FOREIGN LANGUAGE TRANSLATION BY AUTOMATIC COMPUTER

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An electronic computer has been programmed to interpret four foreign languages and automatically print out idiomatic English translations.

Peter Toma, 32-year-old Hungarian, demonstrated his translation technique at the ElectroData Division of Bur-roughs Corporation in Pasadena, Calif. He fed a Data-tron electronic data processing system four excerpts in Russian, French, German and Spanish. One was a head-line from Pravda — "Mashina perevodit s odnovo ya-zeeka na drugoy."

Datatron printed on its electric typewriter the precise English equivalent: "Machine translates from one lan-guage into another."

According to Toma, this marks a real breakthrough toward a universal interpretation of all the world's tongues — and a common written language. His is the only technique formulated for multiple-language ma-chine translation.

The program does not merely produce a word-for-word record, but correctly renders the thought or "sense" behind each foreign phrase.

To prime his electronic linguist, Toma first transmits to its magnetic memory drum four specially-condensed dictionaries of Russian, French, German and Spanish. These were previously punched on paper tape in numeri-cal computer language, along with instructions telling Datatron how it should go about translating.

The computer — which adds or subtracts at the rate of 30,000 numbers a minute — electronically converts the code into alphabetic characters. Then it compares vari-ous semantic and logical patterns with the pre-stored glossaries. In several minutes, it types out a complete page of English translation.

ELECTRONIC LINGUIST — Peter Toma, standing at Datatron, holds punched paper tape used in entering his specially coded formula for translating languages into the electronic computer. Toma, 32, translated four languages — Russian, French, German and Spanish — into Eng-lish in a demonstration at the ElectroData Division of Burroughs Corporation, which manufactures the Data-tron.