that appear on this cd, this project would never have even been started.

This work was supported by Etymotic Research, Elk Grove Village, IL; ReSound Corporation, Redwood City, CA; Widex, Denmark; Articulation Inc., Newton, MA, and AT&T Labs-Research.

Disclaimer

The materials on the CD have not been peer-reviewed.

Christine M. Rankovic and Jont B. Allen

© Acoustical Society of America