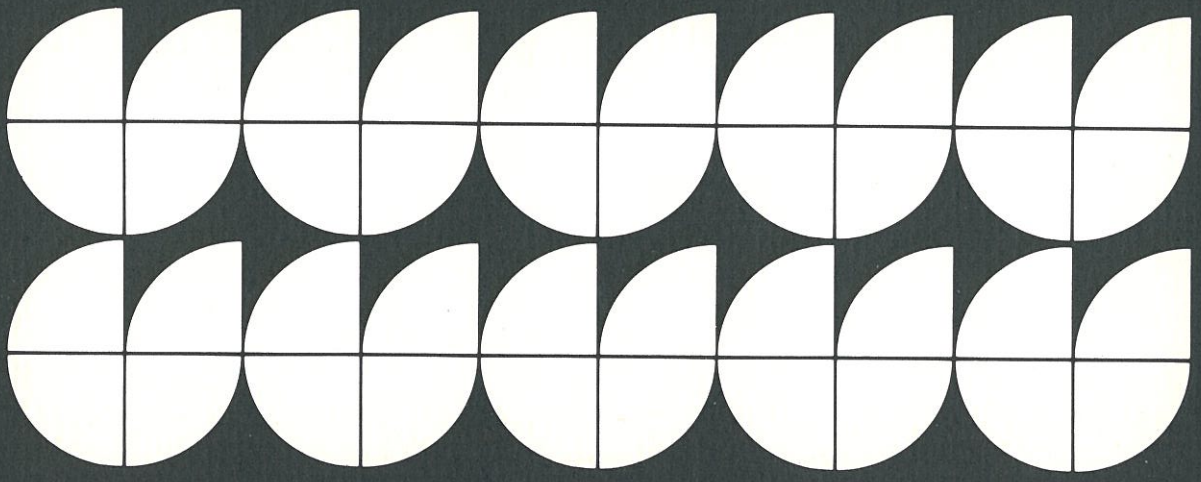
the "TOTAL" data base management system



THE COMPANY

Cincom Systems, Incorporated is a company dedicated to providing the highest possible quality computer support services and proprietary programs to data processing users.

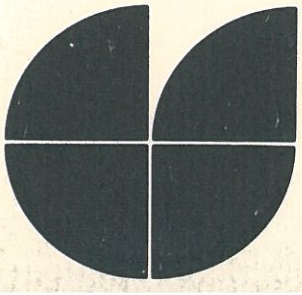
Founded in 1968, Cincom is presently divided into two service divisions: a Custom Systems Division and a Proprietary Systems Division.

The areas of responsibility within the Proprietary Systems Division are the conception, design, implementation, marketing, support, and maintenance of all proprietary systems products. Cincom specializes in those systems software products which are considered as tools with which the user may more easily and surely build his own specific applications. The primary emphasis and background of Cincom is in the area of Real Time On-Line, and Integrated Data Base Systems. Products currently available are:

a) TOTAL — the most advanced and widely accepted integrated data base management system in the industry

b) ENVIRON/I — the terminal monitoring and task management communications control system

This combination of products provides data base/data communications system availability for the IBM 360/370 DOS user, as well as a very powerful combination for the OS user.



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Evolution of the Data Base Concept

The term Data Base is not a new one. Data Bases have existed in our companies and businesses from the very beginning the company was formed. Originally the data base or information base was typically in file cabinets and index files. A data base did truly exist from the beginning.

With the introduction of computers and accounting machinery into our companies, our data bases were then transformed into a form understandable and legible to this equipment, *files of information.*

In unit record, first and second generation computers, and in many third generation computer installations, programmers and systems people attempt to create and maintain control over their own data records and data files (data sets). These data are usually developed along functional or departmental boundaries and accessed on an application-by-application basis.

As result of this type of approach, early attempts at data base had two (2) distinct attributes: (a) no *integration* of information (b) much *redundant* information.

In this traditional approach, output from one application becomes input to another. Sorting, merging, and other associated techniques are used to structure and relate our data records and data sets with each other into some meaningful order. This approach is application oriented and suited only to *batch processing* environment. The concept of a *transaction processing* system was not economically feasible.

Systems designed with this approach to data base were not readily available to change, whether it be trivial or major. The *cost of change* would prohibit, in most cases, any changes to these systems.

With direct storage devices, such as disk storage drives, file organization techniques are used to manage a data file or data set. These file organization techniques are usually vendor supplied and typically include sequential organization, a random organization and a variety of sequential organizations with indexed access (hereafter called indexed).

Many times the terms file management and data file or data management are used interchangeably. This interchangeable usage is generally considered valid.

However, to interchangeably use any of these terms with the term Data Base Management is an error. This single error in thinking is responsible for most of the failures in pursuit of the Management Information System (MIS).

Disk file organization and file management is concerned with the management and control of data on a file by file basis. It is clear that the MIS concept which would dictate that all relevant and related information from many other data sets also be available simply *cannot* be achieved with conventional data management techniques.

The requirement is that a true Data Base Management System be used which will manage virtually an unlimited number of data sets on an "integrated, non-redundant" basis and which will allow for entry and association of each of these data sets with any other data set in the data base. This is precisely the function of TOTAL — the Data Base Management System.