USERBOOK: A MODULAR APPROACH TO THE USERS' REFERENCE MANUAL

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The University of Toronto Computer Centre operates several large computer systems: an IBM Sytem/370-165-II, and IBM System/360-65, and IBM 7094-II and an IBM System/370-155-II. In addition, the Computer Centre operates a Computer Research Facility with minicomputer systems. Each system supports a unique complement of services: e.g., the System/370-165-II provides a high-speed job stream service, batch and TSO facilities, remote terminal facilities, Calcomp and Gould plotting, etc. The System/360-65 provides interactive computer facilities such as ATS and APL. Each user has access to all facilities and thus requires a complete information package to acquaint him with the resources available and to aid him in using those facilities in which he is interested.

Prior to the establishment of USERBOOK, the official reference manual, UTCC supported more than 40 different documents, manuals, guides, notices, recorded messages and other means of formal user communication. The variety of communication vehicles resulted in duplication of material, severe updating problems and a general lack of user confidence in UTCC publications.

USERBOOK was produced in response to a growing demand for a single official reference document which would provide accurate, reliable information on all aspects of computing at UTCC. The original USERBOOK was updated on a regular basis and solved a major portion of the Centre's documentation problems. However, as more and more material was added to USERBOOK, the sheer volume of the text began to create problems. Under the old USERBOOK update system, a user had to subscribe to and receive updates to the entire book. On the one hand, subscribers were inundated with a vast amount of unwanted material, which they had to tolerate in order to receive the updates they actually required; on the other hand UTCC was printing a huge volume of information that was being discarded by users.

UTCC recognized that each user has different documentation requirements. For example, a graphics user may require detailed information on the Gould and Calcomp plotting systems but have no need for documentation on the SPSS or BMD packages. To provide each user with current documentation exclusively related to his particular needs, UTCC has redesigned USERBOOK to be modular in form.

USERBOOK MODULARITY

The revised USERBOOK consists of a unit of required material and a series of optional documentation modules, each module dealing with a specific aspect of computing. The USERBOOK subscriber may select and receive updates for only those modules relevant to his needs. The modules are tied together by the numbering system, and by combining the modules of his choice, the subscriber can design his own customized USERBOOK.

The modular design benefits both the subscriber and UTCC. By specifying a unit of required material, UTCC can issue updates to this base material on changes impacting all users: e.g., changes in hours of service, announcement of new facilities, etc., and be assured that all users have been informed of the change. Since detailed technical material related to a specific topic is confined to a certain module or series of modules, updates to this information can be mailed to only those users who subscribe to those particular modules. The volume of printing is greatly reduced, thus providing a large dollar saving for UTCC. Similarly, the reduced mailing list for any given module reduces postage costs for the Centre. The subscriber may add or delete modules from his copy at any time as his documentation needs change.

USERBOOK ORGANIZATION

The USERBOOK is currently divided into five sections. Each section is dedicated to a specific system and is designed to provide the user with sufficient information to carry out his computing tasks on that machine. Sections 1 and 2 provide a general introduction to all the UTCC facilities and supply detailed accounting information. Section 3 is dedicated to the S/370-165-II; Section 4 to the S/360-65; and Section 5 to the Computer Research Facilities.

Each section is in turn divided into 10 chapters, each chapter containing general information on one aspect of computing: e.g., Chapter 3.4 deals exclusively with utilities on the 370-165-II, Chapter 3.8 deals with Special Input and Output on the S/370-165-II, etc. The chapter divisions are similar in each section. The ten chapters associated with each section in combination with Section 1 make up the minimum required or default

documentation unit for that system. This default material is called the base or level 1 module.

Specialized, more technical information related to specific topics is available in the form of optional second level modules. By reading through the base module material, the user can ascertain what services and resources he wishes to use and then obtain the optional level 2 modules relevant to his needs. For users who require more specialized information, very technical level 3 modules are available. By combining the base module with the optional second and third level modules of his choice, the user designs his own customized USERBOOK.

THE DISTRIBUTION SYSTEM OF THE MODULAR USERBOOK

The idea of a modular USERBOOK has been with us for some time. In fact ever since we went from the once-a-year approach (a manual designed to be all-inclusive and easily updatable) we have toyed with the concept of modularity. But before users could hold selected pieces of documentation on a continuing, updatable basis, it was necessary to develop a means of identifying users to modules or modules to users -- not a gargantuan programming task, but nevertheless one which for two years stood in the way of developing a truly modular system.

With the increasing size of the USERBOOK, increasing numbers of users holding the book, and the constraints of the numbering scheme of the old book, it became obvious that the software for the distribution system could no longer be delayed.

The basic name and address file for people associated with the University of Toronto Computer Centre is the PIN system or Personal Identification Number system. The file is written in I.P. Sharp APL for interactive enquiries and updates. Each person on the file occupies one file component.

The PIN system serves as the basis for TUBS -- Toronto USERBOOK System. TUBS is also written in APL and consists of two primary files. The first file contains the various module names, the level of modularity, and the modules' left and right links to the modules preceding and following it in alphabetical order within its level.

The second file is a series of bit matrices, each row representing one PIN number or person associated with the Centre. The bit matrices are portionally mapped to the PIN file. The number of columns in the matrices are equal to the number of current modules. The columns are directly mapped to the module file components.

There are a number of advantages to this distribution technique. The most obvious is that the quantities of printed material are reduced, thus reducing mailing costs and people-time for handling. The system also allows combined mailings to be sent out simultaneously, since the distribution system checks for possible combinations that may need to be sent out depending on the individual user's requirements. The system also allows for back-ordering information to be stored.

Another, more subtle advantage of the distribution system is that it allows us to keep a profile of the various interests of our users. The USERBOOK distribution system, along with other profile-gathering techniques, enables us to isolate segments of our user community so that we may serve them according to their needs.