

## Typing Unit Produces Synthetic Speech To Verify Input Data

An audio typing unit produces synthetic speech with an unlimited vocabulary to help blind typists to independently produce error-free copy. Announced by the Office Products Div of the International Business Machines Corp, Parsons's Pond Dr, Franklin Lakes, NJ 07417, the unit attaches to any of four magnetic media typewriters, allowing the operator to review and proofread typed material by listening to information as it is stored on the magnetic media, and resulting in error free copy.

Using voice synthesis technology, the audio typing unit produces sounds that correspond to the keys that have been touched. These responses are created by combining a stored set of basic speech sounds (phonemes) according to preprogrammed pronunciation rules stored in memory. A voice synthesizer produces and blends the

phoneme sounds to form continuous speech.

The unit consists of audio keypad, audio console, and optional headset, and attaches to IBM Mag Card II, /A, Memory, or Memory 100 typewriters. A typist uses the audio keypad, installed next to the typewriter, to activate audio responses that include pronunciation and spelling of individual characters, words, or lines of text. The unit also verbalizes punctuation and capitalization, provides audio prompts to guide in use of the typewriter, and gives audible indication of typing position on the page.

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## User Query Language And Report Writer Run on VAX-11/780

An English like query language for direct data access and a nonprocedural report definition language are

both supplied by HARVEST. A product of International Data Base Systems, Inc, 2300 Walnut St, Suite 701, Philadelphia, PA 19103, the software runs on the DEC VAX-11/780.

The query language uses six commands (display, let, show, report, set, and exit) to define temporary variables, to do arithmetic calculations, and to provide automatic functions for total, maximum, minimum, and average values for a field or temporary field. Using the where command, the user designates the portion of the data base to be used to answer the query.

As HARVEST automatically finds the optimum access path to the needed records, the user need not know the database structure, but may treat the data base as a flat file with easily specified fields and retrieval conditions.

SEED, a CODASYL-type database manager, supports the report definition language. Page headings and footings, column and line labels, control breaks of up to 15 levels, automatic calculation of percentages of cumulative totals, and a choice of line printer or terminal directed output are included in the report writer. It can produce financial statements, inventories, patient charts, or student transcripts.

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## ANSI X3.9-1978 FORTRAN Runs on 990/10, /12 Minis

Designed around the recently approved ANSI FORTRAN version X3.9, 1978, DX10 FORTRAN-78 runs under the dx10 operating system. Developed by Texas Instruments Inc, Digital Systems Div, PO Box 1444, Houston, TX 77001, the language will run on models 4 through 30 of the ds990 computer family, and any system based on the 990/10 or 990/12 minicomputers.

The high level programming language allows natural expression of algebraic formulas and numerical problems. Scientific, industrial, engineering, and business applications are programmable in FORTRAN. DX-10 FORTRAN-78 includes process control extensions recommended by the Instrument Society of America, a mathematical/statistical library, plus interfaces to a generalized forms language, sort/merge, and database management. Circle 185 on Inquiry Card