

STN Personal File System

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The STN Personal File System (STNPFS)¹ is another new addition to the large number of software packages for bibliographic applications (i.e., packages for building and managing personal database^{2,3} and packages for bibliographic formatting⁴).

STNPFS, produced and distributed by STN International, enables quick and convenient creation, maintenance, and updating of personal files or databases on a personal computer. The hardware required is a personal computer—any 286 clone and above (or PS/2) with 640 KB RAM (of which at least 510 KB must be free) and 3–4 MB free space on the hard disk. I would recommend using at least a 25-MHz 386 clone in order to be able to process the various indexes or to carry out crossover searches in a reasonable time.

The whole system is very friendly and easy to use via menus, boxes, and control keys. Adding the option of mouse-driven menus would make it even friendlier and easier to use. As an STN International product, the STNPFS retrieval interaction for searching is very similar, in fact nearly identical to the Messenger retrieval language developed by STN International to provide access to its databases through a single, user-friendly command language. The limits of the STNPFS retrieval interaction are somewhat lower than the corresponding Messenger limits. However, help and error messages are available just as in the original Messenger language. A help message is provided anytime one responds with a ? or with "help" at a prompt; sometimes help is listed (as ?) as an option at a prompt. Error messages (which are self-explanatory) are given when the system cannot interpret the information given or when the user response is inappropriate. There are a few Messenger options which are unavailable in the STNPFS. Using such options (e.g., range) results in a message "*SAN Personal File System* Messenger option not installed". On the other hand, STNPFS has a few SET options from Messenger (e.g., graphics, heading, language, relation, and highlight), none of which is active. Unfortunately, there are a few help messages (e.g., help content, help print) related to the Messenger command language but not to the STNPFS retrieval language. Some adaptation and changes should be carried out with these options and messages.

The fact that the retrieval interaction is so similar to the Messenger language has a few implications. One can use the STNPFS as an aide when teaching searching on STN International files. We have been doing this for several months with great success. STN International searchers can search STNPFS without learning a new searching language. I would expect that many of the users of STNPFS will start to search STN International files themselves during that time. Indeed STNPFS has many retrieval capabilities which are barely encountered in other packages (e.g., usage of proximity operators—W, A, L, wild card characters, crossover, multiple file searches). However one has to remember that such capabilities have their costs—the system building inverted file indexes which use much additional storage on the hard disk. This additional storage overhead comes to about 300–350%, depending on the file and the number of indexes created.

The system allows an unlimited number of files (databases), each in its own subdirectory. The only limit is the number of records for a file (32 000). STNPFS comes with different predefined structures and offers nearly all the search and display capabilities of the corresponding STN files. After loading all or some of these file structures, one can automatically transfer data transcripts from STN searches and/or enter documents manually into the corresponding Personal Files. The current version (2.06) has 19 predefined File Structures; this number will increase in the next version of the software. Additional Predefined File structures are available on request from STN International. Unfortunately, the package does not include a File Structure generator, so users cannot easily create their own File Structure to use with search results from other online vendors, CD-ROM databases, or bibliographic data on floppy disks. I hope that such a utility will become available in a future version. However, STNPFS can automatically convert Dbase data files into Personal Files.

On the other hand, STNPFS has Report and Export generators which enable the user to format bibliographic results for display, print, transfer to ASCII files, and manipulate with other software packages such as word processors, desktop publishing, and other database management systems.

One can leave STNPFS temporarily by starting a new DOS shell which occupies only about 5 KB. This allows integration of various other software packages including STN Express, which could be integrated in two ways. One involves using the Transcript File created by STN Express during the online search to automatically add more data into the Personal File; the other one requires transformation of save queries created during the retrieval from STNPFS into files which can be used with STN Express (thus eliminating the need to write scripts for command files). Other software packages that can similarly be integrated are Alchemy and Psi Base.

One should remember that there are some differences between the Registry Personal File and the corresponding STN file. While the Registry Personal File has all the capabilities of the dictionary search, including name segmentation and searching, there are some limitations to its usage stemming from the fact that the maximum length allowed for a search term is 52 characters—less than are in many chemical names. On the other hand, the Registry Personal File, understandably, does not have any structural search capabilities.

The software manual is well-written and organized. It is easy to read and use. It helps, directs, and teaches users who are unfamiliar with the Messenger searching language how to find their way around the searching processes. In the same way, it directs everybody through creation and maintenance of the Personal Files.

A new version of the software with some additional features is due to appear sometime during the second half of 1992. Some of the new features are a menu search mode, duplication detection, a menu-driven file conversion program, and a completely new interface written according to SAA standards.

I would like to see a few other improvements in future versions—scrolling capability, mouse-driven menu, and probably a Windows version, and it would be helpful if structures could be included in the records of the Registry Personal File.

Recently, a comparison appeared⁵ of four personal bibliographic database systems: Library Master, Notebook II, Papyrus, and Pro-Cite. STNPFS, with the enhancements that are in Version 3.0, seems to have the best overall capabilities of all these personal file systems.

To sum up, this package is an excellent personal bibliographic system which has various options for easily adding more capabilities, options that one should try to use as much as possible. It can and should be used, not only for the

management of personal files but also as a stimulus for teaching the use of the Messenger search language.

REFERENCES AND NOTES

- (1) The STN Personal File System is produced and marketed by STN International, Columbus, OH. The list price for this software is \$630.00.
- (2) Lundeen, G. Bibliographic Software Update. *Database* 1991, 14 (6), 57-67.
- (3) Lundeen, G. Software for Managing Personal Files. *Database* 1989, 12 (3), 36-48.
- (4) Stigleman, S. Bibliography Formatting Software. *Database* 1992, 15 (1), 15-27.
- (5) Wolff, T. H. Personal Bibliographic Databases: An Industrial Scientists Perspective. *Database* 1992, 15 (2), 34-40.

Environmental Protection Agency's Sampling and Analysis Methods Database

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The objective of the software database¹ is to aid in the selection of the appropriate EPA method of sampling and sample analysis. There could be many other uses for this program. For example, the EPA analysis methods of interest to an organization could be searched, and the equipment requirements of the various methods could be used in equipment purchasing decisions when a laboratory considers expansion into a new field of analysis. The instruction manual states that the audience for the software would be EPA contractors, hydrologists, and other scientists. An EPA contract laboratory manager was contacted, and his impression was that the database would be very helpful for his laboratories. This software has the possibility of an academic audience as well. It could be used in making decisions on research analysis strategies or to inform students about EPA methods of analysis.

The software requires an IBM-PC, 512K 5.25 floppy and 1.8M hard drives; MS-DOS 2.0 or greater. The software as received has six 5.25 disks and an instruction manual.

INSTALLATION

Initially, there was some confusion because the installation disk was not labeled as described in the manual. Once that difficulty was overcome, installation was easy. The instruction manual was clear and easy to follow. The Main Menu contains a tutorial that is helpful in becoming familiar with the searching process.

CONDUCTING A SEARCH

Searching. The information is divided into seven searchable text files. Each are searched separately, but there is a method of retaining the keywords between searches to save typing. Search time is quartered when using a 8286 cpu instead of a 8086. The program will perform both "and" or "or" types of keyword searches. The summary of an EPA method found through the search process can be printed directly from the search results. Each sampling and analysis summary is called a "record". When printed, all the records are 1 page long. Method 8010, used for 39 different halogenated VOCs for example, is 13 pages long in EPA documents. In editing the

records, a considerable condensing of the information has occurred. It should be understood by persons purchasing this software package that the methods are in an abbreviated form and must be used with that in mind.

The Text Files. The seven text files are

disk	name	no. of records
I	chlorinated aliphatic volatile organics	158
I	other halogenated volatile organics	118
I	nonhalogenated volatile organics	74
I	semivolatile organic compounds	64
II	pesticides, PCBs, dioxins, and furans	75
III	elements	117
III	water quality parameters	59

The number of records in the text files is misleading because the same EPA method of analysis can be used for a number of different compounds, and several EPA methods can be used for the same compound. For example, there are seven methods listed for the analysis of carbon tetrachloride. There are eight methods listed for the analysis of chloroform, and seven are the same as for carbon tetrachloride, so there are these types of overlaps within a text file and also between text files.

The subsections of a record within a text file for individual compounds varies to some degree, but basically they consist of the following sections: the name of the compound, the title of the EPA method, the breadth of the application of the method (for example, method 502.1 can be used for the analysis of 40 different halogenated volatile organic compounds), the compound or contaminants that interfere with the analysis method, the instrumentation needed to perform the analysis, the concentration range of applicability of the method, the sample matrix multiplication factors, the precision and accuracy of the method, the method of sampling for the compound, the stability and method of preservation of the sample and the storage lifetime of the sample, the quality control of the method, and references.

Twenty-six records were checked by comparison to the EPA method documents,² and about 100 of the records were checked for internal consistency. In comparing the records for the analysis of chlorinated hydrocarbons and other organic