

ginger and executive. He was patient and understanding, always willing to help, and was an excellent teacher and advisor. He seemed to take great delight in teaching and training some of our younger people here at Mitchell. He was a quiet, kind and gentle person. Always on time, never absent, he lent to Mitchell a certain dignity and respect that we could always rely on when it came to receiving important visitors and guests. Technically speaking, we believe he deserves most of the credit for designing the Mitchell Background Projectors (single and triple heads) that are in use throughout

the world today. His death is a real loss to us and we miss him greatly."

A member of the Society since 1946, Mr. Manderfeld was the author of scientific papers, four of which appeared in the *Journal*. Titles of the papers are, "Permanent-Magnet Four-Ribbon Light-Valve for Portable Push-Pull Recording" (in the September 1938 issue of the *Journal*), "New Type of Double-Film Attachment" (in the December 1937 issue), and (with F. L. Hopper and R. R. Scoville) "Light-Weight Sound Recording System" (October 1939) and "New High-Quality Portable Film Recording System" (February 1937).

knowledge recording systems and recording media, and a discussion of the various indexing methods (ranging from intuitional human to more recent automatic methods, and including discussion of the physical form of index material). The document goes on to an extensive discussion of applications, including document management, retrieval and dissemination, right down to hardware and costs. It finally indulges in a perspective evaluation of the state of the art and prediction of trends. It is noted that cataloging and abstracting are surprisingly expensive tasks, and that more and more cooperation from the author, and more and more use of machine-readable punched tape, cards, etc., will be required. Automatic analysis of full text input by a computer is discouraging for the moment. Microform copy will continue to displace "hard-copy," but will need more standardization to be useful, particularly for integration into retrieval systems. It is to be noted that in spite of its recent dissemination by Clearinghouse, the document is really two years old, which is a long time in this art.

The second report covers a study of automatic classification of documents (in the specific experiment, some 2000 or 3000 abstracts) from the frequency of occurrence of key words used in the text — this being assumed to be in machine readable form. Automatic classification was compared with a pre-existing manual classification. The sensitivity of various parameters to successful classification was studied, the most sensitive condition found

Books Reviewed

Information Storage and Retrieval: A State-of-the-Art Report. By Lawrence Berul. Reproduced by U.S. Dept. of Commerce Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151; AD 630 089, Sept. 1964. 249 pp., 8½ by 11 in. Price \$6.00 (Microfiche \$1.50).

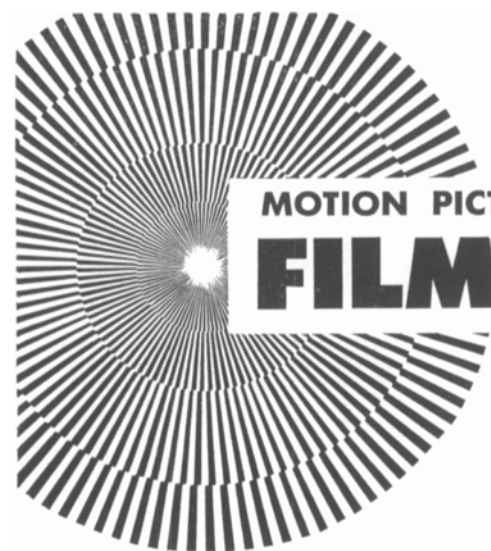
Discriminant Analysis for Content Classification. By John H. Williams, Jr. Reproduced by U.S. Dept. of Commerce Clearinghouse (address above); AD 630 127, Feb. 1966. 283 pp., 8½ by 11 in. Price \$6.00 (Microfiche \$1.50).

Optimization and Standardization of Information Retrieval Language and Sys-

tems. By Earl G. Fossum and Gilbert Kaskey. Reproduced by U.S. Dept. of Commerce Clearinghouse (address above); AD 630 797, Jan. 1966. 94 pp., 8½ by 11 in. Price \$3.00.

Within the last few years there has been considerable activity in the problem of information retrieval from the vast amount of recorded knowledge which is constantly being accumulated. These three recent documents from the U.S. Department of Commerce Clearinghouse collection discuss a few various phases of the problem.

The first is a state-of-the-art report which consequently gives a very general notion of the broader aspects of the situation. It gives a classification and discussion of



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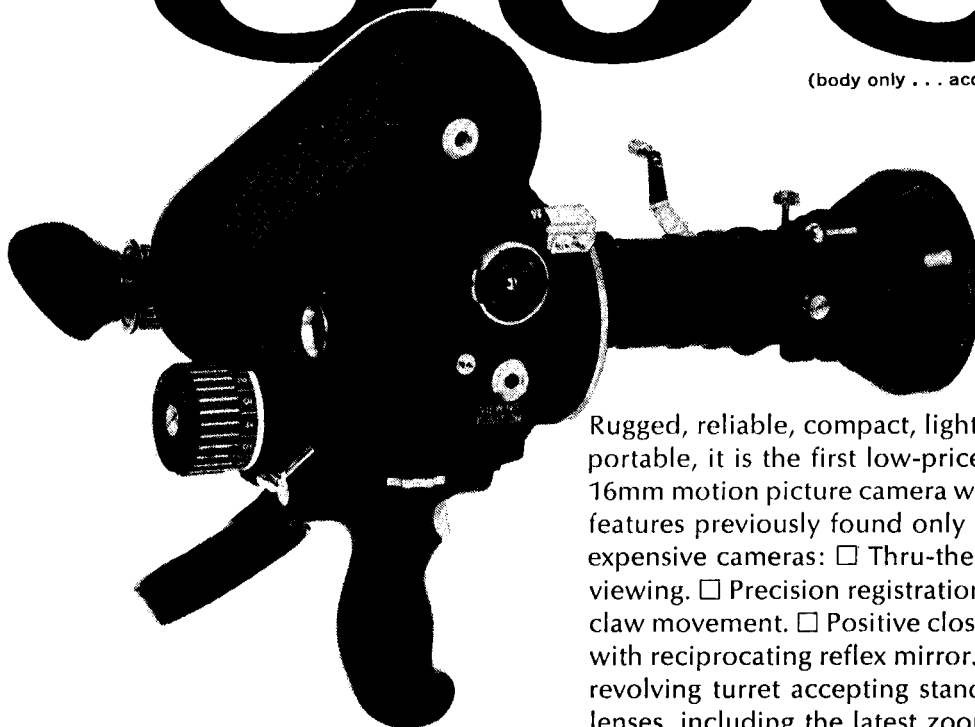
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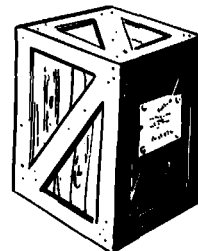
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being choice of key words. Successful classifications ran from some 80 to 97%, which seems very good.

The third report covers a study of listing systems for optimum retrieval. An army illustration for a given group would be listing by rank (general to private), by age, by specialty (infantry signal corps, medical corps, tank corps, etc.), and so on. Multiple file listing possibilities, and various combinations of them, are examined. The problem is complicated because, unlike in the army example, for documents the component specifications of a given listing cannot usually be mutually exclusive. The results are disappointingly

inconclusive for the general problem, though some advice appears for specific conditions.

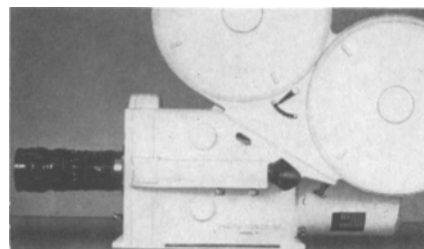
One can only wonder at what will be the outcome of all this work. The general feeling, after analysis, always seems to be that automatic indexing, and especially abstracting, are inferior to the human efforts. But obviously something will have to be done to keep track of all the outpouring of recorded information, which is fast becoming unmanageable. Let us hope that soon a practical solution can appear that may be put to general use.—*Pierre Mertz*, Consultant, Lido Beach, L.I., N.Y. 11561.



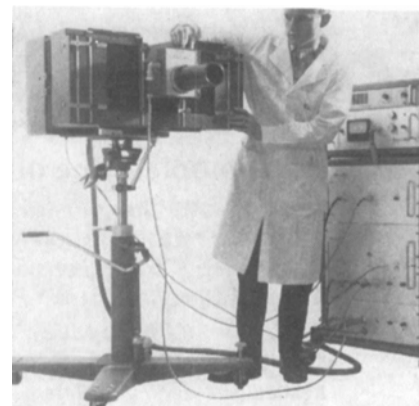
new products

(and developments)

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Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.

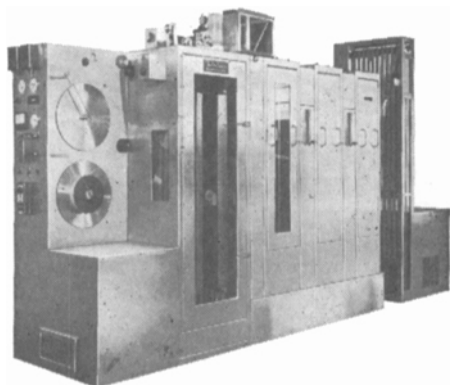


The 35-mm-4E, a high-speed 35mm instrumentation camera featuring pin registration and speeds from 24 to 360 frames/s, has been announced by Photo-Sonics, Inc., 820 S. Mariposa St., Burbank, Calif. 91506. Three motor drive systems are available: 208-V, 3-phase, 115-V single-phase with SCR variable-speed controls, and 208-V 3-phase synchronous motor with integral gearbox. The camera can be supplied with 400-ft or 1,000-ft film magazines. Other features include an integral 5-digit footage counter, reflex viewing and focusing, timing lights, illuminated fiducial markers with intensity control, and rotary shutter adjustable from 5° to 120° opening. Prices range from \$13,000 depending on drive systems and accessories.



A continuous writing camera designed to record a sequence of 48 pictures at rates up to 4.5 million pictures/s has been announced by Beckman & Whitley, 441 Whisman Rd., Mountain View, Calif. 94040. Called the Model 300, the camera is used to photograph unpredictable events that occur in microseconds, such as hyper-velocity impacts, nuclear reactions, laser

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R-60S	Rev. & Neg/Pos.	B&W	16mm	60-100FPM
316DS	Neg/Pos.	B&W	16mm	60-100FPM
*ND100	Neg/Pos.	B&W (TV News)	16mm	60-85FPM
NP36	Neg/Pos.	B&W	16mm	90FPM
S-90	Neg/Pos.	B&W Spray	16/35	90FPM
S-120	Neg/Pos.	B&W Spray	16mm	135FPM
S-150	Neg/Pos.	B&W Spray	16/35	160FPM
FE-30	Ektachrome	Color	16mm	30FPM
FE-100	Ektachrome	Color	16 or 16/35	100FPM

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