

University of Mississippi

eGrove

Guides, Handbooks and Manuals

American Institute of Certified Public
Accountants (AICPA) Historical Collection

5-11-1966

Prospectus for a Technical Information Documentation and Analysis Center (TIDAC)

Edmund F. Ingalls

Follow this and additional works at: https://egrove.olemiss.edu/aicpa_guides



Part of the [Accounting Commons](#)

PROSPECTUS
for a Technical Information
Documentation and Analysis
Center (TIDAC)

Edmund F. Ingalls, Manager
Technical Information Service

May 11, 1966

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

MEMORANDUM

From Ed Ingalls

To Miss K. Michaelsen

Subject Information Center
Prospectus

Date May 12, 1966

Attached is a copy of the prospectus for a Technical Information Center, for the time being. I would appreciate it if you would keep it confidential, except that you may want to get Mrs. Jenkins' reactions. The only other people receiving copies of this are -- Messrs. Carey, Lawler, Lytle and Nest. As soon as you have had the chance to study it, I would like very much to have your frank criticism and comments.

Thank you!

Ed Ingalls

EFI:bw

Attachment --

PROSPECTUS
for a Technical Information
Documentation and Analysis
Center (TIDAC)

I. Preliminary Remarks re Functions, Needs, Characteristics,
and Objectives of an Information Center --

A specialized technical information documentation and analysis center makes it its business to know everything that is being published and to keep abreast of all developments in a special field. A technical center should function primarily as a clearing house for ideas and knowhow rather than as a mere storehouse for data and documents.

Retrieval of data and documents is not the same as analysis and retrieval of "information." A professional practitioner really needs the information contained in published literature, not the published literature itself.

To be fully effective, a specialized information center must be backed by a large centralized depository, must be operated in closest possible continuous contact with working professional practitioners in the field, and must be operated by highly competent and knowledgeable technical information specialists -- people who see in the operation of the center not only an opportunity to advance and deepen their own personal contact with their profession but who are dedicated to the challenging tasks of collecting relevant data, reviewing and assimilating a problematical area, analyzing and distilling information in a manner that goes to the heart of a technical situation, and effectively communicating their findings to overburdened practitioners in the field.

In the course of establishing, and after establishing, a technical information analysis center, perhaps the most important administrative considerations are to obtain competent professional operating personnel, to maintain their interest, and to develop and maintain a highly effective capability to communicate information.

A successful information center --

- can be an integrating force within the profession;
- can serve to encourage adherence to, and enhance, standards of performance;
- can not only retrieve and disseminate, but also create, information;
- can, through its evaluative function and familiarity with the question matrix, pinpoint areas for needed research;
- can index on a multi-dimensional basis for practical problem solving;

I. (continued)

can, through studies developing user profiles, selectively disseminate information for current awareness;
can, by expert screening of literature for need, duplication, and trash, upgrade the information system for pertinency; and,
can, through its feedback capabilities, reduce or eliminate redundancy or duplication of research effort by busy practitioners.

II. Candidate Provisions of a Charter for TIDAC (a Framework of Tested Principles or Policies* for Effective Information System Design and Planning) --

A. General Principles

The Charter should include:

1. A preamble or introductory statement as to why a technical information center is needed;
2. A statement as to objectives of Institute and/or objective informational needs of membership and others being served;
3. A statement of the philosophical approach to information storage and retrieval;
4. Provision for charter modification and amendment -- specification of the nature of the charter as a flexible guide, with further specification that it should be revised, amended, and modified as experience and system maturity dictate;
5. Provision for periodic review of charter by system personnel to amend charter to conform to practice or to revise practice to keep it in line with charter;
6. Provision for periodic major program evaluations, frequency depending on system maturity;
7. Glossary of terms used in charter, particularly those having special meaning in information storage and retrieval.

* In this section, I have drawn heavily on a research report "developed from observations of what was done and what was not done in a number of evolving system situations" prepared by John C. Costello, Jr. of Battelle Memorial Institute.

II. (continued)

B. User Groups and Coverage

1. The charter should specify as clearly as possible at the time the center is established who will be included and/or excluded from the user groups (Institute members, non-member CPAs, Institute staff, other accounting organizations, students, educators, attorneys, non-CPA management consultants, businessmen, government personnel, foreign correspondents, members of the public??) Alternatively, rather than specific exclusions, a listing as to priority of service might be indicated, or a distinction between primary and secondary user groups be made;
2. The charter might well attempt to specify the document coverage of the center, first, in terms of broad index classifications as to content; secondly, in terms of transience (interim reports, drafts, etc.); and thirdly, as to providing for both elementary and advanced materials to cover the knowledgeability spectrum of potential users;
3. Nature and types of services to be rendered, and any limitations thereon respecting scope, specific types of users, or subject content should also be specified;
4. The charter might well attempt also to specify general standards for screening documents (content, transience, legal value, historical value, obsolescence, duplication, and trash), and should declare a policy in favor of an aggressive program of source monitoring.

C. Services

1. The charter should specify that the organization being set up will function as an information documentation and analysis center, not as an archive. A declaration of intent to follow an activist, rather than passive, course in seeking out and meeting informational needs of users, should be made;

II. (continued)

2. The charter should declare the responsibility of information system personnel for qualitatively screening retrieved documents or output, and should enunciate that users can expect to be provided with services at a high level of sophistication -- that the center will perform research and analysis towards resolving practitioners' problems, will consult with members, will provide topical bibliography, will print and disseminate coordinated or permuted indexes, will provide selective abstracts or extracts, will circulate reference works and documents, will be prepared to furnish hard copy, will strive ultimately to provide selective dissemination of information for current awareness, etc., etc.;
3. The problem of priority of services may present itself. A distinction in the charter between "what is important" and "what can wait" can be of great assistance later to operating personnel. Consideration should be given to the related matter whether a charter provision should specify reasonable times within which requested services can be expected to be provided.

✓The components of this section on services point up clearly the need for a charter which is flexible and amendable to provide for revision of initial overplanning on the extent of proposed service.✓

D. Organization

1. The charter should recognize the information center as a valuable professional resource and should endow it with Divisional organizational status reporting directly to the Executive Director, with separate budgetary responsibility and accountability;
2. The structural organization of the information center is important. The charter should designate the library as an integral part of the information center under its administrative direction and operation;

II. (continued)

3. If "general files" is to operate administratively separate from the information center, the charter should define coverage and functions of the former to avoid duplication of effort;
4. The charter should define or declare the information center's relationships with external counterpart functions or groups. If conventions or agreements with other accounting groups (principally National Association of Accountants, but not necessarily excluding Financial Executives Institute, Institute of Internal Auditors, and American Accounting Association) are concluded, the bases of collaboration (e.g., financial contribution, user privileges, assignment of tasks during design and development stage and thereafter) should be set forth in the charter;
5. There may be aspects involving the information center's working relationships with other internal divisions and/or the committees they service, which should be clarified in the charter.

E. Personnel

1. Since the effectiveness of an information system is directly proportional to the quality of input to the system as well as the quality of output services, the charter should specify minimum qualifications for information system personnel and reasons for the qualifications. Information analysis is a subjective and judgmental operation, and description of information in documents will be inferior and communications to users will be ineffective if analytical operations are performed by persons not professionally qualified in the subjects discussed;
2. The charter can defend utilizing the services of professional personnel at greater costs on the ground of unfavorable reactions of professionally trained CPAs if they are forced to look to unqualified personnel for assistance in conducting their searches;

II. (continued)

3. The importance of training analysts, indexers, informational specialists and librarians should be acknowledged by the charter, as should the length of time involved in bringing a new employee to a satisfactory level of productive efficiency. It is desirable that all involved in the intellectual operations have a common base from which to develop their capabilities. Accordingly, the charter might well require development of a standardized training program and/or provision for periodic "refresher" training for all informational specialists;
4. Information system personnel need to be kept currently aware of all research projects, technical committee work, and professional development courses and undertakings proposed and in progress. The charter should require the divisions to provide the information center with this intelligence. This enables the center to anticipate the need for materials pertinent to these projects and to undertake appropriate acquisition, screening, and analysis;
5. The charter should specify titles descriptive of the work performed by information system personnel. Detailed job descriptions and position titles will facilitate internal and external personnel recruiting. Use of terms such as "Information Analyst," "Information Specialist," or "Information Retrieval Specialist" may be used to add organizational prestige and encourage respect for the necessary skills employed. [An "Information Specialist" has been defined as "a subject specialist who has come into the information systems field and developed a unique perspective."]7
6. If installation of an information system involves abstracting or indexing a large backlog of documents, and if this work can be spread over a period of time, there is the possibility of making economical use of part-time or temporary summer employees. Qualifications, conditions of employment, duties, timing of recruiting, training, and supervision should be specified.

II. (continued)

F. Physical Facilities and Document Storage

While requirements for physical facilities may not be deemed suitable for inclusion in an information center charter, inadequate planning in this area can adversely affect efficiency. Consideration should be given to the following:

1. Analysts should have offices in the same area so that they can freely communicate with each other;
2. The library as an integral part of the center should be contiguous to provide ready access and availability of the document collection to the information analysts;
3. Ideally, internal user groups, particularly divisions occupied with technical projects (such as Accounting Principles Board Administration, Research, Technical Services, Professional Development, and Examinations) should be adjacent to the center;
4. Mechanical or other equipment for storing and searching the index should be located so as to provide easy access;
5. In connection with the center's responsibility for charge-out of documents, adequate provision must be made for storing loanable copies and/or for reproduction equipment;
6. Tables and chairs should be provided for users in the information center so that they may examine, review, and study documents;
7. Since many, if not most, of the users, will be at remote locations, adequate communication facilities are highly important. The eventual need for teletype equipment might develop, and a special information center telephone number should be assigned, to be monitored at all times and not to be used for personal calls;
8. Decisions made concerning the storing of the index and documents will determine any need for microfilming equipment, microrecord readers, the reproduction of full-size copies from micro-records, copying equipment, keypunching equipment, flexowriters, reactive typewriters, readers or scanners, printers, card or tape punches, et al.;

II. (continued)

9. Tied in with decisions on whether to micro-record or to store only one hard copy of certain documents are decisions regarding type of shelf storage (file cabinet versus open shelf), filing arrangement, binding of a number of reports together in loose-leaf binders, and maintenance of duplicate collections at remote locations;
10. The charter can provide management with an excellent opportunity to restate policies concerning maintenance of personal collections and retention of copies of reports or other documents by individuals, maintenance by divisions of subcollections separate from or in addition to the central collection, or maintenance of subcollections of documents without copies thereof being included in the central collection. This policy statement, as well as embracing maintenance of document collections, can also be used to specify control procedures for security purposes. Controls should be developed and specified in the charter, the library being responsible for documents in the hands of users and the length of time they are retained. The only way to get maximum assurance that documents (which have a way of disappearing mysteriously) will always be available is to maintain at one central location an absolutely unloanable collection, available only to the information analysts. This has been done in some information centers, but would be impracticable in our situation. However, a core collection could be defined for our purposes, could be made absolutely unloanable, located in the information center, and made available only to information analysts.
11. Provision should be made in the charter that every formal research or other technical document produced within the Institute be deposited with the center and submitted to a central indexing function. There may be very legitimate need to restrict access to certain internally generated documents to only those users with a "need to know." All technical documents (not deemed classified or proprietary information) can and should be accessible through one central corporate index.

II. (continued)

G. Controls

Reference has been made (under F.10. and 11.) to maintenance of document collections, control procedures for security purposes, and central indexing control. The controls referred to herein may be described as quantitative (operational or fiscal) and qualitative.

1. As for quantitative controls, management has a right to know how often the system is used, by whom, and the extent to which use is effecting economies and eliminating the duplication of research work by users. Management should also be informed how responsive the system is to actual user needs. To this end, system management or supervision should be directed by the charter to provide statistics to permit analysis of system operation and effectiveness. Data provided might include the following: number of searches conducted; individuals and groups for which searches were conducted; search times required; volume of input; details of "peak and valley" effects in receipt of input material; indexing and abstracting or extracting times for documents by type; volume of material received by source; input lag time (time elapsing between receipt of document and its accessibility through index); costs of publications; delays in publication (from time material is prepared to time it is distributed); if a machine is used for searching, statistics such as machine input cost per document and cost of time for machine use per search. Also, to determine on a long-range basis, the usefulness of individual documents and types of documents, running records should be maintained on frequency of retrieval of both specific documents and types, and data on users' evaluations of the pertinence of documents to the search questions they asked;
2. The control records should be adequate to provide for exception reporting to management in such areas as costs, lag times on inputs and searches, number and frequency of searches, and size of backlog;

II. (continued)

3. Quality control considerations relate to intellectual operations performed by professional employees. A prime quality control requisite is charter specification and development of standards for screening both internally and externally generated input and screening for removal of obsolescent backlog documents. Screening standards should be based on the premise that the system is designed for recall and reuse of information, not merely to serve as a warehouse or mausoleum. When a periodic purging of the collection is undertaken in line with a planned program of obsolescence recall and review, and obsolete documents are removed from the collection, the terms by which they were indexed should be removed as well as their extracts or abstracts, if any.
4. Policy consideration must always be given to whether information system analysts will evaluate and screen retrieved documents or whether screening for pertinency should be the sole responsibility of the ultimate user. In our type of operation, an evaluative function must be performed by both analyst and user, one problem being the gap between the user's statement of a problem and information center personnel's understanding of the question. Basically, however, any information center worthy of the name must undertake screening of retrieved materials for pertinence, but without censorship or allowing biases to creep into information sources selected or provided.
5. Every information center should also develop a code of ground rules to assure consistency in intellectual operations such as abstracting and editing. This provides a basis for a training manual for new indexers and enables indexers to develop a consistent approach among themselves. Some rules can be developed inductively before indexing is started, but most of them will result from cooperative effort among indexers after analytical work is started. The work of indexers should be audited regularly for accuracy, consistency, and completeness -- so-called "review indexing" or "second indexing." Review for consistency also applies to abstracting and searching as well as to indexing.

II. (continued)

6. Continuing development should be modified and adjusted to reflect users' reactions to the system and how well it is meeting their needs. Users should be asked routinely for their evaluations and comments to provide for regular feedback on quality of service. To accomplish this, a log should be kept of searches, results of the searches, search strategy employed, name of user, and other pertinent data to enable management to determine effectiveness by surveys of system users.
7. One way of looking at deep-indexing which involves a planned, detailed, one-time, advance literature search as a document accedes to the collection, is that the content of a document will be immediately available when information is needed at a future time without the necessity for a time-consuming and costly on-demand literature search.

H. Scheduling

This rubric refers to scheduling of two types, one involving system installation and development, the other periodic operational activities and publications.

1. Preoperational scheduling includes: progressive stages of design and planning; specification of target dates for start-up of planned services; staff training and recruiting; preparation and publication of announcements or reports on progress; acquisition of equipment; preparation of physical facilities; acquisition and screening of documents; indexing and abstracting of documents; editing of system vocabulary; and installation of communication facilities. The most important aspects of preoperational scheduling are those requiring coordination with other organizations or groups, e.g., machine operations, preparation of physical and communication facilities, and printing operations.
2. The scheduling of activities such as inputs, periodic outputs, selective dissemination, preparation of reviews and bibliographies, and preparation and publication of abstract bulletins can wait until the system becomes operational. However, developing an advance scheduling for these activities provides the necessary material

II. (continued)

H. Scheduling (continued)

to determine time, personnel and budget requirements. Management can obtain a good picture of what it will be expected to support.

I. Mechanization

1. Equipment should be selected only after a fundamental philosophical system approach has been selected.
2. The decision to proceed to mechanize should be held in abeyance until its need is clearly demonstrated. The mere availability of equipment is very inadequate justification, per se, for the much greater expense of mechanization over manual methods. Mechanization should be undertaken only after substantial proof of need and a full study of the economics;
3. A computer should be regarded as no more than one alternative means for implementation of a system which otherwise should be designed free of hardware considerations, such as current availability of a specific type of equipment;
4. There are many justifiable applications for computers in information retrieval systems, and there are many where comparable service obtained via the computer will be many times more costly than other methods with no increase in effectiveness. System designers should make no decision to mechanize until they have a complete statement of costs of input, output, programming, and processing;
5. There are successful, efficient systems in which self-restraint was exercised in making changes. Edge-notched card systems were converted to field punched cards or optical/coincidence cards, then subsequently to printed coordinate indexes, and finally to computer storage. A planned program of this type may be an ideal solution in many cases.

II. (continued)

6. Lastly, it should be emphasized that information system management should be in a position to specify to, and expect from, the equipment organization that which is needed to fulfill system objectives. There are numerous instances in which, after information system management set forth its requirements, the computer organization told the information center what it could have. The information specialists devise the tools they need. Computer systems personnel, internal or external, should provide them, not revise them.

J. Compatibility

1. This refers to an information system's tailoring its indexing, abstracting, and other services to achieve maximum compatibility with any external source or sources which is expected to supplement the information system in a major way. It would also be an important consideration in coordinating efforts of two collaborating organizations.
2. Compatibility also concerns indexing and abstracting of different types of documents by systems or groups within the same organization. Information methods within the same organization should be standardized and should employ maximum uniformity of vocabularies, if not centralized indexing.

K. Adaptability

1. The charter should include a statement to assure that system management is continually sensitive and alert to changes in both user group composition and relative intensities of interests within the technical areas covered. Needs for information may become more specialized or may require re-direction of coverage.

II. (continued)

K. Adaptability (continued)

2. Organizations of which information systems are a part have their year-to-year budgetary problems and variations in ability to underwrite supporting services. A soundly conceived charter will anticipate budget reductions by listing those functions, such as coverages and services, in an order according to which they can be suspended during periods of reduced financial support. While it is hoped that a technical information center could be self-supportive by furnishing a package of attractive and useful services for an annual subscription fee, the ranking of services according to their respective value to the user group is a desirable self-evaluative function which can serve as a basis for orderly system contraction when necessary.

III. Specification of Some Immediate and Ultimate Areas of Study, and Potential Services, to Be Performed by an Information Center --

A.- If the policy of establishing, developing, and maintaining a Technical Information Documentation and Analysis Center is endorsed, then a number of operations and phases will have to be planned and analyzed in detail with a view to determining desirability and feasibility.

The basic initial necessity prior to designing an information system is solid support from management, a receptive management environment which recognizes that the needs are greater than the disadvantages. Among the disadvantages are cost of design of the new system; installation, equipment, and conversion costs; uncertainty and risk; and the disruption involved in parallel operations in converting to new operational procedures. However, the potential return on investment is an invaluable professional resource. Positive membership response in paying for the services envisaged can lighten the load all along the way. Apart from providing current awareness, and an indexing system which would contribute immeasurably to ease in finding pertinent material for resolving practical problems, the prime value of an information center would lie in reducing the redundancy of research time and effort by our members. The center would have the ability to feed back research already undertaken on one problem for one member to other members having similar problems. This looks at redundancy of research efforts from the standpoint of the membership en masse. The information center can correlate what is received from, and what has been accomplished for, one member, with what is currently

III. (continued)

needed by other members. The cost of input and effective retrieval can become equal to or less than the cost of redundant creation -- this is the foundation for the economics of a technical information center which can make it worthwhile and feasible.

Assuming endorsement, then it appears that one of the first tasks would be operations analysis of our present technical information system (TIS and Library) and present and potential user requirements. Analysis, planning, and design of an improved, integrated system for a center necessarily must precede implementation and conversion thereof. Accumulation and analysis of pertinent data would be entailed, as well as construction of models for components of the system, and a detailed critical path chart (or graphic analogue) as an aid to implementation and conversion. Obviously some planning phases must proceed more or less concurrently, others over a perhaps considerable time-span.

B. More specifically, one of the immediate tasks envisioned is construction of an index framework, that is to say, development of a so-called "controlled vocabulary" or thesaurus of descriptors or subject matter terms embracing professional public accounting practice. Indexing mobilizes data and structures information so that succeeding manipulation can be effectively accomplished. Thesaurus construction, and the active indexing process itself, has been described as the kingpin and crux of information storage and retrieval.

C. After thesaurus construction, the task of classifying the official or substantive body of AICPA literature into a fully-indexed loose-leaf service should be undertaken by the information center. This represents the matrix of a loose-leaf service "package" contemplated as being offered to members for an annual subscription fee by the information center.

Other candidate services ultimately contemplated for inclusion in the subscribed loose-leaf service package, might be: selective extracts or abstracts; selected correspondence dealing with practical accounting and auditing problems; and a completely re-formatted version of the Accountants' Index (q.v., under "D." below). The center should also continue to provide selective bibliography and continue to provide a question-answering service of high calibre. Subscribers to the loose-leaf service would receive all formal technical documents when and as issued by the Institute, all centrally-indexed and coordinated. The supplementary materials in the service (such as abstracts, correspondence on technical matters, re-formatted Index of current literature) should be furnished either monthly or quarterly, or at any rate, as promptly as possible, for current awareness. The center should also

III. (continued)

stand ready to provide subscribers with hard copy of requested articles (copyright conventions or agreements having been worked out, where necessary).

In connection with conversion of the official or substantive body of AICPA literature into a uniform loose-leaf format, study should be made of the feasibility of using an optical scanner which reads the printed page and converts the characters to computer code. Recently developed scanners can interpret a number of different fonts or assortments of type. Character recognition has the great cost-saving advantage of eliminating initial conversion to punched cards or other machine-readable media. It may then be feasible to use the Institute's printed documents directly as inputs to an automatic type-setting machine which could set and justify the type in standardized form for the entire contemplated loose-leaf service.

D. Reference has already been made above to a re-formatting of the Accountants' Index. The latter, as presently arranged, merges subjects, titles, authors, jurisdictions, industry and trade groups, et al. into one alphabetical pattern -- several such patterns to be more precise, since the Index is not cumulative and requires use of several volumes to exhaust research sources. The present Index does not meet practitioners' needs for an objective, random access, arrangement of the subject matter. While much detailed planning will be necessary to achieve an optimum format, basically it appears that an index guide listing major headings and subheadings, functionally or objectively classified, for several sections of the book could be inserted. This would serve as a "findings list." Use of tabs for the several sections should be considered. Tentatively, the major sections might be classified somewhat as follows:

1. Auditing Standards and Procedures
(including Audit Reports)
2. Cost Accounting and Reporting
(Principles, Practices, and Methods)
3. Estates, Funds, and Trusts
4. Financial Accounting and Presentation
(Principles, Practices and Methods)
5. Foreign Countries
(Accounting, Auditing, Taxes, et al.)
6. Management Services
7. Organization and Management of Public Accounting
Practice

III. (continued)

- 8. Professional Education
- 9. Professional Ethics
- 10. Statistics
(especially Operating and Financial Ratios)
- 11. Tax Practice
(Law, Regulations, Provisions, Articles,
Monographs, Planning, Administration, et al.)
- 12. Uniform Systems and/or Charts of Accounts
(including all references tailored to
specific types of businesses and/or
products).

Categories "1.", "2.", and "4." might be segregated in turn, into "Commercial, Industrial, Financial"; "Non-Profit Organizations"; "Governmental Units"; and "Public Utilities." It is possible the public sector, i.e., "Governmental Units," might be made a major section, with subdivisions such as "Accounting"; "Audits"; "Procurement" (contracts, costs, renegotiation, termination, etc.); "Uniform Accounting Systems and Regulations"; "Securities Regulation"; etc., etc. Some other major sections of the Index may be found necessary upon further analysis of the content of the present Index. For example, separate sections, one listing publications by individual and corporate authors, the other listing publications by permuted keywords of titles, might be a useful addition. Each functionally- or objectively-classified section should be sub-sectioned, and rotational keyword indexing may then be employed thereunder, together with copious "see" and "see also" references. A publishers directory, as now, should also be provided. To repeat, the foregoing is a highly tentative suggested format. The re-formatting should be approached with imagination from several pragmatic angles and tested out for optimum practicability in use.

E. Pursuing the Accountants' Index one step further, serious consideration should be given to automated compilation of the re-formatted Index. Before proceeding, a clear distinction should be made here between "machine-compiled" and "machine-generated" indexes: the former having reference to use of the machine to compile, sort, duplicate and list or print out humanly-prepared index entries; the latter having reference to use of the machine to extract or assign index terms (automatic derivative-or assignment-indexing) without human intervention once programs or procedural rules have been established. Luhn's i.e., IBM's KWIC (key word in context) is an example

III. E. (continued)

of a machine-generated permuted keyword indexing technique, KWIC, or similar techniques, should, of course, be seriously studied, and the state of the art respecting automatic generation of indexes and abstracts thoroughly and continuously explored, and assessed.⁷ However, our immediate proposal here relates to study of the feasibility of "machine compilation" of the Accountants' Index. Such study should also involve a closely-related aspect, namely, automation of the library cataloguing (automatic production of the card catalogue). An important aspect for investigation would be the pros and cons of using a Flexowriter (i.e., a typewriter with a paper tape punching unit) to eliminate a costly card-punching operation and to achieve machine-readable media in one typing operation. A scanner with automatic typewriter attached holding continuous-form blank cards does an excellent job of printing out the catalogue cards. The cost, and volume involved in our operation, would have to be explored, of course. From the standpoint of providing current awareness to users, however, machine-compilation of the Index holds the center of the stage. Since the ordinary computer print-out does not produce a choice font (assortment of style and size of type), there is the definite possibility of automatic type-setting of the Index which would then allow for specification of size, and more exquisite or readable style, of type.

F. In the more distant future, as the information system approaches greater maturity and sophistication, considerable attention should be given to survey procedures to provide data for analyzing user needs and developing user profiles and interests. IBM has rationalized this procedure considerably in its SDI or selective dissemination of information technique. The essence of SDI is machine correlation of input as to user profiles and interests with indexed literature for current dissemination of selective bibliographies and/or abstracts. An information center should continuously seek specific feedback as to what users need and want.

G. Another area for investigation in connection with establishing and developing a technical information documentation and analysis center, is the feasibility and desirability of collaborating with other major accounting organizations. Joint users, joint services, joint research, joint implementation, joint financing, and even joint housing of information facilities -- all these aspects are worthy of serious exploration. On one immediate practical phase, namely, classification rubrics for the cost accounting sections of a thesaurus and a re-formatted Accountants' Index, the National Accountants Association could render invaluable help.

III. G. (continued)

In speaking of future collaborative and financing possibilities, the landmark Information Retrieval report of COSATI released in January, 1966 should not go unnoticed. The report of the Federal Committee on Scientific and Technical Information provides and recommends a design for a national network of information systems. The report defines "Scientific and technical literature" broadly, and specifically recommends, among many other things, establishment of a Federal policy for support and sponsorship of, and cooperation with, specialized non-governmental libraries and information centers.

H. Technical Information Center personnel should undertake a number of visits to established information centers and/or special libraries. This should prove highly rewarding. Attendance at courses or seminars for updating on developments in the highly-rationalized and rapidly-developing Informational Retrieval field is deemed a necessity. Means of accumulating a small core library of basic reference materials on Information Retrieval should also be assured.

* * * * *

The proposed system has been referred to as a Technical Information Documentation and Analysis Center (TIDAC). The "information analysis" function, as conceived, involves several discrete yet nevertheless related functions, e.g.:

- a) analysis of literature for screening acquisitions;
- b) analysis of literature for purging files;
- c) analysis of retrieved literature for pertinency;
- d) analysis of literature for deep indexing and for abstracting, extracting, etc.;
- e) analysis involved in selecting descriptors, structuring index framework or thesaurus, and controlling index vocabulary;
- f) analysis of user needs and interests for better-directed acquisition and input of literature;
- g) analysis involved in personal consultation on problems and in extemporaneous response to telephoned inquiries;
- h) analysis and discernment involved in information specialists' maintaining their own current awareness of the "state of the art" in subject areas covered by the system;

- i) analysis involved in interpreting inquiries and effectively expressing written opinions thereon;
- j) analysis for purpose of researching specific topics and editing same for general publication;
- k) analysis involved in structuring loose-leaf service incorporating official AICPA accounting and auditing bulletins, and in indexing same;
- l) analysis involved in re-formatting Accountants' Index;
- m) operations analysis in planning, designing, developing, and implementing a mature system.

* * * * *

Data processing, data manipulation, and effective presentation of financial information have been the accountant's forte and reason-for-being since the advent of accountancy. Electronic data processing is merely a technological extension of possibilities for the processing of data into information. Current awareness of technical information is a prerequisite to effective professional performance. The rationalization of methods and facilities for rapid access to the growing complex corpus of literature pertinent to public accounting practice should be given patient and prime consideration.

* * * * *

Documentation tasks parallel the basic categories or facets of COMMUNICATION

Documentation is involved with the mobilization of data or information for communication and develops rules and procedures respecting language and decisions applied to recorded knowledge. These decisions and language rules have developed and recognized major problems which have been described consistently as belonging in the following problem areas:

1. Useful levels of word abstraction (word specificity level), generics.
2. Words spelled alike with different meanings (word application), homographs.
3. Synonyms and near synonyms (word specificity precision), semantics.
4. Word relationships and order (precision of grammar), syntactics.
5. More than necessary information (precision of description), redundancy.
6. Word families (assignment to group), class.

General Model of Information
Retrieval System

Information Management
and Control

