The archival function

A review of the tape file inventory was undertaken which attempted to identify the important archival records and determine the costs of bringing these files to an acceptable level of file maintenance and documentation to be incorporated into an archive. The question of which records constitute significant archives rests, of course, upon an interpretation of requirements and development of standards not yet undertaken. In the interest of getting some feel for the dimensions of the problems this question was begged by arbitrarily preparing a list of the records considered to be vital general purposes series on a judgment basis to represent a sample archive.

On the basis of the data included in this sample archive it was estimated that a more complete archive would represent about 20,000 reels of magnetic tape and require an estimated $3 to $3.5 million and 3–5 years to develop. Of this amount about $800,000 would be needed to bring data not now machine accessible into usable form, about $500,000 would be needed to transfer punched card data to magnetic tape. In addition, between $500,000 and $1 million would be essential for blank reels and tape copying.

One of the interesting aspects of this report is the fact that almost half of this file (9,000 reels) could be brought into a data center for about $260,000 within a year. This indicates that the files vary widely in the quality of their maintenance and documentation. The incremental costs of the second half is about $300 a reel as compared with $37 a reel for the first 9,000 reels.

Obviously, the costs of bringing existing files into archives are substantial and some review and justification will be needed. This can only be done within the context of a more comprehensive review of the user requirements that must guide planning in this area. A related sidelight of the report is that the files that are best maintained and can most easily be brought into an archive are not necessarily those that are most important in a usage sense. This is largely a function of the size of the files and the frequency with which it is produced. This suggests that an archive based upon considerations of cost and convenience in assembling existing records does not assure the most useful file.

At the same time, a large part of these records can be preserved at such a small cost that there seems little question that the investment in this resource is essential and justifiable. There is another important observation. About half of the total costs estimated are for system development and will have to be incurred even if the archival objective is addressed to current and future records only. These must be thought of as a capital cost of archival development as distinct from the costs of "dusting off" existing records.

It is true that these records will still contain all of the elements of file incompatibility that are the product of the production methods and standards that governed their generation. However, they appear sufficiently vital to current and future analysis that a total program should make a serious provision for trying to salvage some of the loss in data resources that has taken place in the absence of a policy and procedure for file preservation. In addition, every step needs to be taken to place future accumulations on a sound and economical basis.

The costs of bringing these records into an archival file do not represent all archival costs, of course. There are storage costs also (less than $10,000 annually for 20,000 reels in prime air conditioned space), but these are inconsequential when compared to the need for facilitating services resting upon hardware and software systems to allow their effective use. These latter costs, however, cannot be fairly estimated at this point because, again, these services can be provided jointly by a facility which has a broader user service mission. As in the case of a reference service, an archive that is set up as a discrete service function will cost more than one incorporated in the total service complex.

A systems capability for facilitating services

It was through the agency of the Bureau of Standards that we attempted to assemble the intellectual resources to establish the scope of the program and the costs that would be required in establishing a system capability for providing the kind of facilitating services outlined in the recommendation. It is obvious from the foregoing discussion that this is the key to the program concept and to the evaluation of costs.

This turned out to be a difficult assignment. In our early attempts we found it exceedingly difficult to estimate program dimensions and costs without a clearer specification of the requirements the system will be designed to serve. Accordingly, a 3-day study session at Camp Ritchie was planned to see if we could break the back of this problem as the report in the appendix reveals.