CRITERIA FOR SELECTION AND EVALUATION OF LIBRARY SOFTWARE

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ABSTRACT

Present paper discusses the development of library software in India. General criteria and implications for software selection like cost, experiences, originator, supplier etc. are briefly discussed. Technical criteria for software selection like language, compatibility, ease of use, support, interface and integration, documentation, maintenance, etc. are discussed in detail. Checklist for the evaluation of database software is presented. Several advantages and disadvantages of software packages are elucidated. Various problems in available library software are also described.

I. INTRODUCTION :

Software is a collection of programmes required for the computers to manipulate the data stored in the database to produce desired results. The software mainly consists of the operating system, programming language, application programmes etc. On the other hand hardware consist of the Central Processing Unit (CPU), the drives, the printers and the Video Display Unit (VDU). Magnetic taps, floppy-diskettes, hard disk, paper tapes, optical disks etc. are the storage medias.

Software requirement varies from library to library. Large scale libraries require integrated software package to be used on multi-user environment, but, at the same time small or middle level libraries may or may not require the integrated software package. Only specific module is sufficient for their library automation. Some libraries give importance to On Line Public Access Catalog (OPAC) and Circulation Control rather than Acquisition, Technical Processing and Serials Control modules automation, as they need not have to acquire and process the books at their end.

Library database is a bibliographic database which normally requires more storage capacity and, hence, requires more processing or search time. It is essential, here to select software package and of course computer language which can minimize the processing time to give required results. Selection of software is a complicated issue and it partly depends on the number of functions to be automated.

II. DEVELOPMENT OF LIBRARY SOFTWARE :

Computer based library information system will help, to improve control over collection, to have effective control over entire operations, to improve the existing services such as quality, friendliness, regularity, etc., to share the resources among various libraries, to avoid duplication works, to use the s services of existing staff effectively.

To achieve the above mentioned goal most suitable softwares are required. Library software package development in India has not been given priority by commercial or government agencies in the beginning only because of less number of customers, complicated in house operations, different library procedures adopted by different libraries, language problems etc. Many libraries have maximum collection in the regional languages and do not want to go for transliteration though English has been accepted as an International computer language.

III. SOFTWARE IMPLEMENTATION :

Implementation should start with any necessary building works, office rearrangement, or network installation, followed by hardware installation. Once hardware has been installed, or if hardware is already in place, software installation can proceed. This will start with a establishment of a small trial database, and associated elements of a trial system. Hardware, software, and their capability should be tested and any problems resolved, consultation with supplier.

Once the system is operational, databases can be established and any system design, such as the format of report forms, printed outputs etc, security arrangements such as the allocation of passwords and user ID's and write or read access to specific parts of the database need to be put in place. Staff training is essential, and user familiarization programmes should be planned. When these measures are completed the system can work into

full l operation.

IV. GENERAL CRITERIA FOR SOFTWARE SELECTION :

USER EXPERIENCES :
A well tested package that is established in the marketplace, with several applications, is generally to be preferred. Such a package will be less likely to have bugs and should have adequate support. Other people's experiences are useful in indicating the potential and problems of a software package.

COST :
Cost is clearly a consideration, but since, in general, you get what you pay for, cost should not be a primary consideration. Software cost may also be a small component of the costs of the entire system, and better software may significantly reduce operating costs. Annual maintenance cost and revised version of the package must be kept in mind at the time of cost consideration, so that it gives compatibility with present and future systems.

ORIGINATOR :
The reputation of the systems house responsible for writing a software package is important to consider. Experience with other packages from the same originator may be useful in assessing a new package.

SUPPLIER :
With specialist software the supplier is often the originator, but with standard business packages there is often an agent acting as supplier. The user may look to the supplier for support and needs to feel confident that this will be forthcoming. The supplier's reputation and history should be considered. Supplier should provide training in the use of the program. Ease of availability of maintenances engineer should be kept in mind. eventhough the software package is best, the system some times fails without timely and proper customers support in maintenance.

V. TECHNICAL CRITERIA FOR SOFTWARE SELECTION :

LANGUAGE :
It is important that the language used permits the application to be run efficiently in terms of machine time and storage requirements. The programming language in which the software is written may be a high-level language or assembler or, often, a combination of both. If an application package is written in a particular language, a compiler or interpreter must be available on the system that is to run the package. Or, application software language

should be compatible with the compiler/ interpreter available with the existing hardware system in library.

TECHNICAL CONSIDERATIONS AND COMPATIBILITY :
The software must run under the operating system available in the hardware configuration to be used, and must also be available in a version that is compatible

with the hardware. Compatibility is less of a problem that it was once, due to the move towards UNIX based system and extensive use of DOS in microcomputer systems. Multiuser environment is preferred. Software must be compatible with the hardware available for use and not visa-versa.

EASE OF USE :
The quality of the human computer interface is important for any software package. One must observe how user friendly is the system ? Is it menu driven (files and functions on the screen for user to choose) ? Are the commands and operations easily learned and handled by documentation staff ? Minimum key operations are preffered for change in menus. Software package must be in a position to cover all library in-house functions also few or no changes in library functions according to software are acceptable but not more or all. Similarly modifications or provisions must be available in the software for new functions or services to be started in future.

SUPPLIED FORMAT:
The supplied format may be particularly important for microcomputer systems. Software can be supplied on 3 1/2" or 5 1/2" size disks or tapes that can be run on the system and, if necessary, transferred to another medium such as hard disk.

INTERFACE AND INTEGRATION :
Most software packages should be able to export and import data to and from the other packages, of the same kind. Such as between word processing packages and two database packages. Some software will also export data to other kind of packages as from, for instance, a database package to a word processing package. e.g. Data from dBASE files can be converted to LIBSYS format or database in CDS/ISIS can be converted into dBASE format. Software packauge should support different activities such as word processing, databases, graphics and spreadsheets. It is important to be able to reuse data in a system in different formats so a high level of flexibility should be sought.

RETROSPECTIVE CONVERSION :
Vendor should convert the existing data base and should train Library Professionals for import export

satisfactory compromise can be achieved.

* The user depends on the expertise and reliability of the software supplier for both the initial package, and for a subsequent maintenance and support.

* The package programme is likely to be less efficient than a tailor made package in terms of computer running time and core store utilization.

X. PROBLEMS IN AVAILABLE LIBRARY SOFTWARE :

There are several problems in library software which have retarded the progress of Indian Library Automation.

Software portability :

Some softwares having good functioning capability are developed for particular machines only (e.g. MINISIS - H/P 3000 minicomputer system). Inability of software packages from one environment to the another environment will frustrate the efforts on the part of user.

The cost of software :

It seems to be high along with indirect costs such as installation, file conversion, training, documentation, maintenance, etc. It has several other interrelated parameter such as number of package sold by the company and commitment by the developer towards the package.

Software purchase :

It appears Indian user is reluctant to pay anything for software. He easily gets a package pirated through one of

his known computer centres. Thus, the developers deprived of his revenue. This ultimately effects entire software industry.

Shortage of Manpower ability :

This needs training of library staff in maintaining computerised library management.

Standardization :.

A statutory body needs to be formulated to look into the standardization of library software package.

Funding :

Library funding is needed for library automation b the government/management.

Importing Software :

Problems in imparting software includes :

1). Delay in supplied tapes,

2). High cost of transportation, training, servicin maintenance, etc.

3). Poor communication between the centres software development and the perspectiv buyer.

4). Restrictions put by government for importin of software so as to protect and encourag indigenous development enforce the buye to obtain valid licence from the governmer (DOE in case of computer hardware /software).

5). In any case a custom duty of 60-65 percer of the package cost has to be paid by the customer.

6). Transactions involving foreign currency is an additional problem source for developin countries.

Software Piracy :

Software piracy is a phenomenon prevalent in a countries due to the absence of strict controls in illega copying, duplication & usage of popular packages Particularly with the easy availability of IBM/P compatible microcomputers in India, the market flooded with a wide variety of softwares, tempting person to obtain a free copy of a package from h friend or an unscrupulous vendor. But this can lea to unhappy situation in the long run. Besides th potential legal problems involved, there will b problems regarding maintenance and servicing i cases of any breakdowns. More important is the fac that an illegal user misses out on the improved versio of the package.

Recurring problems:

One has to keep constant touch with the supplier i order to solve recurring problems, they should pt terms and conditions for maintenance and supply

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Recurring problems:

One has to keep constant touch with the supplier in order to solve recurring problems, they should put terms and conditions for maintenance and supply of

the updated version of the software.

CONCLUSION :

In India, the libraries having their own software developed in house are neither integrated nor can they use extensively for all library functions. Although few commercial software packages are available in the market, while purchasing it the libraries have to consider many factors such as the functions to be performed, support offered, user groups, background of supplier, training offered, documentation, etc

Every software is capable of handling quite a good number of functions. At the time of selection, it is necessary to analyze and define the present and future application requirements and compare them with the provisions of other softwares. Presently, integrated and reliable softwares are available in the market with full customer support. However, the cost of such software package is very high.

The library professionals should visit other automated libraries to discuss the problems and prospects of the proposed system before taking a final decision. Librarians should invite the software companies to arrange the demonstration to examine the facilities offered by various software systems. However, the user must be confident that the goals of his organization are met by the software package. A package acquisition decision should never be made on cost alone but also on all critical considerations.

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