HOW LIFE HAS CHANGED AT CARL

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When DTIC began SBIE 5 years ago, the founders drew up a set of objectives which included improving life in the local participating libraries, a return on investment for staff effort expended in the program. When the Combined Arms Research Library, an institution supporting the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas, first began participating in SBIE, we took these local objectives to heart. The implementation of new procedures required by, and facilitated by, SBIE has changed life at CARL -- very much for the better.

The Documents Center at CARL -- our library also has an extensive book and periodical collection, not within the scope of SBI -- contained about 100,000 documents in 1980 including student and staff studies, technical reports, historical studies and after-action reports. They were cataloged and shelved using systems and authorities completely "home grown" over the 40-plus years the library has been supporting a documents collection. More detail about the former system will be included in the discussions below, contrasting it with the system now in place, SBIN.

Keeping in mind that the library exists solely for the service it provides to patrons, let us look first at the changes out front, the "library/patron interface." Under the previous system, a visitor to the Documents Center first consulted the card catalog. In the card catalog, all main entries are under title. As many as twenty additional access points -- corporate author, personal author, series number, subject headings including popular titles such as the Brown report, etc. -- lead patrons to the shelves. Documents were shelved by a call number consisting of the medium if other than paper (e.g., MF indicating microfiche), the classification of the document, a 5-digit number representing the source of the document, a 1- to 4-digit accession number for that source, a part or supplement number, volume number and copy number. The call number, in fact, was so complex that in our in-house, machine-readable data base, the call number required a 29-character field. The documents were shelved by classification in three separate sections of the Documents Center: unclassified and confidential (open stacks) and secret (closed stacks). The patron unraveled the mysteries of the card catalog and its nonstandard cataloging system, deciphered the shelving number successfully and retrieved the document desired in fewer than one-fourth of the attempts.

Most patrons would then try a search of the DTIC data base. At that time we were training our patrons, primarily faculty and students of the College, to perform their own DTIC searches. To be sure, little time could be spent teaching more than just the basic retrieval and display commands. But with this limited knowledge, most patrons could identify through DTIC some documents that might be helpful to their research. The patron asked the librarian to order the appropriate documents and a week or so later the material arrived. Because of the simplicity of the patron's DTIC search (compared to the specificity of a fully trained librarian's search of DTIC on the same topic), often material was not what was required and a good deal of pertinent information was missed. The bottom line: we estimated that fewer than 1 patron in 10 left satisfied after his/her first visit and fewer than 6 in 10 were satisfied at all. Not surprisingly, the Documents Center resources were used by very few patrons.

Today, more than 9 in 10 patrons leave the library after their first visit with at least one pertinent document. When a patron comes to the Documents Center now, a reference librarian listens to the request, constructs the DTIC search strategy with the assistance of the patron and DTIC Retrieval and Indexing Terminology (DRIT), and runs the search using all the sophisticated commands now available with DROLS. The reference staff is well trained on the terminal and keeps up to date on new commands and capabilities; important new functions such as key word search of title make finding information in the system much easier and faster than in the late 1970s. Our holdings code in field 48, a product of SBI, indicates immediately to the librarian which documents we hold and which must be ordered. Documents whose records are included and tagged in the DTIC data base are now filed by AD number. The documents themselves, mostly in microfiche, are located in cabinets adjacent to the DTIC terminals. (If a document is held in paper or in microfilm, a dummy in the microfiche file so indicates; paper documents are on shelves and film is in a nearby film cabinet.) Interestingly, when as few as 13,000 document records in DTIC were tagged with CARL's holdings code, more than 90 percent of the on-line searches identified at least one tagged document. Today, more than 30,000 records are tagged, and it is a rare search that has no tagged hits. These 30,000 include records input through SBI (over 700 to date), records identified during duplicate checking, records located for CARL's retrospective holdings, and records for microfiche received and automatically tagged by DTIC as part of its Automatic Distribution of Documents (ADD) program.

So service to the patron has improved considerably. To be sure, some improvement resulted from changes other than initiation of SBI (for example, we discontinued training patrons to conduct their own searches some time before we began SBI). But this improvement comes in spite of deteriorating service from DTIC and/or the U.S. Postal Service, to wit, documents (in paper) which used to arrive 7 to 10 days after request now take 2 weeks or more to reach Leavenworth. It is fortunate that only a small percentage of patrons must now wait for mail from DTIC to satisfy their information requirements. (Interestingly, the number of documents custom-ordered from DTIC has remained almost constant since 1978; see figures 6 and 7.)

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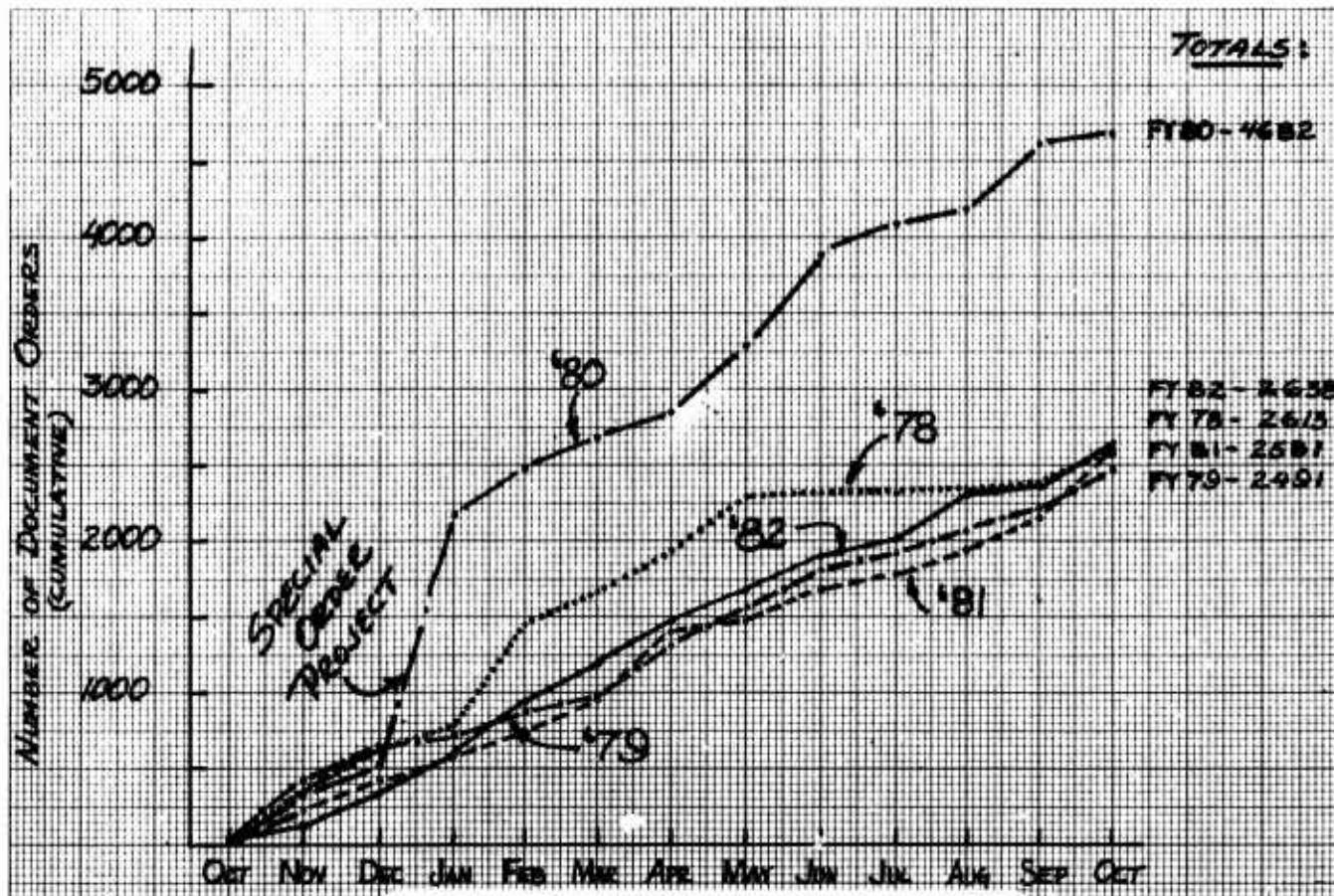
Figure 6 - Cumulative number of document orders, per year. Special order project in 1980 involved ordering some 2000 documents for collection development. (Special order project figures omitted in figure 7.)
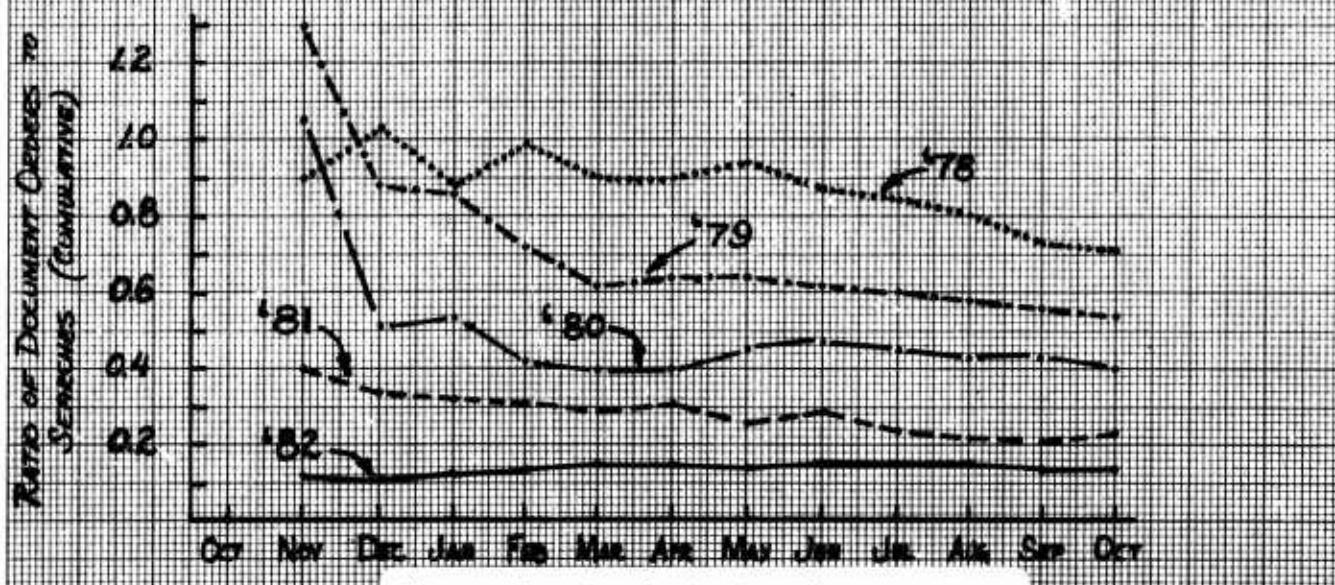
Figure 7 - Graph showing decrease in the number of documents ordered per search. Graphs for 1980-92 are artificially low due to inclusion of dup-check searching. However, the trend illustrated here is valid.

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Fewer and fewer patrons these days consult the card catalog, although we continue to keep that tool up to date for the non-DTIC materials. Of course, such dependence on the DROLS terminals makes downtime very disruptive. CARL has experienced continuing problems with the equipment installed: one U100 terminal and Communications Output Printer and one U200 terminal and 786 bidirectional printer, multiplexed through a Paradyne modem to a circuit which is multiplexed through St. Louis and again through the Pentagon to DTIC. Couple these equipment difficulties with the problem of slow response and downtime at DTIC, and life at CARL also gets more anxious. Our backup to the on-line system consists of printed indexes from DTIC; every 3 months we order indexes (but not the bibliography itself) to a bibliography comprising all citations tagged with CARL's holdings code. These indexes cannot provide the Boolean search capability of the on-line system, and they are quickly out of date; however, for the material they cover, they are as good as, if not better than, our card catalog access was to the same materials. These indexes will soon be available from DTIC on COMfiche.

The major differences at CARL behind the scenes are in the cataloging process. The original cataloging process went something like this:

1. Acquire the document, usually in paper, most often from our being on an agency's distribution list.

2. Consult an alphabetic list of sources to determine the 5-digit source number under which the document would be shelved. Assign the document an accession number for that source and record the document title and date on the source number card to track the accession (and to eliminate duplicates).

3. Prepare an accession card. This card included standard bibliographic information as well as other data such as postal registry number, regrading information, date when document should be reviewed for retention, number of copies, etc. This card was also used to record and change to the document received, changes in classification, destruction certificates, and other actions affecting the document. These cards were filed by call number in the shelflist.

4. Enter the call number, title, source, and date in a ledger called the Main Entry Listing. This ledger duplicated information also on the catalog and accession cards and was in the same order as the accession card file (our shelflist). It was compiled because individual accession cards were often removed from the shelflist for a variety of reasons (including recording circulations on occasion) and ran the risk of being lost.

5. Prepare a main entry catalog card. Subjects were assigned from a subject authority listing developed over the years by the catalogers at CARL. From the main entry card, type a complete card set, proof, and file in the card catalog.

6. File a carbon copy of the accession card in a suspense file by date of review, date of regrading action, or date of declassification.

7. Enter all this information -- bibliographic data, copy numbers, regrading information, etc. -- into the machine-readable data base. Our in-house automated system, called ALIS (Automated Library Information System), required a record for each copy of each document. Ironically, the automated circulation system, the raison d'etre of ALIS, did not require the data base; it recorded circulations from a punch card specifically prepared for circulation. The circulation function was entirely independent of the machine-readable data base; in fact, the data base was used for nothing other than compiling management reports!However, a record for each document received was dutifully entered into the data base.

8. Prepare an 80-column punch card for circulation purposes.

To be sure, all these files were established and maintained for very valid reasons. However, by 1980, the file maintenance effort required staffhours the library could ill afford.

Enter SBI: Today's cataloging procedure for documents which can be included in DTIC consists of duplicate checking (if a record is found, it is tagged and the document is filed), preparing and inputting an SBI citation, and tracking the document and citation through the step when it is converted from an SBI to a DTIC record (i.e., when it receives its final AD-A, B or C number). Of course, the process of cataloging, inputting, correcting, flagging, and tracking the SBI citations has its own complexity, but we are working with only one record in place of the seven manual records of the old system. And the fact that so many of those documents we obtain are already in DTIC reduces the number of documents we have to catalog in the first place.

Notice now we have omitted the circulation control step (Step 8). In the old system, we prepared a punch card for every document that might be charged out. Today, we wait until a document is presented for check out; then we simply record the AD number on a standard book check-out card and have the patron sign it. Thus we have exchanged a manual cataloging/ retrieval system and an automated circulation system for an automated cataloging/retrieval system and a manual circulation system. It's better; this is one instance where the automation of a function (circulation) was more costly by far than the benefits derived from it warranted.

We also no longer worry about copy number (unless the document is classified). With DTIC serving as an archive, and with microfiche copies of our documents available at very little cost, we do not track the number of copies held. If we need a copy (or another copy) of a DTIC document, we order it. If a patron fails to return a copy of a document, we simply order a replacement. This system, of course, depends on DTIC's current pricing structure. Should this pricing structure change, we will reevaluate the policy. One principal reason for this policy is that the DTIC record, now CARL's only record of a document held in-house, has no convenient provision for recording data on individual copies of an AD number.

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DTIC'S ADD program has increased CARL's acquisition rate from 3000 documents a year to over 8000. These additional 5000 documents a year from DTIC are already tagged and require only filing in microfiche cabinets to add them to our completely cataloged, electronically retrievable collection (our total holdings now number over 130,000, an increase of 30 percent in 3 years with no additional staff or funding requirements). The ADD program at CARL has an interesting history. In the mid-70s, CARL began receiving ADD documents. At that time, however, each fiche set was cataloged into the collection by the complex procedure outlined above and shelved by its new call number. Understandably, a backlog of fiche to be cataloged developed in a very short time and soon grew to unmanageable proportions. The solution was to discontinue the ADD program. With the advent of SBI, these fiche (still awaiting cataloging!) were tagged in the DTIC data base and filed by AD number. Participation in the ADD program, which now included automatic tagging, was resumed. This time we had the right solution: don't recatalog what has already been addressed by DTIC catalogers.

To tell the whole story, SBI has not replaced the old cataloging system completely, at least not yet. CARL does not have a classified terminal to DROLS; therefore, the number of classified document citations we input is limited. If there is any chance that a citation may be "classified by compilation" (i.e., a collection of unclassified terms revealing a classified concept), we do not include that document in the SBI process. Additionally, since the beginning of Phase IV of SBI, in which citations to documents held by but not under the proponency of the library are input to SBI, two agencies have reserved the responsibility and privilege of inputting their citations for themselves. Therefore, if CARL receives documents from either of these sources (and there may be more such agencies in the future), we must catalog them under the old system. And, we still have over 90,000 documents already cataloged into the card catalog; although we are continuing to identify AD numbers for many of these and to transfer them to the DTIC collection at CARL, the conversion of this retrospective collection will take years and may never be completed. No matter -- the card catalog will continue to access this collection adequately, and the collection itself will grow older and smaller (through weeding and transfer) until it is an "historical" adjunct to the on-line, DTIC-supported collection.

CARL is currently in the process of procuring a minicomputer-based circulation/inventory control/public access catalog system for the book and periodical collections. The decision not to include the documents collection in this new automated system was made for a number of reasons, most notably the potential security problems with including even unclassified information about classified documents (approximately 40 percent of our documents are classified), and the already well functioning SBI/DROLS automated access to documents. We will include in the minicomputer system only a brief record for documents held, a record consisting of AD number, bar-code label ID to identify a particular copy of an AD number, and regrading information (a function that the DROLS/SBI system cannot yet adequately address). With this short documents record included, we can use the minicomputer system to control documents circulation in the same manner as circulation of other library items.

Participation in SBI has presented some new problems. As stated above, system and equipment downtime is particularly damaging since we now rely so heavily on DROLS for in-house documents access. Until DTIC develops some suitable backup or until the LAM provides computer-power at the local level, we must continue to rely on the bibliography indexes when the system is down. Adequate, but just barely. Since CARL is a member of TRALINET, we are concerned with sharing our resources with other network members. The transparency of the holdings codes in field 48 precludes an on-line union list (like OCLC's) of documents held by TRALINET. We are examining alternatives at this time. And SBI procedures themselves have surfaced problems we could ignore heretofore such as those pertaining to distribution statements, e.g., improper distribution statements, missing distribution statements, obsolete distribution statements. These problems must now be solved by our catalogers before the document can be input to DTIC.

A significant function that cannot yet be addressed by DTIC is the pinpointing of classified documents requiring regrading action. Regrade and/or declassification dates are included in the DTIC record, but those fields are not searchable. We tried searching all classified document records tagged by CARL and then sorting them by regrade and/or declassification date, assuming that those needing attention in 1981, for example, would be followed by those with dates in 1982, 1983, etc. However, the dates in the pertinent fields are entered as month-day-year; so, when we sorted, all the firsts of April were followed by all the firsts of August, etc. We still keep a paper regrade suspense file and will until we can devise a reliable way to get this information from the DTIC system.

We are still better off as far as regrading is concerned. Under the old system, all the paper records for a regraded document (including as many as 20 catalog cards) had to be changed (remember, document classification was part of the call number) and the document reshelved according to its new classification. Today, with AD number filing, only the electronic record must be changed -- and DTIC takes care of that. We are saving an estimated 45 minutes for every document regraded.

A number of smaller problems have arisen because, for the first time, the library is not controlling its "shelflist." We have requested, and DTIC has provided, means to inform us when changes are made in records to which we have appended holdings codes (i.e., our "shelflist" records). DTIC has been most responsive to these requests. For example, AD number changes and cancellations are announced on the electronic mailbox, a new identifier "S/L CHANGE TAB nn-nn," is now included in the record when the classification or limitation of that document has been changed (the reason for the change is included in the new field 49). These efforts from DTIC show, we feel, DTIC's willingness to assist a library to implement and use SBI as outlined in the original objectives.

Figure 8 is a graph showing the increase in the number of DTIC searches performed since 1978, about 2 years before we began SBI. Some of the tremendous increase in searches is due to the duplicate checking step required by SBI, but much of it is due to the increased dependency on DROLS. Altogether it shows how activity at the Documents Center is centered more and more around the DTIC system. A second Uniscope terminal was added at CARL shortly after we began SBI; competition for the single terminal was too great. Recently we have begun using a third terminal (a dial-up) to provide additional access during periods of heavy reference work. Our staff alignment also reflects the increased demand of patrons on the services of the Documents Center: one cataloger, who often assisted with reference, plus a reference technician fielded most of the questions in 1978. By the end of 1982, two catalogers who spend more than 50 percent of their time doing reference and one full-time reference technician were required to handle the reference load.

Whether reference business picked up as a result of the increased accessibility to useful information or whether the automated system is merely helping our staff handle a concurrently increasing reference requirement cannot be determined from the statistics. The only conclusion which can be made is that DTIC and SBI have definitely changed life at CARL.

For further information, contact Ms. Barbara Everidge (913) 684-4035 or AV 552-4035.
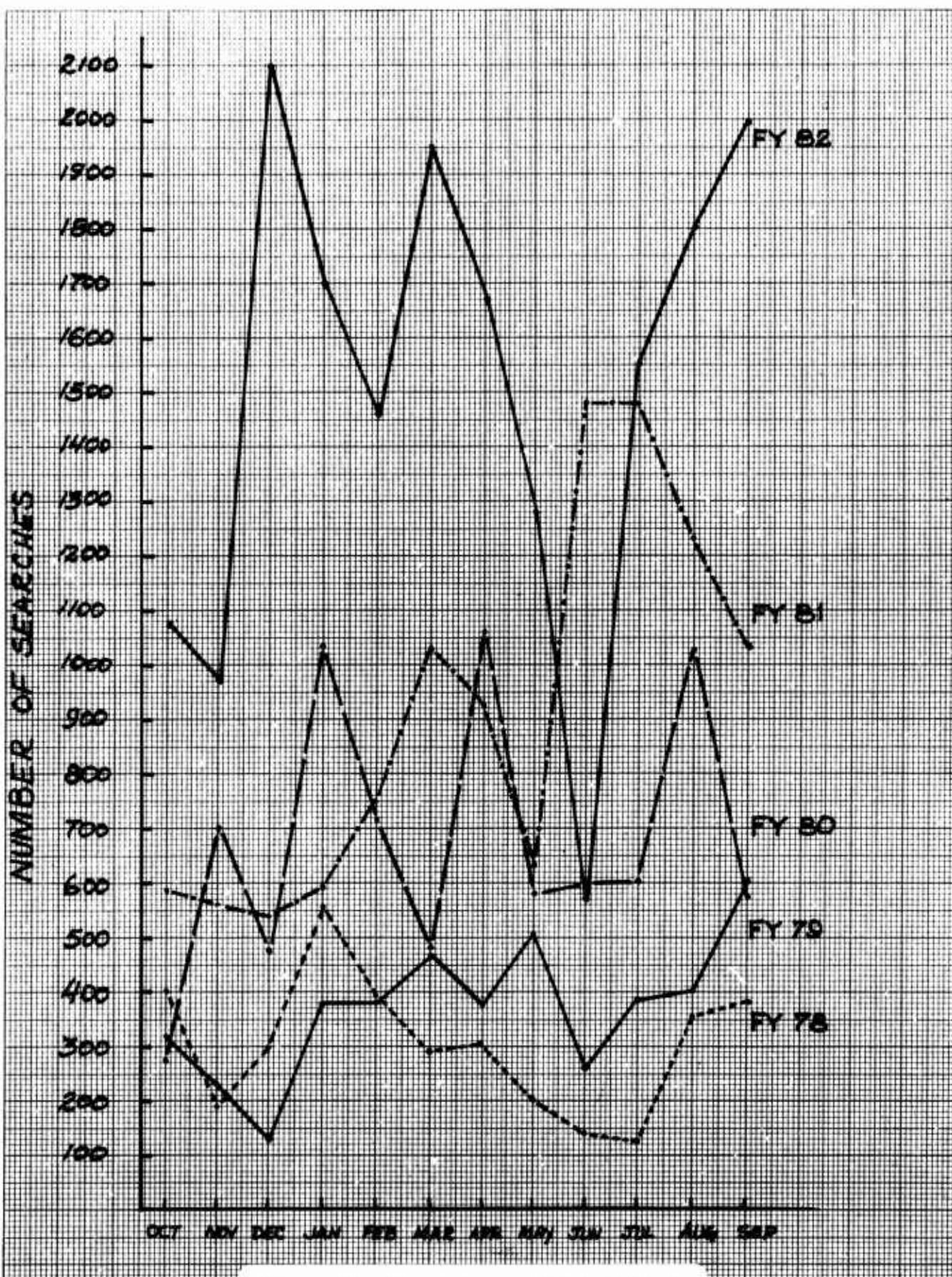
Figure 8 - Increase in number of DTIC
searches per month since 1978 (all
files, all terminals added together).
SBI participation began in June 1980.

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