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National Document Delivery Service : A Proposal

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1. ORIGIN

The concept of a national document delivery service (DDS), as we understand it today, had its origins during the World War II (1939-1945). During the War years, the allied nations, particularly the United States of America and the United Kingdom, set up a large number of R&D groups, established several new defence establishments to support the war efforts, and recruited a very large number of scientific and technical personnel to work on various defence projects.

The 'discipline-oriented research', which was till then carried on in the universities and other academic institutions, was replaced by 'mission-oriented research', and the 'individual research' by 'team research'.

1.1 The American Model

In order to promote the exchange of information among the various R&D groups and project teams, a Clearing House for Scientific and Technical Information (CFSTI) was established by the Office of Technical Services of the US Government during 1944.

CFSTI collected technical reports issued by various project teams, Defence contractors and Government agencies and made these reports available to the Defence and scientific communities on a 'need-to-know' basis. This may be called the first 'document delivery service' through a national document delivery centre (NDDC).

CFSTI, which is now known as the National Technical Information Service (NTIS), under the US Department of Commerce, in Springfield, Virginia, is one of the largest document delivery centres (DDCs) in the world, mainly dealing with technical reports deposited by more than 200 Federal Departments and Agencies.

NTIS has a collection in excess of 1.5 million documents in the public domain which are available for distribution nationally and internationally. NTIS is among the 100 (or more) document delivery centres that exist in the United States at present. The Library of Congress, the John Crerar Library, the library networks like the Research Library's Network (RLN), and several major universities also provide document delivery as a part of their services.

1.2 The British Model

The British Government had also felt a similar need to set up a national document

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delivery system. During the War, desperate attempts were made to access scientific and technical journals in German language which were held in nearly 200 libraries in UK in order to fathom the secrets behind the spectacular developments in rocketry in war-time Germany under Hitler's rule.

Soon after the War, the British Library Authority decided to set up a separate division, known as the British Library Lending Division (BLLD), now known as the British Library Document Supply Centre (BLDSC), for the purpose of providing a centralised document delivery service, covering particularly articles from journals, papers presented in international conferences, technical reports, etc.

The BLDSC is the most widely known and the most widely used DDS in the world today. It has a collection of nearly 7 million documents, mostly in the field of science and technology, and handles requests for photocopies of documents from all over the world. It is estimated that about 3 million reprints are supplied by the British Library annually—the highest for any DDC in the world.

In Great Britain, all libraries having old and rarely used document collections are encouraged to deposit them with the BLDSC in order to strengthen and improve its DDS. According to the statistics furnished by the British Library, about 80% of all requests for document delivery are fulfilled from the collections held by it and by other supporting libraries.

1.3 The Russian Model

The former Soviet Union had established VINITI—the All Union Institute of Scientific and Technical Information in Moscow—shortly after the War years, to serve as a national clearing house for information and also as a document delivery centre.

At one time, VINITI had about 4000 full-time staff and nearly 20,000 part-time translators for preparing abstracts of technical papers from more than 20,000 foreign scientific and technical periodicals for inclusion in its major abstracting journal Refertavyni Zhurnal in about 200 subject series.

1.4 Other National Document Delivery Centres

Canada, Japan, Australia and several major European countries have their own NDDCs. Several learned societies and associations in these countries also provide a DDS in the subject areas of their specialisation.

2. CENTRALISED VERSUS DECENTRALISED DDS

The question, whether the national DDS should be organised on a centralised or a decentralised basis has been the subject of intensive debates in several fora.

The protagonists for a centralised system point out several advantages, as under, of having such a centralised system:

(a) The centralised system is economical, since all journals and other documents can be acquired by a single institution to serve as the base for the DDS, instead of duplicating the same documentary sources in numerous other libraries, resulting in wasteful expenditure.

(b) A centralised operation, in handling a large number of requests for document delivery will be highly economic, whereas, in a decentralised set up, handling only a few such requests, the cost of operations will be very high and uneconomical.

(c) Improvement and modernisation in terms of equipment, manpower and delivery mechanism can be introduced with

minimum investments in a centralised system, than in decentralised centres.

(d) From the point of view of the users also, a centralised system is preferable since they know where to turn to, whenever they need to have a document, instead of knocking at the doors of various DDCs without any certainty whether they can get the required document or not.

The success of the British model is generally cited as an example to buttress the argument in favour of a centralised system.

However, the model of a centralised document delivery system has not caught on in USA which has the largest number of decentralised DDCs. The opinion in this country seems to be some what on the following lines :

It is all right to have a centralised set up for DDS so long as it is well-organised, has comprehensive documentary collections for back up, and is administered efficiently without subjecting itself to frequent changes on account of funding, management and government policies. Once a centralised system deteriorates in its operations and the level of efficiency comes down, the entire DDS will collapse totally, putting the user communities to serious inconvenience.

A centralised system may be manageable in countries which are small in size, such as, Great Britain, but not for countries as vast as the United States, having thousands of academic and S&T institutions and a large user community.

Duplication of documents may not be a bad thing, as it is made out to be, and may be even desirable and preferable in certain cases.

There is no centralised system as such for document delivery in the United States but hundreds of decentralised DDCs with overlapping documentary collections. Owing to the size of the document collections and the level and reach of the 'service', some DDCs in this country, serve, in effect, as centralised international DDCs.

The Library of Congress, the Research Libraries Network, the Engineering Information Inc., UMI Information Store, ERIC Document Reproduction Service, Chemical Abstracts Document Delivery Service, etc are the examples of such centres in USA.

3. DDS IN INDIA—THE EXISTING SCENARIO

The Indian National Scientific Documentation Centre (INSDOC) was established in New Delhi by CSIR during 1952 with assistance from UNESCO. INSDOC's charter, *inter-alia* includes document delivery service also among various other functions and services.

Pursuant to its charter, INSDOC has been providing a DDS on a national scale. The number of photocopies of documents supplied by INSDOC ranges from 15,000 to 40,000 per annum. In the earlier years, many Indian libraries, which did not have their own photocopying machines or access to any other DDC, were mainly and heavily dependent on INSDOC to meet their needs for photocopies of documents.

The situation is gradually changing now with more and more libraries having their own reprographic facilities and access to several other DDCs like the Sectoral Information Centres set up by NISSAT, the Department of Biotechnology, DRDO, UGC, etc. This might be one of the reasons for the gradual decline in the number of document requests handled by INSDOC over the last few years.

However, it may be pointed out that there is still no effective or organised document delivery system in the country. There are still many organisations and individual researchers, scholars, faculty, scientists, etc., who are not aware of the existence of the many decentralised DDCs in the country and who are still approaching directly the authors or the issuing agencies or their foreign colleagues to get copies of the documents they need. This situation is particularly true in the case of the users working in academic and S&T institutions located in semi-urban and rural areas far removed from the metropolitan cities.

The reasons for this situation may be summarised as follows:

(a) Adequate document resources in the form of journals, books, monographs, etc., do not exist in the libraries and information centres in the country to serve as an essential back up for DDS.

(b) Due to financial and other constraints, it has not been possible to increase the subscriptions to core journals to the required level even in major institutions, like INSDOC, DESIDOC, IITs, national laboratories and so on.

(c) While there is a *National Union Catalogue of Scientific Serials* reflecting the holdings of more than 1000 libraries in the country, it is still difficult to have access to these holdings due to lack of reprographic equipment and modern communication facilities in several libraries.

(d) Many institutions are still reluctant to participate in, and contribute to, a national document delivery system.

(e) National union catalogues for other categories of publications like books, monographs, technical reports, conference proceedings, etc., do not exist and, therefore, there is no organised DDS covering these categories of documents, except through the traditional inter-library loan facilities.

The Bureau of Indian Standards which offers a DDS for standards is not able to cope up with the heavy demands, and many organisations depend on private companies for meeting their requirements.

Similarly, in respect of patents too, the DDS proposed by the Government of India's Patent Information System in Nagpur is yet to take off fully.

4. A PROPOSED MODEL FOR DDS IN INDIA

For obvious reasons, funding being the major one, a centralised document delivery service similar to the British model may not be feasible for India in the foreseeable future. Therefore, we have to do with the existing decentralised document delivery system. However, the existing system needs to be strengthened and structured in an organised manner.

4.1 Outlines of the Proposed Model

4.1.1 National Document Delivery Centre

The existing wing in INSDOC, which deals with DDS, may be upgraded as an 'INSDOC-National Document Delivery Centre (INSDOC-NDDC)'.

The number of scientific and technical journals being received at present in INSDOC needs to be increased to atleast 7500 core journal titles. This is expected to meet 70% to 80% of the document requests from the users. As proposed a few years ago, the Government of India might consider a one-time grant to INSDOC to increase its core journal subscriptions.

The National Science Library, which is an integral part of INSDOC, may also need support in the form of increased recurring grants to acquire and strengthen its special collections, such as, reference books, multi-volume sets, conference proceedings, technical reports, theses, etc., which are not likely to be received in other libraries.

Eventually, the INSDOC-NDDC may be modelled somewhat on the lines of 'Ariel' service offered by the Research Libraries Group (RLG) in USA.

RLG has developed a BIB FILE, a Union Catalogue containing bibliographic data on more than 63 million items held by nearly 200 major R&D, law, medical, public and corporate libraries in the United States, covering everything from books, serials, films, photographs, computer files and so on.

The BIB FILE and another CITADEL (article citation file), are accessible for searching online through RLG's Eureka search service.

RLG's clients can also use its electronic document delivery software *viz.* Ariel for scanning articles, photos and documents and transmit the resulting electronic images over Internet to each other's Ariel workstations and print them on a laser printer. The system which is optimised for Internet transmission is faster and less expensive than fax and produces images of greater resolution and quality.

4.1.2 Regional Document Delivery Centres

The following INSDOC Centres may be upgraded *ipso facto* as the Regional Document Delivery Centres (INSDOC-RDDCs)

(a) *INSDOC Regional Centre, Calcutta* to serve users in West Bengal, Assam, Bihar, Orissa and the North Eastern states.

(b) *INSDOC Regional Centre, Bangalore* to serve the users in Karnataka and Kerala states.

(c) *INSDOC Regional Centre, Madras to serve the users in Tamil Nadu and Andhra Pradesh states.*

(d) *INSDOC-WRIC Information Service, Bombay* to serve the users Maharashtra and Gujarat states.

The INSDOC-NDDC may cover the rest of the states not included above.

4.1.3 Satellite Document Delivery Centres

INSDOC's National Union Catalogue of Scientific Serials covers about 1000 or so special libraries in all parts of India. Atleast 20 special libraries in each of the above four mentioned regions which have sizeable document collections, say about 50,000 documents and above, may be selected and treated as 'Satellite- Document Delivery Centres' (SDDCs).

An integrated network can be formed by attaching SDDCs in the states of a region to the respective RDDCs and the SDDCs in the remaining states to the NDDC. All DDCs in the network may be linked to each other through an electronic document request transmission system, similar to the British Library's ARTTel (Automated request transmission by telecommunications) for the purpose of document delivery.

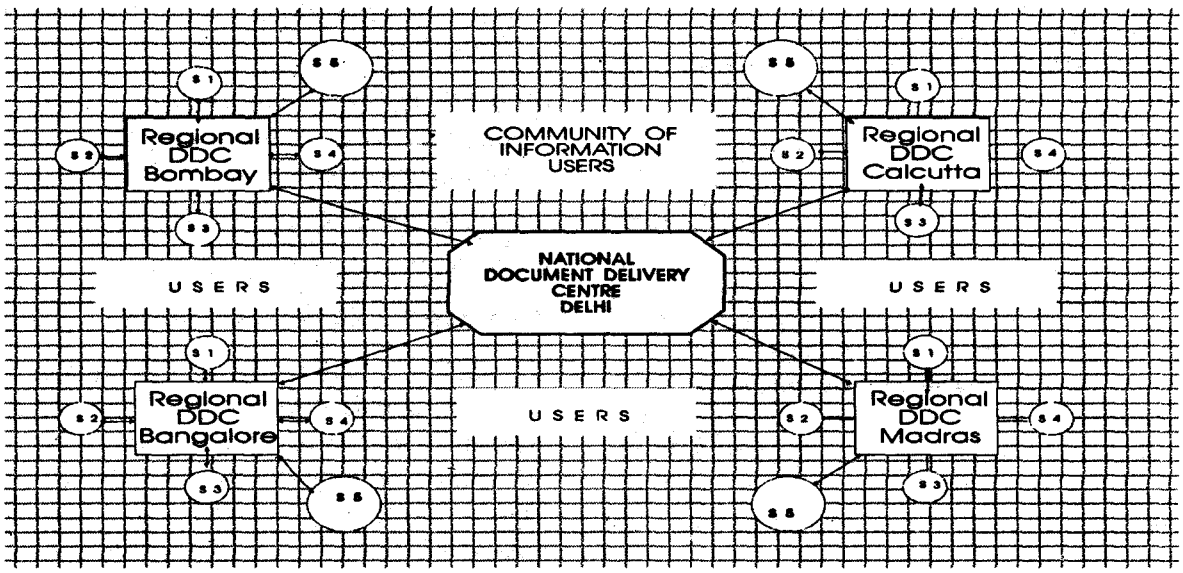
The illustrative model in Fig. 1 shows the proposed national document delivery system.

4.2 Institutional Mechanism

It is essential to have an institutional mechanism for bringing together the NDDC, RDDCs and the SDDCs into an integrated and functional network.

For this purpose, a policy document on National Document Delivery Service may

Figure 1. An illustration of the proposed model for national document delivery service in India



I. ROLE OF NATIONAL DOCUMENT DELIVERY CENTRE (NDDC)

1. Maintain, update periodically and distribute national union catalogues to other DDCs.

2. Conduct studies on ranked list of journals for the purpose of providing DDS on demand.

3. Build other core documentary collections—books, conference proceedings, technical reports, thesis, etc.

4. Plan institutional linkages with other DDCs.

5. Plan data communication circuits with DDCs for transmission of document requests electronically.

6. Co-ordinate and guide other DDCs

7. Establishe relationships with international DDCs and handles requests for documents not available in indigenous sources.

8. Provide training facilities for personal engaged in DDS.

9. Conduct surveys on user needs for document delivery.

10. Publicise document delivery service nationally through mass media.

II. ROLE OF REGIONAL DDCs

1. Handle document delivery service in co-ordination with satellite DDCs in the region.

2. Collect data for input in the national union catalogues.

3. Maintain one set of all national union catalogues

4. Maintain liaison with all satellite DDCs in the Region and with the National DDC.

III. ROLE OF SATELLITE DDCs

1. Handle and service document requests received from users, if the source document is readily available in their own collections.

2. Redirect document requests to concerned satellite DDC if the source document is not available in their own collections.

3. Redirect document requests to National DDC, if the source document cannot be identified or it is not available in any of the DDCs for servicing.

4. Maintain liaison with other DDCs in the region and with the Regional DDCs and the National DDC.

5. Maintain upto date set of National Union Catalogue.

be prepared and submitted to the Government of India for approval and funding as a development project during the IX Plan period.

The policy document may cover, *inter-alia*, the following basic imperatives:

- The selection and identification of satellite DDCs.
- The linkages to be established between the various DDCs in the network for the successful operation of the service.
- The obligations by the DDCs participating in the network to offer document delivery from their collections (to be clearly spelled out in the form of a MOU)
- The details of financial assistance that would be made available under the scheme
- The reference tools to be developed to support the DDS
- The *modus operand* of the DDS
- The tariff structure for the DDS
- The turn-around time for document delivery.

It is essential that a document available in indigenous sources is supplied within 3 weeks from the date of request and, in case of documents to be procured from foreign sources, within 6 weeks.

4.3 Funding

It is essential to point out that a NDDS cannot be imagined without adequate financial inputs to the DDCs forming the network for strengthening the document collections and for other requisite equipment and infrastructure development, such as photocopying, binding and packing machines and communication facilities like telephone, fax, modem, e-mail, etc.

Apart from the Government of India, the following agencies of the Government have to be requested to commit themselves to support this vital service with recurring grants in the larger national interest of the academic and S&T activities in the country:

(a) NISSAT/DSIR

(b) UGC/INFLIBNET

(c) Aeronautical Research and Development Board/DRDO

(d) Major business and industrial organisations (with eligibility to write off 125% of the grants given for this project under the IT Act)

The suggested scale of funding the DDCs as grant-in-aid is as under:

Annual recurring grant per annum.

(a) NDDC	Rs 100 lakh
(b) RDDCs (4 Nos)	(Rs. 5 lakh each) Rs 20 lakh
(c) SDDCs (80 Nos.)	(Rs 1 lakh each) 80 lakh
Total	Rs 200 lakh per annum.

The grant-in-aid scheme may be administered through INSDOC-NDDC.

4.4 Reference Tools

For an effective national DDS, we need to develop several basic reference tools and uptodate them. Each of the selected SDDCs should be required to bring out a monthly accession list and an annual journal holdings catalogue and send the data in the prescribed format in floppy diskette to the national DDC for input in the National Union Catalogue.

Several information and documentation centres are already bringing out Combined Accession Lists reflecting the new additions to the collections in various associated libraries. Examples of such lists are :

a) Combined Aerospace Book Additions, and Combined Aerospace Report Additions issued by National Aerospace Laboratories, Bangalore, with inputs from over 20 aerospace libraries.

b) DESIDOC's 'Union Catalogue of Periodicals' subscribed by DRDO Libraries.

Under the INFLIBNET project of UGC, university libraries may be creating machine readable OPAC's (Open public access catalogue) representing their holdings.

The NISSAT Sectoral Information Centres may also be required to bring out similar OPACs and monthly combined accession lists in the respective subject fields.

All these OPACs and combined accession lists may be sent to INSDOC for input in the National Union Catalogue.

INSDOC has brought out the National Union Catalogue of Scientific Serials in CD-ROM format. Other national union catalogues on books and monographs, reports, conference proceedings, etc., may also be brought out in CD-ROM format and distributed to the Regional and Satellite DDCs.

4.5 Operational Aspects of the Service

The National Document Delivery Service, as and when it is introduced, should be widely publicised to the academic and scientific communities by extensive publicity campaigns through leaflets, newsletters, advertisements in the mass media and seminars, etc.

The users should have the freedom to register with any DDC and be free to send the document requests by one or more of the communication channels of their choice, viz. post, telephone, telex, e-mail, and/or other electronic transmission systems.

The sequence of operations in executing a request for document delivery will be as follows:

- The user contacts anyone of the National, Regional and Satellite DDCs nearest to him.
- The DDC which receives the request should supply the reprint, if the source document is available in its collection.
- If the source document is located in any other DDCs, the document request should be transferred to the concerned DDC for processing the request and supplying the document directly to the user.
- If the source document is not available in any of the Satellite DDCs, the Regional DDCs or the National DDC, it should be the responsibility of the National DDC to procure the document from foreign sources and supply it to the user.
- For the purpose of procuring documents from foreign sources, the National DDC may register itself with one or more of the following international DDCs:

(a) International Photocopying Service, Library of Congress, Washington DC

(b) BLDSC Boston Spa, Wetherby, York, England, (via ARTTel)

(c) Research Libraries Group Inc., California, (USA) (via Ariel)

(d) Dialog's DIALORDER Service

(e) Micromedia Ltd., Toronto, Canada

(f) 'Request-a-Reprint' Institute for Scientific Information, Philadelphia, USA (through their Indian agents)

(g) Other major international document delivery centres, as required.

The DDC which supplies the document to the user shall also bill him for the cost of

the document supplied at the uniform rate specified in the basic policy document.

Each DDC may maintain a separate revolving account for all the financial transactions relating to document delivery and send an annual statement of receipts and expenditure to the designated authority.

5. CONCLUSION

Document delivery service plays a vital role in information access and dissemination and forms an essential element of the national information system.

While considerable progress has been made in the country in setting up facilities for online access to international databases for information search and retrieval and from a large number of CD-ROM databases available in various libraries and information centres, the problem of providing copies of the full-text documents selected by the users from the search results still remains unresolved to a great extent. The users who get copious references and abstracts from the databases on their topics of interest are frustrated when they fail to get a full text copy of the document they need.

The national document delivery system should be developed concurrently with the introduction and use of modern information access and retrieval facilities. Any further delay in this regard would affect seriously the academic and R&D activities in the country.