CD-ROM FACILITIES AT DESIDOC

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Abstract

Describes in detail CD-ROM systems, databases and CD NET networking system available at DESIDOC. Advantages and disadvantages of online and CD databases are compared. Problems faced in acquisition, installation of various databases; and retrieval software problems of major CD database producers are also discussed.

1. Introduction

CD-ROM (Compact Disc-Read Only Memory) is a relatively new technology. First announced in 1983, it became commercially available since 1985. The library represents one of the largest markets for this technology. Its usefulness in libraries is not only limited to developed countries, but also of great advantage to libraries in developing countries where telecommunication services for connection to online databases are very expensive and unreliable. CD-ROMs can be used as a substitute to online searching and even to build up customised databases.

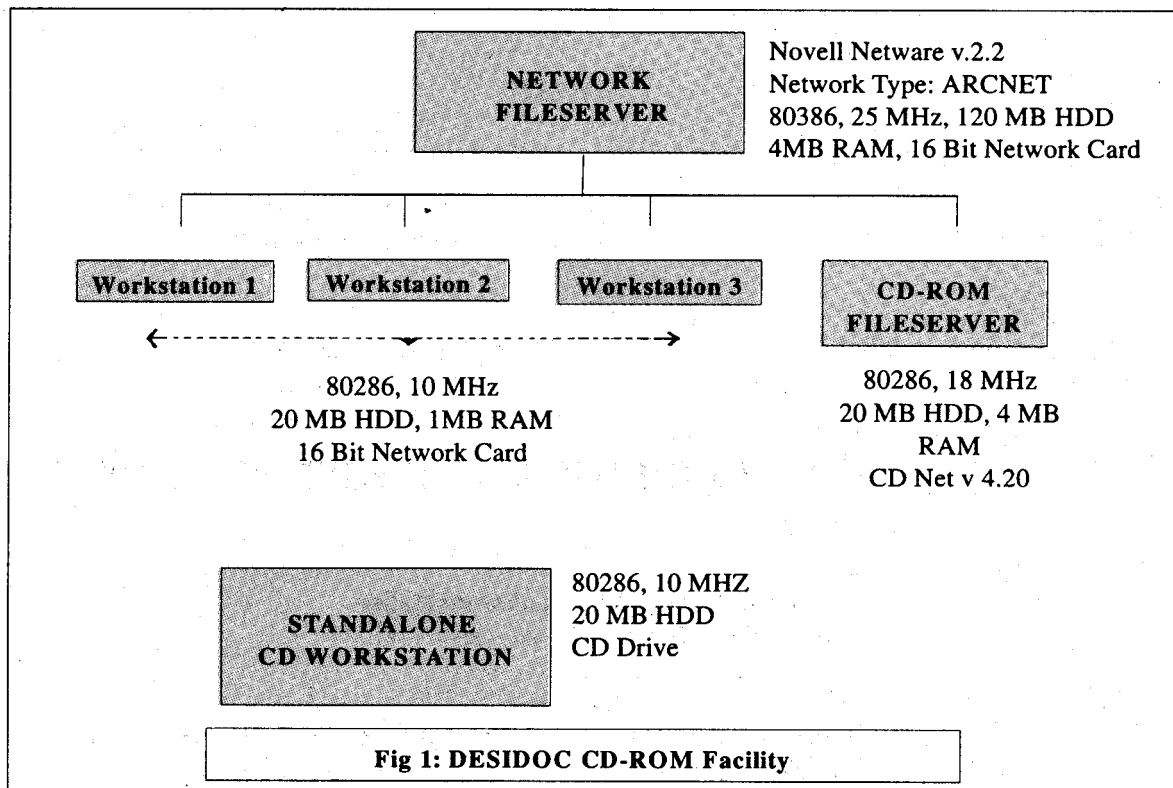## 2. Characteristics and Advantages of CD-ROM

A CD-ROM disc, which can store up to 660 MB of information or 260,000 pages of text, is user-friendly and requires less floor space. In addition to high storage capacity, it facilitates end user searching and saves information retrieval time, besides offering safety of data.

The search software is flexible and relatively straight forward to use. All features like field searching, word adjacency, search truncation, sorting, etc are available with the CD-ROM retrieval software.

3. CD-ROM vs Online Searching

Menu driven approach with CD-ROM is more user friendly than command driven approach of all online services. Therefore, the searcher is not under pressure to complete the session as quickly as possible, even though menu-driven software is slower than the command-driven software. In online services, costs normally increase with the usage of database while in CD-ROM, once installed, it can be used without further incremental costs.

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                    ┌──────────────────┐      Novell Netware v.2.2
                    │     NETWORK      │      Network Type: ARCNET
                    │   FILESERVER     │      80386, 25 MHz, 120 MB HDD
                    └──────────────────┘      4MB RAM, 16 Bit Network Card
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Fig 1: DESIDOC CD-ROM Facility

Another advantage with CD-ROM is its graphic capability. Diagrams, graphs, tables, maps, illustrations, etc, can be reproduced on screen as well as on printer whereas online services currently support textual information only.

Biggest disadvantage with CD databases is the frequency of updation. For example, *Dissertation Abstracts Online* is updated monthly whereas *Dissertation Abstracts on Disc* is updated only annually; *Humanities Index* is updated twice per week for online but only quarterly on CD-ROM. This is because of the production of master discs, their replication and mailing to subscribers is an expensive and time consuming process.

For retrospective searching, online is the only alternative, because major databases are available from 1966 onwards; whereas CD databases are available from 1980 onwards. All CD databases do not use the same search software, atleast 70 different kinds of software are currently in use. As a result, it is difficult for the user to refer to different manu-als for different databases whereas online vendors adopt Common Command Language (CCL) for searching all databases.

4. CD-ROM Facility at DESIDOC

DESIDOC has Philips CM 110 system which works as a stand-alone CD workstation. A CD networking system is currently under implementation at the Defence Science Library of DES|DOC.

4.1 Hardware

Detailed hardware configuration of CD-ROM network is given in fig. 1.

4.2 Software

The software falls into three categories:

(i) The Novell Network : Novell network software has been used to connect all MS-DOS workstations.

(ii) The CD NET software : It allows multiple users on a Local Area Network (LAN) to share multiple CD-ROMs, and transparent access from user MS-DOS worksta-

CD-ROM Databases at DESIDOC

Sl No	Name of database	Year	Frequency	Annual Subscription	Coverage
1.	INSPEC On disc (UMI, USA)	1989-1992	Quarterly	$ 7500	Journals,,conf. proceedings,books etc. computers, communication,information technology, etc. (Abstracts)
2.	NTIS Database National Tech Inf Service (Silver Platter, USA	1983-1992	Quarterly	$ 3135	Govt sponsored R&D project reports (Abstracts)
3.	LISA Library & Inf Science Abstracts (Silver Platter, USA)	1969 - April 1989	Bi-monthly	$995	Journal articles, conference proceedings, library inf science (Abstracts)
4.	ISA Inf Sc Abstracts Plus (Silver Platter, USA)	1966 - July 1992	Bi-monthly	$995	Journal articles, conference proceedings, library inf science (Abstracts)
5.	Applied Science and Technology Index (H W Wilson Co, USA	Oct/83-1992	Quarterly	$1490	340 S&T periodicals (Index)
6.	Wilson Business Abstracts (H W Wilson Co, USA)	July 82 - May 90 (Indexing) June 90-Aug 92 (Indexing & Abstracting)	Quarterly	Gratis	340 S&T periodicals (Index)
7.	Whitaker's Book Bank (Whitaker, UK)	1992	Bi-monthly	$1140	British Books in Print Publisher's addresses
8.	Ulrich's Plus (R R Bowker, USA)	Summer 1992 (1986-92)	Quarterly	$465	Serials database
9.	Books in Print Plus with Book Review Plus	July-August 1992 (1986-1992)	Quarterly	$1,395	Books in Print Publisher's addresses
11.	Aldrichem Data Search (Aldrich Chem Co, USA)	1990	Monthly	$475	50,000 chemicals 8,000 lab eqpt
12.	Grolier Electronic Encyclopedia (Grolier Electronic Pub, USA)	1988	Monthly	$395	Academic American Encyclopedia (21 volumes)
13.	Mc Graw Hill S&T Reference Set (Mc Graw Hill, USA)	1987	Monthly	$335	2 lakh S&T terms, hyperlinked entries, formulae structures, design, etc

tions. It also features dynamic DOS-drive-letter-assignment to remotely networked CD-ROMs and system overview facility.

CD NET Software consists of two primary components: The central CD Net Server, and the CD Net Workstation. CD Net Server is a CD-ROM 'data service' network server, providing dedicated CD-ROM data service to MS-DOS user workstations on LAN. Each CD Net Server node attaches to the LAN as a 'peer' node, and is completely independent of any network file server. CD-Net Workstation software gives access to each MS-DOS workstation on the LAN and to the CD Net Server CD-ROMs.

CD Net Workstation Software includes Microsoft MS-DOS CD-ROM Extensions ver 2.20 (MSCDEX); Meridian CD Net MSCDEX Network Device Driver; Menu and command line utilities; CD-ROM Network Application Management System; CD-Menu; CD-Admin; and Remote CD Net Server Status Tools.

4.3 Cost

The subscription prices for CD-ROM products are the same regardless of networking. However, for networking the products, user has to give network licence fee depending upon the number of workstations.

4.4 Advantages of CD Networking

(i) The network supports simultaneous use of the same product.

(ii) As the CD-ROMs are permanently mounted, the users only have to select from a menu, rather than individually collecting and installing discs.

(iii) Security can also be improved as the CD-ROMs can be permanently mounted and kept in non-public area.

5. Limitations of Access Software

5.1 Applied Science and Technology Index (AS&TI)

(i) In AS&TI software no option is available for limiting the search on a specific range of

publication years. For example, the problem of searching the articles on radar, published specifically from 1980-1984 cannot be solved.

(ii) In many cases wrong citations were noticed, in particular, wrong pagination was found when actual source journals were referred.

(iii) Basic Index is available through Browse option and is based on keywords/descriptors. Terms from title words, keywords, subject headings, journal names, etc can be searched in other modes like Wilsearch and Wilsearch Online. For exhaustive search, Wilsearch mode provides optimum results.

5.2 INSPEC On Disc

Proquest Software ver 3.3 is very fast as compared to its earlier two versions. Using this software exhaustive searching through free terms, descriptors, authors, chemical formulae, document type, INSPEC classification code etc is possible. An extremely useful option of INSPEC Thesaurus is also available with this database.

Printing is possible in two modes: long output (complete record), and short output (citations).

For a particular search selective fields can neither be displayed nor printed.

5.3 Silver Platter Retrieval Software System (SPIRS)

SPIRS is very exhaustive. All features like Help; Browse; Index; Display or Print (citations, full record, selective fields); Exchange; and Search History are included. Wild Card searching on various fields viz Author, Title words, Year, NTIS Accession Numbers etc is possible. In addition, Boolean logical and relational operators can be used for refining the search.

Inadequate/inconsistent indexing is seen in all databases which directly affects the retrieval performance. For multi-term/compound words like carbon carbon composites, following variations were found in NTIS database:

	Installation	User-friendliness	Software features	Performance	Documentation	Online help	Screen display	Value for money
ASTI	VG	G	G	VG	VG	G	G	G
INSPEC ON DISC	G	VG	VG	VG	VG	G	G	VG
Silver Platter Database (NTIS, ISA, LISA)	VG	E	E	E	E	E	E	VG
Bowker Databases (Ulrich Plus Books in print)	G	G	G	VG	VG	G	VG	G
Whitaker's Bookbank	G	VG	VG	E	VG	VG	G	VG
Grolier Electronic Encyclopaedia	G	A	G	G	A	G	G	G
McGraw-Hill S&T Reference set	A	G	A	A	G	A	A	A

* Abbreviations used : E: Excellent, VG: Very Good, G: Good, A: Average

Carbon-Carbon-Composites　　[Indexed]

Carbon-Carbon Composites
C-C Composites　　　　　　　[in the text]
Carbon Carbon Composites

For this query each set has retrieved different number of records. Thesaurus is not available with all the databases of Silver Platter.

6. Problems of Access Software

6.1 Acquisition Problems

Documentation/original installation software floppies were not supplied in some cases when ordered through local vendors while CD producers are prompt in providing necessary documentation and technical support.

Few database publishers like Silver Platter and Dialog insist on returning old discs after the updated disc has been received. In case where user fails to renew his subscription, he has to return the disc as per the agreement.

CD databases should be checked up by validation program because some may have manufacturing defects. For example in one of the CD update we noticed that some sectors were not readable and therefore, that CD database had to be replaced.

6.2 Software Installation Problems

☐ Retrieval software is not standardised for all CD databases.

☐ Retrieval software version changes with every update disc.

☐ For installation of Bowker databases, viz. Ulrich Plus, and Books in Print, specific device driver name has to be given separately in CONFIG.SYS (system file) depending upon the make and model of CD-ROM drive while other CD databases support MS DOS extension software.

☐ Recent trend is to have the installation software on CD to avoid virus problems.

7. Users Response and Downloading

Users who are aware of basic computer commands can do searching themselves. Downloading of data on floppies is not all-

owed. Most of the CD-ROMs allow downloading of text on floppy discs. However, in order to protect the network from computer viruses, users are not discouraged from downloading data on their floppies. Several barriers like physical or software lock, on the workstation floppy disk drives, use of pre-checked disks etc are employed to avoid virus problems. This is not of course fool proof but it has kept the problem within reasonable limits.

8. Future Programmes

In future, the following hardware configuration/systems will be considered for acquisition to expand the CD-ROM facility on a large scale.

(a) Expanding the number of CD-drives,

(b) Increasing the number of local workstations,

(c) Remote searching of CD-databases, and

(d) Subscription of new CD databases.

9. Further Readings

1. Fairman, R. Networking CD-ROMs: theory and practical experience. *Aslib Information*, 1991, **19**(10), 356-62.

2. Pesch, O. CD-ROM network software. *CD-ROM Librarian*, 1990, '5(11), 9-16.

3. Langlois J. CD-ROMs: considerations before purchasing. *CD- ROM Librarian*, 1990, 5(11), 19-20.

4. Favini, R. What makes a CD-ROM great: the producer's point of view. *CD-ROM Librarian*, 1990, 5(7), 22-25.

5. Armstrong, C.J. & Large, J.A.(Eds). CD-ROM information products: an evaluative guide and directory, Vol.1. Gower Publishing Co. Ltd., England, 1990.

"Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read but not curiously; and some few to be read wholly, and with diligence and attention. Some books also may be read by deputy, and extracts made of them by others."

- Francis Bacon