

THE CHALLENGE OF KEYPUNCHING FOR MT

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In 1960 Léon Dostert, then Director of the Georgetown University Mechanical Translation Project, convinced the Central Intelligence Agency that the quickest, most cost-effective way to develop working dictionaries for the project was to keypunch the corpus on which the entries were based in Germany. The logic was that there would be an easy supply of personnel with knowledge of the Russian language, or at least competence in the Cyrillic alphabet and that overall costs for such an operation would be significantly less than in the United States.

In July of that year I arrived in Frankfurt to establish a keypunch operation which was ultimately composed of 19 keypunch operators, 13 verify operators, 20 keypunch machines, and 10 verify machines, plus supervisory and support personnel. Start-up involved searching for suitable space, equipment, and staff. Fifteen years after the end of World War II and well into the *Wirtschaft Wunder*, everything was difficult. Space was hard to find and labor had to be mobilized. As I recall, no employed person could change jobs at that time without six months' notice, and then only on the quarter of the year—to prevent inflationary-job hopping. The Georgetown plan was to hire housewives seeking to join the labor force and learn a skill. We were very successful in recruiting a good staff, but they all had to be trained to keypunch, and some of them to type. Most had knowledge of the Cyrillic alphabet, but we learned that it did not seem to matter.

Dr. Peter Toma, also a participant on this panel of pioneers, took part in the selection of keypunch personnel and assisted in their training. He was also responsible for programming the dictionary abstraction and the conversion process. The keypunching of text began about six months after our July 1960 arrival in Frankfurt.

The dictionary material to be punched was initially divided into eight technical disciplines:

Organic Chemistry
Economics
Physical Chemistry
Crystallography
Celestial Physics
High Energy Physics
Surface Physics
Geophysics

There were further distinctions between “microglossaries” specific to the individual discipline and “metaglossaries” common to several disciplines. The Frankfurt Center also keypunched more than one half million words from *Pravda* to provide the basis for a “general glossary.”

Objectives for the Frankfurt Keypunch Center were cited in a December 1960 report to Paul Howerton of the Central Intelligence Agency:

... to enable the center to send to Washington complete alphabetically listed (but uncoded) dictionaries on tapes and/or printed forms.

... to provide Washington with printed-out alphabetical word lists containing the individual text addresses for each lexical occurrence.

... to send out a machine printout of the texts used for dictionary preparation.

. . . The alphabetical sorts, or word lists, will also be available without text addresses.

. . . The corpus will be converted from card to tape to permit supplementary linguistic research, if required.

In the end, the Frankfurt Keypunch Center had consumed approximately three million IBM keypunch cards, attempted to keypunch one half million words in each of the eight disciplines noted above, converted those cards to magnetic tape, and flown the tapes to the Georgetown MT staff in Washington, D.C. At its peak, the Frankfurt Center had 40 people on staff. It ceased operation in the late fall of 1962.