AUTOMATED BOOK ACQUISITION SYSTEM USING 'SANJAY' AT DEFENCE SCIENCE LIBRARY

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ABSTRACT

This paper outlines various features of the acquisition module of Sanjay, an augmented CDS/ISIS ver 2.3 software package. It briefly describes the activities which are carried out using this software at Defence Science Library. It also suggests some features that need to be provided for book acquisition processing.

1. INTRODUCTION

Defence Science Library (DSL) is a central agency for providing scientific and technical information to all DRDO labs/estts. To cater for the day to day needs of DRDO scientists for their research work, DSL at Defence Scientific Information and Documentation Centre is holding a rich collection of books and non-book documents. To efficiently develop and manage its collection in an organised way, DSL has automated library acquisition activities which include acquisition, cataloguing, circulation and serials control.

Acquisition activities in DSL have been automated using 'Sanjay', a software based on CDS/ISIS. The software package CDS/ISIS has been developed and distributed free of cost to non-profit organisations by Unesco (PGI). Designed and used for the management of structured non-numerical databases, the package combines features of Unesco's Computerised Documentation System (CDS) and the Integrated Set of Information Systems (ISIS) and is efficient to store, retrieve, display and print information.

Micro CDS/ISIS is basically a package for information storage and retrieval and is not capable of handling many library management activities (*viz.* acquisition, circulation, financial control) in an integrated manner. To overcome the

limitations of Micro CDS/ISIS, Sanjay has been developed by NISSAT in coordination with DESIDOC. Sanjay enhances the capabilities of CDS/ISIS by interfacing about 35 Pascal programs and 25 special user-friendly menus. Sanjay as an augmented package, has the following special features in addition to the database management applications already available in CDS/ISIS package.

□ The package is capable of handling numerical operations like calculation of budgetary allocations and expenditure.

□ It provides linking of two or more databases for a single application, like linking an acquisition system with the online catalogue and circulation system.

□ The inverted files are updated automatically whenever a change is made in the database. For this purpose, the user is not required to use the inverted file service.

□ New menus can be inserted in between the existing menus without affecting their functions.

2. BOOK ACQUISITION PROCESSING AT DSL

The activities in book acquisition at DSL involve sending information about new publications to readers, getting indents from them, placing the details of new indents to Book Selection Committee (BSC) placing orders and reminders to vendors, processing of bills and keeping track of the budget position. DESIDOC also procures books for other labs from separate budget allocations.

Manual processing of the new indents requires repeated inputting of bibliographic details for generating lists for BSC, list of selected books, budget status reports, order and reminders to vendors and processing of bills for payment. For online catalogue of books, the data on acquired

books is to be inputted in the required format. The same data is also required for generation of acquisition lists and catalogue cards.

To avoid frequent inputting of data and generation of various reports and forms, the acquisition activities were automated. Sanjay package was chosen for automation, because of its suitability for menu-driven information storage and retrieval system, linking of various related databases, handling of numerical data for budget and expenditure, and also as DESIDOC has been involved in its development.

Availability of the acquisition data in machine-readable form has lead to quick updation of online catalogue at DESIDOC by exporting this data in required format using a conversion program. The flexible printing options of the package facilitate the generation of reports and lists in desired form.

3. SYSTEM FEATURES

The following hardware and software configuration is required for operating Sanjay.

(i) PC AT with 1 MB RAM, 40 MB Hard Disk and one floppy drive.

(ii) Printer

(ii) MS-DOS 3.2 or above

(iii) CDS/ISIS ver 2.3

At Defence Science Library, version 1.0 of SANJAY package (based on CDS/ISIS ver 2.3) has been loaded on a PC/AT computer and the acquisition control module of the software is being used for the management of acquisition activities.

The following databases are being used with the acquisition module of 'SANJAY'.

The structure of these databases is given in Appendix I.

(i) *Acquis database*: It contains bibliographic details of the documents to be procured, along with the details of indentors, vendor codes, and Book Selection Committee number (Table 1).

(ii) *Vendor database*: It includes the addresses of vendors approved by the Library for supply of documents (in Table 2).

(iii) *Catalogue database*: It contains the bibliographic details of documents received in the library (Table 3).

(iv) *Budget database*: It contains budget allocations, expenditure and other related information (Table 4).

(v) *Bill database*: It includes price and other details of each item listed in the bill along with the sanction number, order and invoice number, CRV number etc. (Table 5).

Acquis database has been linked with other databases to carry out routine functions of library without redundancy and to meet the requirements for acquisition and cataloguing.

Acquisition control module of the software offers the following options in its main menu (Fig.1).

(a) Data entry (Fig. 2)

(b) Query search separately for indentor (Fig. 3), vendor or budget status.

(c) Report generation

(d) Link to catalogue

4. DATA ENTRY

4.1 Acquis database

Starting from the receipt of an indent for a document to its final processing and

Fig. 1. Main menu

Fig. 2. Data entry menu

Fig. 3. Sample query search menu

merging into online catalogue, fields are added at four different stages of data entry using different worksheets in acquis-database as detailed in Appendix II.

(a) *New indents*: First level of data entry is done in 'New Indents' worksheet. This includes both the indents received from DRDO scientists plus books taken on approval from vendors (Worksheet 1). Monthly list of indents is generated at this stage for consideration and approval of the BSC which meets every month.

(b) *BSC decision*: After the Committee has screened the list for approval, entries with the details of vendor, supply due-date, approval status etc. are added in 'BSC Decision' worksheet (Worksheet 2).

After completing the data entry in this worksheet, supply orders to vendors are generated. Other reports such as list of approved and un-approved documents are also generated at this stage.

(c) *Arrival of documents*: After the receipt of document, entries regarding publishers' details, bill details, accession number, classification number, descriptors, etc. are made (Worksheet 3).

List of books received over a specified period of time can be generated at this stage.

(d) *Catalogue entry*: Finally when data is complete and ready for online catalogue, completeness code and date are given to
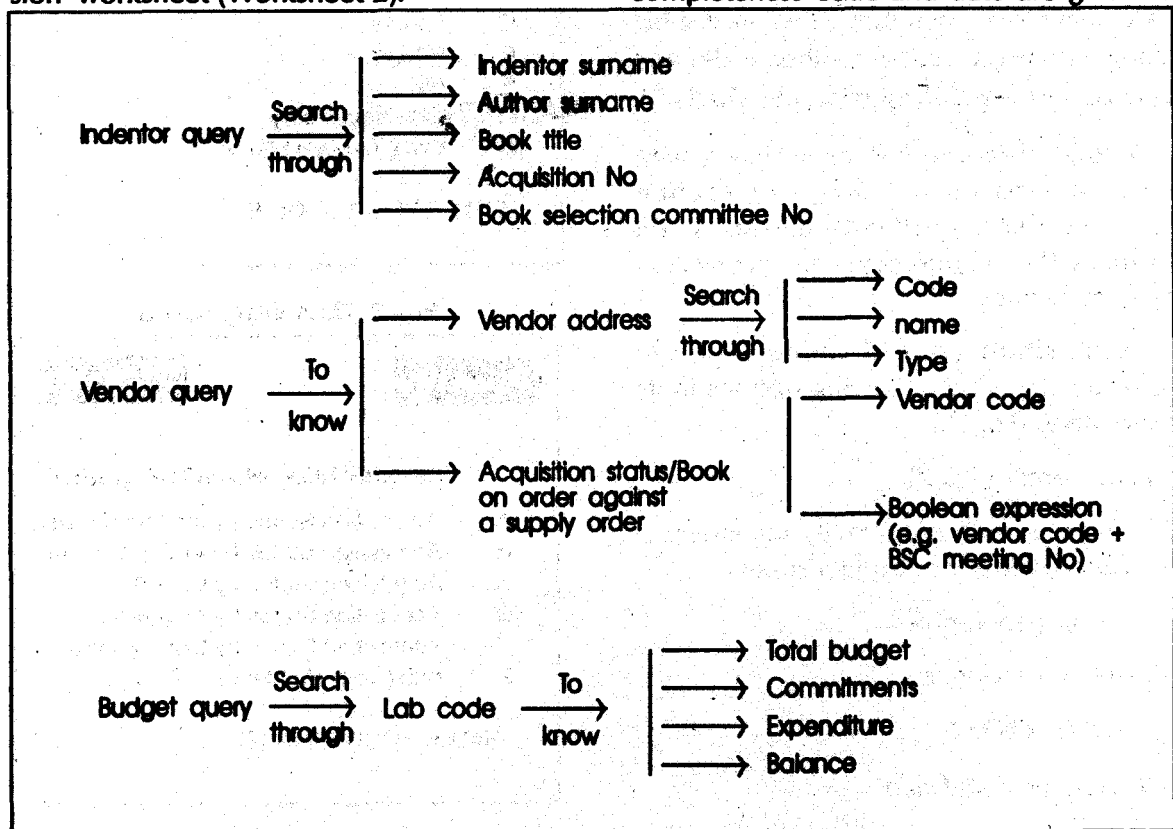

Figure 4. Query search.

the record. Print-out of complete record is taken for editing (Worksheet 4).

The edited data is sent for merging into the online catalogue and generating 'Monthly List of Additions to Defence Science Library'.

4.2 Vendor Database

Full details of the supplier viz. name address, type and vendor codes are maintained in vendor database (Worksheet 5).

4.3 Budget Database

Initially, the allocated budget amount for acquisition is entered for all the labs for whom DESIDOC is procuring books (Worksheet 6). System updates the database by calculating expenditure and budgetary status for each laboratory and status report can be generated at any stage.

4.4 Bill Database

Bill details are entered to generate two types of reports (Worksheet 7).

(a) Sanction and contingent bill

(b) Certified receipt voucher (CRV)

5. QUERY SEARCH

The database can be searched to know the information about a document including the vendor details, indentor details, bibliographic details, etc. The fields on which searches can be made are shown in Fig. 4.

6. REPORT GENERATION

The following types of reports and letters can be generated using the acquisition module of Sanjay software.

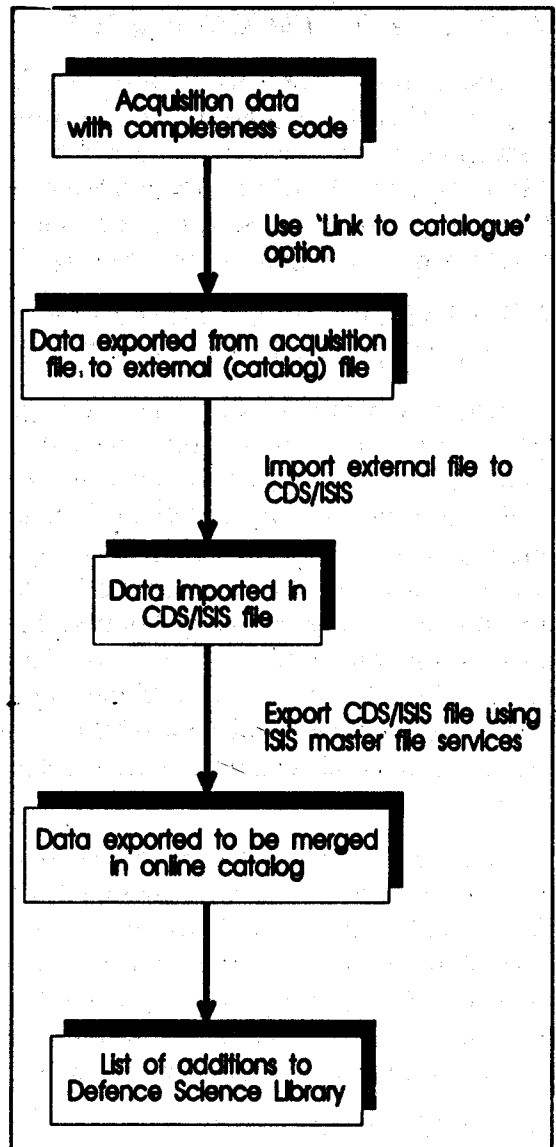(a) List of indented documents

(b) List of approved documents

Figure 5. Steps involved in exporting acquisition data to online catalogue.

(c) List of rejected documents

(d) List of documents received during a particular period

(e) Supply orders

(f) Reminders to vendors

(g) CRVs (Certified receipt vouchers)

(h) Sanction and contingent bills

7. LINK TO ONLINE CATALOGUE

Using this option, acquisition data is exported and merged in the online catalogue. As a by-product of this data, a Monthly List of Additions to Defence Science Library is being generated. Steps involved in this process are shown in Fig. 5.

8. SUGGESTIONS FOR IMPROVING THE ACQUISITION MODULE

Acquisition module of Sanjay package (Ver 1.0) has been found quite efficient in managing the acquisition activities of Defence Science Library. Adequate help messages have been provided at all the stages of data entry. But it is not possible to link the acquis and bill files; therefore bill processing job could not be simplified further. The need for a few help messages such as symbols for truncation and Boolean expressions has also been felt in the search module.

Facilities for information queries such as the consolidated list of orders pending with a vendor, listing of all indents by a person with their status, total expenditure of a particular BSC should also be provided in the package. These may be incorporated in the future version of the Sanjay package.

9. CONCLUSION

For managing the acquisition and related activities in an organised way, Defence Science Library is using the acquisition module of Sanjay package since last two years. The use of this package has resulted in reducing the efforts and time required for acquisition processing and generation of status reports at different stages. The same data is available for merging into the online catalogue database and generating monthly list of acquisitions.

The software has been able to fulfil majority of the requirements of the acquisition control in Defence Science Library. However, there is a scope for further improvement of the software.

FURTHER READING

1. Bhargava, J.K.; Srivastava, R.K.; & Murthy, S.S. Sanjay—An Indian library automation package based on CDS/ISIS. *Program*, 1993, **27**(1), 51-66.

2. Cabral, Maria Luisa & Lopes, Maria Ines. The modernisation of Portuguese libraries—Five decisive years. *Program*, 1992, **26**(3), 249-58.

3. Haravu, L.J. Library automation and networking in India — An overview of recent developments. *Annals of Library Science and Documentation*, 1993, **40**(1), 32-40.

4. Nieuwenhuysen, P. Computerised storage and retrieval of structured text information—CDS/ISIS Version 2.3. *Program*, 1991, **25**(1), 1-18.

5. Perera, Pradeepa. Micro CDS/ISIS—A critical appraisal of its search interface. *Program*, 1992, **26**(4), 373-86.

Appendix I

Table 1. FDT for Acquis Database

TAG	NAME	LEN	TYPE	REP	DELI-MITERS
- 800	Bill No. and Date	30	X	R	AD
- 801	Acquisition No.	10	X		
- 802	BSC Number	20	X		
- 805	List Price (1 copy)	20	X		
- 808	No. of Copies	2	X		
- 809	Indentor Details	30	X	R	AB
- 812	Approval Code	1	X		
- 813	Vendor Code	10	X		
- 814	Supply Order Number	20	X		
- 815	Supply Mode	10	X		
- 816	Supply Order Date	8	N		
- 817	Supply Due-Date	8	N		
- 829	Reminder Date	8	N		
- 830	Reminder Number	20	X		
- 831	Book Received Status	1	X		
- 832	Book Received Date	8	N	R	
- 833	Estt/lab	20	X		
- 834	No. of Copies Received	2	N	R	
- 835	Cancelled Order	10	X		

Table 2. FDT for Vendor Database

TAG	NAME	LEN	TYPE	REP
- 10	Vendor Code	3	X	
- 20	Vendor Name	25	x	
- 30	Vendor Address	50	X	R
- 40	Vendor Type	10	X	

Table 3. FDT for Catalogue Database

TAG	NAME	LEN	TYPE	REP	DELI-MITERS
- 1	Record ID	7	X		
- 2	Record Status	1	X		
- 3	Bibliographic Level	1	X		
- 20	Source of Record	20	X		
- 22	Date of Record completion	8	N		
- 40	Language	10	X		
- 50	Physical Medium	5	X		
- 60	Type of Material	5	X		
- 100	ISBN	20	X	R	
- 120	Document Number	30	X	R	
- 200	Title	150	X		AB
- 230	Other Title	150	X		
- 260	Edition	40	X		
- 300	Author	50	X	R	ABF
- 310	Corporate Body	100	X		ABCDE
- 320	Name of Meeting	100	X		ABEGHJ
- 400	Place and Publisher	100	x		ABD
- 420	Place and Distributor	100	X		ABD
- 440	Date of Publication	8	X		
- 450	Serial No. and Date	20	X		SD
- 460	Physical Description	50	X		AD
- 465	Cost (per copy)	20	X		
- 480	Series	100	X		ABC
- 490	Part Statement (Vol)	100	X		ABC
- 500	Note	100	X		
- 510	Note on Biblio Relation	30	X		
- 610	Class No.	20	X		ABC
- 620	Keywords	25	X	R	
- 836	Completeness of Rec.	1	X-		
- 900	Accession No.	10	X	R	

Table 4. FDT for Budget Database

TAG	NAME	LEN	TYPE	REP
- 10	Lab/Institution Name	25	X	
- 20	Lab/Institution Address	50	X	R
- 30	Total Budget	10	X	
- 40	Year	15	X	
- 50	Commitments	10	X	
- 60	Expenditure	10	X	
- 70	Balance	10	X	

Table 5. FDT for Bill Database

TAG	NAME	LEN	TYPE	REP	DELI-MITERS
- 5	Vendor Address	50	X		
- 10	Order No. & Date	30	X		od
- 20	Invoice No. & Date	30	X		id
- 30	Book Details	1600	X	R	aqtp
- 40	Total Books	2	X		
- 50	Total Cost	10	X		
- 60	Discount/Excess	10	X		dp
- 70	Net Cost	10	X		
- 75	Net Cost (in words)	200	X		
- 80	CRV No. & Date	30	X		cd
- 90	Sanction No. & Date	30	X		sd
- 100	Budget Adjusted	1	X		
- 110	Budget Lab	10	X		

Appendix II

Worksheet 1:

Language _____
Physical medium _____
ISBN Number _____
Document Number (Repeatable) _____
Title _____
Edition statement _____
Author _____
Corporate body _____
Name of meeting _____
Place & Publisher _____
Date of Publication _____
Part statement _____
Acquisition No. _____
BSC Number _____
List price _____
No. of copies _____
Indentor's detail _____
Estt./Lab _____
Record status with bibliographical level _____
Series _____
Note _____

Worksheet 2:

Language _____
Physical medium _____

ISBN Number _____
Document Number (Repeatable) _____
Title _____
Edition statement _____
Author _____
Approval code _____
Vendor code _____
Supply mode _____
Supply due-date _____
Reminder date _____
Reminder Number _____
Corporate body _____
Name of meeting _____
Place & Publisher _____
Date of Publication _____
Part statement _____
Acquisition No. _____
BSC Number _____
List price _____
No. of copies _____
Indentor's detail _____
Estt./Lab _____
Record status with bibliographical level _____
Series _____
 Note _____

Worksheet 3:

Language _____
Physical medium _____
ISBN Number _____
Document Number (Repeatable) _____
Title _____
Edition statement _____
Book received date _____
Copies received _____
Place & Distributor _____
Cost (per copy) _____
Book received status _____
Bill no. & date _____
Author _____
Corporate body _____
Name of meeting _____
Place & Publisher _____
Date of Publication _____
Part statement _____
Acquisition No _____
BSC Number _____
List price _____
No. of copies _____
Indentor's detail _____
Estt./Lab _____
Note on bibliography _____
Class Number _____
Subject descriptors _____
Accession No. _____
Physical description _____
Completeness of record _____
Source of record _____
Type of material _____
Other title _____
Serial no. & date _____
Series _____
Note _____

Worksheet 4:

Record status _____
Bibliographical level _____
Source of record _____
Date of entry _____
Language _____
Physical medium _____
Type of material _____
ISBN Number _____
Document Number (Repeatable) _____
Title _____
Other title _____
Edition statement _____
Author _____
Corporate body _____
Name of meeting _____
Place & Publisher _____
Place & Distributor _____
Date of Publication _____
Serial no. & date _____
Physical description _____
Cost (per copy) _____
Series _____
Part statement _____
Note _____
Note on bibliography _____
Class no. _____
Accession no. _____
Bill no. & date _____
Subject descriptors/keywords _____
Completeness _____

Worksheet 5:

Vendor Code _____
Vendor Name _____
Vendor Address _____
Vendor Type _____

Worksheet 6:

Lab/Institute Name _____
Lab/Institute Address _____
Total Budget _____
Budget Year _____
Commitments _____
Expenditure _____
Balance _____

Worksheet 7:

Order no. & Date _____
Invoice no. & Date _____
Book Details _____
Total Books _____
Total Cost _____
Discount _____
Net Cost _____
CRV no. & Date _____
Sanction no. & Date _____
Vendor Address _____
Budget LAB _____