

NAME OF SYSTEM:

Technical Data Dissemination and Retrieval

ORIGINATOR:

**Warner Robins Air Material Area
Air Force Logistic Command
Department of the Air Force
Robins Air Force Base,
Georgia 31093**

OBJECTIVE. To evaluate and implement a microform image storage and retrieval system that will more effectively serve the technical data needs of maintenance technician personnel.

BACKGROUND. Warner Robins Air Material Area (WRAMA) is one of five logistic facilities within the Air Force that provides material support to its operating units throughout the world. This support encompasses such activities as supply, material maintenance, and procurement. WRAMA specifically is responsible for the logistic management of a variety of component systems such as tactical missiles, helicopters, and small aircraft.

Because of the technical nature of this mission large quantities of instructional material are produced. For example, the organization's technical data system contains about seven million pages of instructions, which are contained in 70,000 publications. During an average year more than two million page changes to the basic instructions are necessary to keep the information current. To maintain this data in reasonable order, 90 file areas or stations are located throughout the base complex of work areas that service particular types of material.

Success of WRAMA's maintenance mission is dependent upon accurate, complete, and current technical data. A study of the growing problem isolated three main areas of concern. These were the lack of technical manual file integrity, the failure to provide data in a form convenient to the user, and

the high cost of maintaining files. File integrity was found to be the most serious deficiency. Requisitions were often back-ordered, mail was frequently delayed, and revisions were sometimes not received or were misplaced. Obsolete instructional data delayed technicians in accomplishing maintenance task assignments while awaiting receipt of a current directive.

As a result of these findings, in early 1969 WRAMA conducted a 4-month service test with 400 individuals to evaluate the feasibility of employing microform to eliminate the deficiencies. The test conclusions showed that "microfilming of technical data should prove highly beneficial in all areas, including cost reduction." As a result, WRAMA is currently expanding the use of microfilm to other work areas. Because of the magnitude and operational impact of this undertaking, full conversion will not be completed for several years.

THE NEW METHOD. Technical data material, in page form, is arranged sequentially for recording on 16-mm. microfilm by a Recordak 600-K microfilmer. The film is developed in a Recordak Prostar processor, and diazo negative roll copies are then produced on a CBS (Columbia Broadcasting Company) continuous film duplicator. The microfilm is cut into 100-foot lengths and loaded into cartridges intended for use with the 3M 400-C microfilm reader-printer. The cartridges are indexed and labeled to show the segment of the technical data material each contains.

Cartridges are distributed to work area file stations, and upon receipt the obsolete cartridges are returned to the data manager's office. Revision data cycles average 45 to 60 days and depend upon the data change frequency within a particular type or class of material data.

The mechanic or other interested individual has the option of viewing page image data on a reader or of obtaining an enlarged paper copy for use at his work location. Battery-powered portable readers are available for use at remote sites such as engine run-up

facilities and area support sites. Image finding is accomplished by the odometer technique wherein individual images are manually located on the viewer on the basis of their linear location on the roll.

REMARKS. The primary advantage of the use of the microform rather than manual means of technical data display is the concept of one data manager being responsible for a given set of microfilm data cartridges. The

responsibility for updating the master data package, for assuring that data is current and complete prior to filming, for reviewing the master film and duplicates, and for distributing required cartridges rests with one individual. This concept provides a single contact between material class managers and various users of the data and proves most beneficial to file integrity. Data integrity is further enhanced by the system's ability to cut reaction time to data changes by about one-half.

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