B-108 – INFORMATION SOURCES AND SERVICES

Unit- IV: Types of Information Services

TOPIC

Selective Dissemination of Information(SDI)

Selective Dissemination of Information(SDI)

- This concept was given by H P Luhn of IBM in 1950 and he devised the information system in 1958 and on this basis IBM has developed a system in 1959 to provide personalised CAS to specialists users and to save the time of the users by scanning the contents. SDI is based on the principle that no two users have identical information needs

Objectives

- To keep the specialist personally informed of all the current & relevant documents of his interest
- Save the time of the user by screening out irrelevant information, thus making information explosion a manageable problem
- Thus SDI helps users to overcome the problem of information overload by effecting information filtering based on their needs.

Objectives

- To provide current information on a particular subject,
- To receive, scan and provide the literature to right users,
- To notify the latest information about the particular subject clearly,
- To delegate the computer base technique for relating current profile of information to the interest of users,
- To achieve current requirements through the scan of journals, current awareness bulletins, and other important resources, and
- Expeditious service/time saving.

Definitions

- **Strauss, Shrene and Brown:** a refinement of current awareness idea-that is designed to serve the individual scientists directly.
- **D Elhence:** a type of personalized Current Awareness Service which under optimum conditions involves screening of documents selecting information exactly tailored to meet the specific research needs of each user or group of users and supplying the information directly to each individual or user group so that the users can keep himself abreast of the latest developments in the area of his specialization.

Definitions

- Dr. S.R. Ranganathan defines SDI as documentation list on a specific topic anticipated to engage the attention of the member of the parent body. Fidoten defines SDI as a method of providing personal current awareness information to individuals or groups.
- UNESCO defines SDI as the regular provision of scientific information to individuals or corporate users on predetermined subjects (interest profiles).

Definition

- However, it can be defined in a comprehensive sense that, SDI is a type of current awareness service which under optimum conditions involves screening of documents, selecting information exactly tailored to meet the specific research needs of each user or a group of users and supplying the information directly to each individual or group so that user can keep abreast of the latest developments in the area of his specialization

Selective Dissemination of Information

- **SDI is that service with in an organization which concern itself with the *machine assisted* channeling of *new items of information* from *whatever sources* to those points with in the organization where the possibility of *usefulness*, in connection with *current work or interest* is high.**
- Machine assisted
- New information
- Whatever source
- Usefulness high
- Current work or interest

CAS Vs SDI

It is often questioned whether SDI can at all be considered a current awareness service. CAS, by its very nature, is not provided against any specific requirement and it covers a wide subject field. But the nature of SDI is not so. Nevertheless, it helps the users keep themselves abreast of the new developments in their own fields, which is also the main aim behind CAS. Besides, if a user wants to know about the new developments in the penumbral region also, along with those in the umbral region of his/her interest, he can do so by having, the level of match “kept in a comparatively diffused or lose form” . SDI, therefore, is basically a current awareness service, though personalized in nature.

CAS vs. SDI

	Current Awareness Service	Selective Dissemination of Information
1	CAS is awareness service directed towards all the users who need it.	SDI is a personalized service and is directed towards the individuals or homogeneous group.
2	Subject coverage may be broad.	Highly specific subject – searches based on user's query.
3	Output includes mostly bibliographic data.	Often tends to includes abstracts as well.
4	CAS is provided by circulating the current list of periodicals among all the users.	SDI service is based on matching the user's profile with the document profile.
5	No profile matching is involved.	Users profile (query) is matched using sophisticated query algorithms.
6	CAS all the information is circulated to the user on the given topic.	SDI is a selective service based on the exact information need of the user.
7	Feedback is not important in CAS service.	Feedback is an important step is providing SDI service.
8	Continuous omnibus type of service.	Service may change as far as individual user is concerned, as soon as his interests change.

Characteristics

This service is based on the principle that no two users have identical information needs and as such each one should be provided only that information which he actually needs.

- It is a personalized information service meant for individual user or group of users with near identical areas of interest.
- It is a user oriented service provided with clear outstanding of the specific interest of the users
- It is speedy device providing information long before they are incorporated in A & I periodicals
- This is a pinpointed and tailored made service for the specialist users

SDI Characteristics

- Tailor-made service
- User oriented
- Subject specific
- Semi- fully mechanized
- Pinpointed and exhaustive
- Speedy and time saving
- Less scanning on user part

SDI: Components/Steps

- Document Profile
- Users' Profile
- Matching
- Notification
- Feedback
- Modifications

Document Profile/Document Database

- As the documents come to the library, their contents are clearly analyzed and the unit concepts or facets are expressed in the same keywords, symbols, or code numbers which have been used in users' profiles, so that matching is possible. The individual profiles of documents so prepared are filed together. This is called documents' profile file. This work is done by the SDI staff.

Document Profile/document database

A file containing document description and terms representing the subject content of the documents being described. Since SDI is a computer-based service, the document database is in computer-readable form. The document database used in SDI is for recent or current literature. The terms chosen to describe document content are usually drawn with the help of a thesaurus.

Document Profile/Document Database

It is a bibliographical record of the documents related to user's information needs and areas of interest. It may be in-house or a commercial database. Both the systems have relative advantages and disadvantages. For example, coverage and scope of commercial database may be more than the in-house created one. On the other hand, in-house database despite being very time-consuming as compared to commercial database, may ensure pin-pointed and better customization of information requirements

Document Profile: Elements

- Keword/ Class Number
- Author of the document
- Title of the document
- Locus of the document
- Accession number
- This work is of subject analysis. Preparation of document profile and organisation is done by library staff

Users Profile

The first decision one has to take before starting an SDI service is about the group of users to whom this service is aimed at. The needs and interests of each user or a group having similar interests are ascertained and carefully analyzed. These are then expressed in terms of some keywords or code numbers. The usual practice is adoption of keywords from an accepted thesaurus. The individual profiles thus prepared are then filed together. *This is called users' profile file*. The user profiles file is again a computer-readable

User Profile

- The terms to describe user interests are also drawn from the same indexing vocabulary (thesaurus) used to index the items going into the document database. The use of the same terminology to describe document content and user interests ensures good matching of user interests with document content file.
- It may be pointed out here that making and maintenance of users' profile file are a vital part of the whole system, without which SDI will have no meaning at all. The work may be done by a user himself with the help of a manual supplied to him for this purpose, or by the SDI staff in collaboration with the user.

Users Profile : Elements

- Background Information about Users
- Subject interest
- Keywords
- Research project
- Information regarding users background
- Names of the peers working in that areas
- Key journals
- Name of organisations noted for their research activities
- Scientists working in that areas

Profile Matching

It consists of matching the user's profile (UP) with the document profile (DP), i.e., contents of the DP with those of UP with the help of a computer. It is advisable to use computer rather than manual work if users are more than 100 or so. The task of the librarian/ information professional is to translate the information requirements of user in to descriptors taken from the controlled vocabulary or thesaurus as it helps in perfect searching of documents/information stored in the database.

Profile Matching

The above two profile files are matched at regular intervals. When positive results are obtained, that is, a close resemblance between a user's profile and a document's profile is found, the necessary details from both the profiles are recorded. For carrying out matching work effectively, it is necessary to determine beforehand a level of match for each user. Existence of what minimum number of concepts (keywords) and what combination of them in a document will make the document suitable for each user should be found out and noted on respective profiles for this purpose. Instructions provided by the users and analysis of responses received from them may help determine the best level of match.

Notification

- It is based on the match between the user's interest profile and the document profile. At the first instance, the individual user receives notifications from the system. If any loose match is observed between his/her profile and any document in the database, the same may be taken care of.
- Further, the user may indicate the usefulness of the documents/information disseminated to him/her. The notification may be sent by taking printouts along with the covering letter and feedback form. The same may be sent by e-mail or by using Bulletin board service, if the request from users is common.

Notification

- Intimation is sent to a particular user, with whose profile the profile of a document matches closely. Thus he/she is alerted about the presence of a document in the library which may be of relevance to him/her. The notification may carry only minimum details necessary for identification of the document or abstract/keywords of the contents of the document along with the bibliographical details. Sometimes, a copy of the document or the document itself is also sent.

Feedback

- The user is expected to provide feedback to the SDI providers in a prescribed feedback form indicating whether the documents/information notified is most relevant, relevant but not needed, or not relevant at all. In case most of the items of information are found useful, then it can be concluded that the user profile has been properly prepared. On the other hand, if most of the information is not found useful, then it can be said that user profile does not match with the user's interest areas and hence must be modified.

Feedback

There should be a mechanism in the SDI system for feedback from the side of the users. A printed card or sheet may be sent to each user along with the notification in which he/she has to indicate how far the reference supplied has been of use to him/her.

- The response may also sometimes take the form of referral response, when a user on getting an intimation, informs the SDI unit that the document referred to him may be of interest to another particular user.
- Although feedback is a very important aspect, which can improve the efficiency of an SDI system, it is often neglected. Through this mechanism, it is possible to detect slightest change in the interests of the users.

Readjustment/Modifications

- In case, the user indicates through the feedback form that the output is not useful, the SDI provider takes action to modify the profile on the basis of the results provided by the user.
- The reasons for disseminating information that is not useful are analysed which may result in revision or modification of the user's profile.
- In some cases, the users' interest may also change due to the change in research projects or so. In such cases, the modification of user's profile itself is required.

Readjustment/Modifications

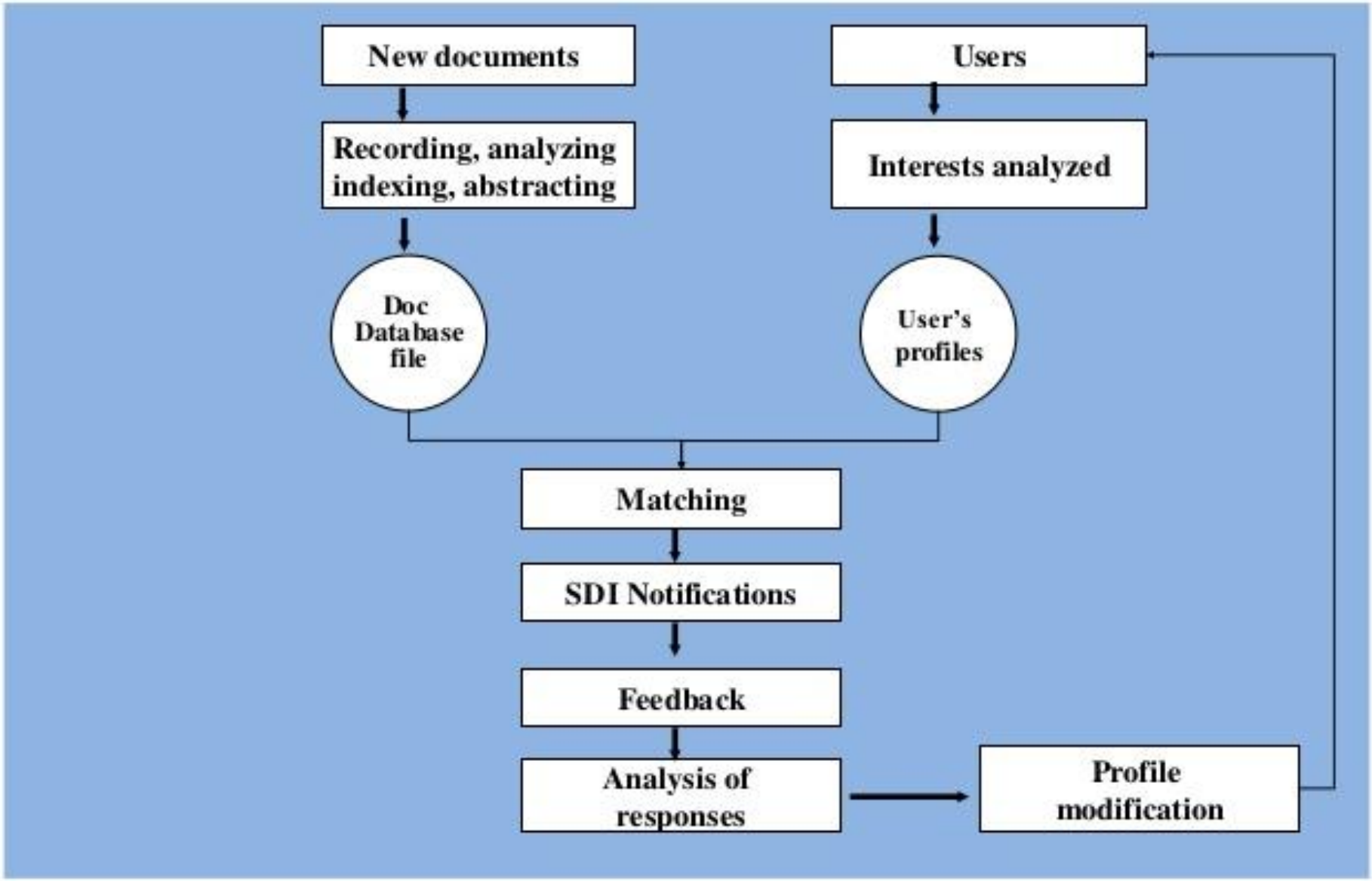
- For improving the service of an SDI system, it is necessary to carefully analyze the views of the users obtained by above methods and modify the users' profiles, if necessary. Such modification is called readjustment, rejuvenation or updating. Continuous readjustment of the profiles certainly helps in raising the efficiency level of the system. An active interest and personal contact between the user and the researcher is of great importance to ensure modification of the profiles.

User-SDI System Interface

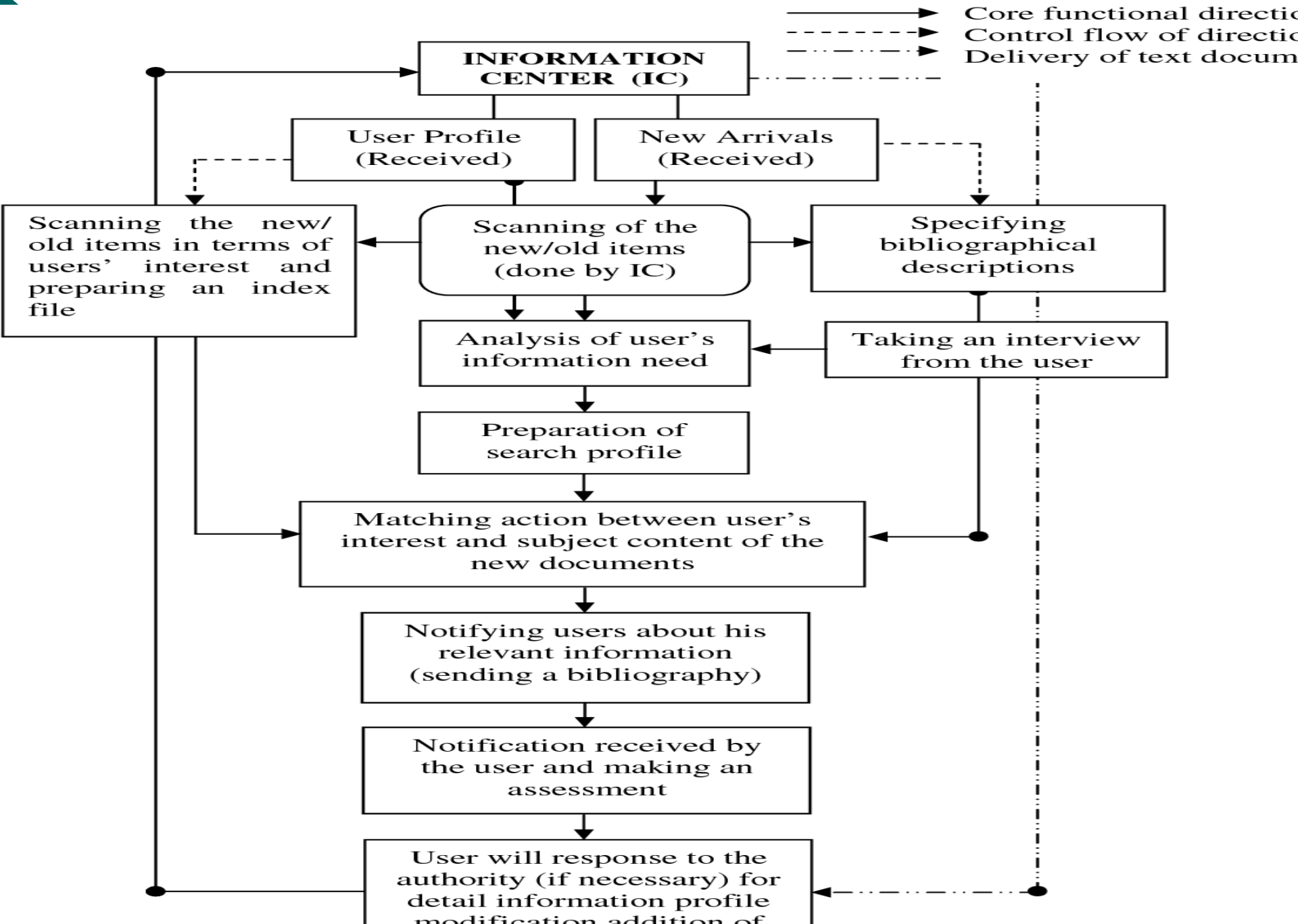
An interface is a common boundary that permits useful interaction or communication .SDI service interface comprise of the following :

- The users of the SDI service.
- SDI notifications of recent literature that match given users' interests.
- Request to users to provide feedback on the notifications sent to them. The feedback provided by the user is about the usefulness or otherwise of the notifications sent to him.
- Intermediaries in the SDI system operation, These are the information scientists within the organisation of the who interact with the user and are knowledgeable about the document database and its characteristics, and in the creation of user profiles.

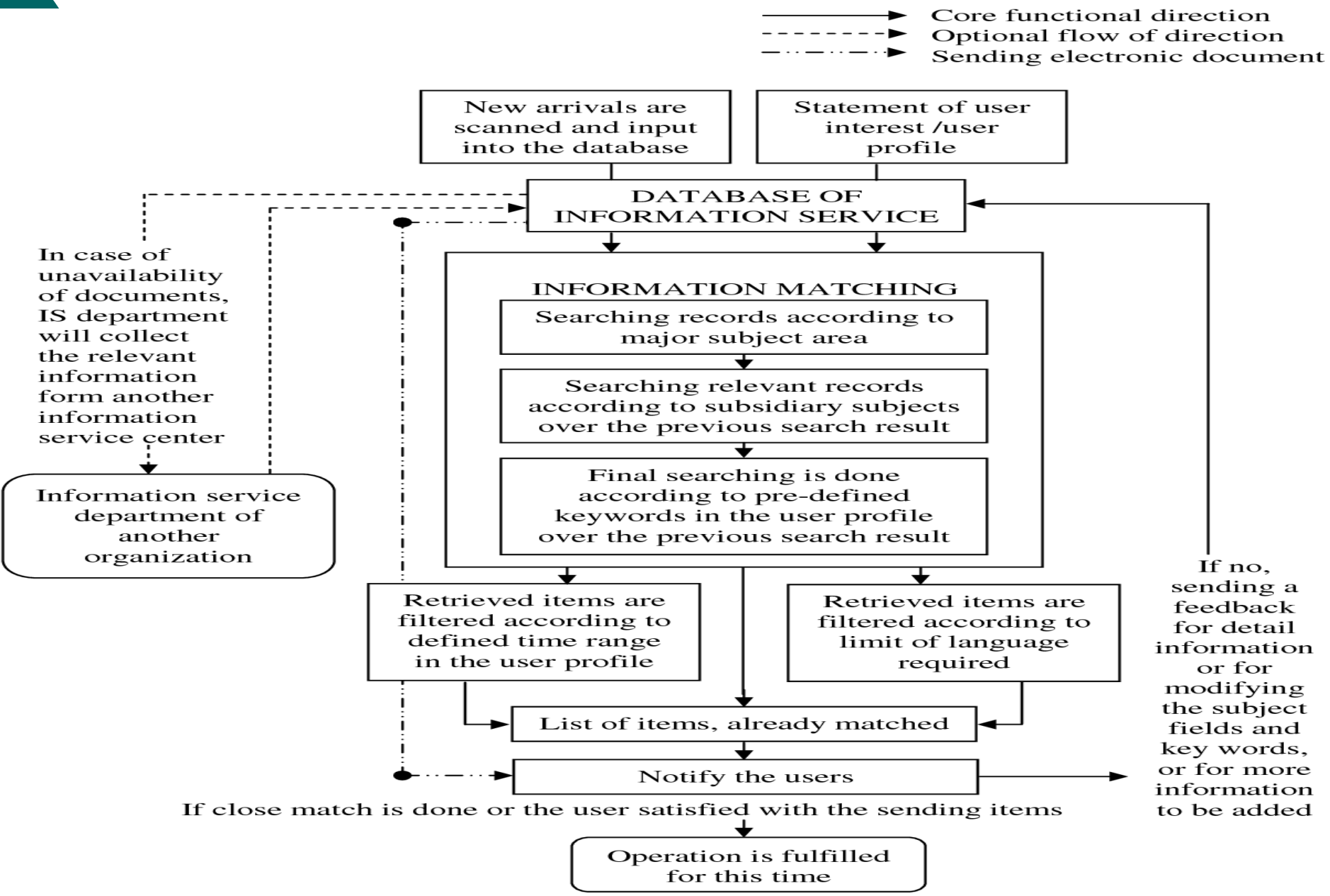
Operational Chart of SDI Service



SDI work Flow (Hossain and Islam 27-44)



SDI Online Work Flow (Hossain and Islam 27-44)



Step 1 & 2

Step 1: **Starting point**

- Receiving the new arrivals/documents.
- Receiving user profile.

Step 2: **Scanning the document**

- Specifying and recording bibliographical description of the new items.
- Scanning the new documents in terms of subject matter and setting up appropriate subject headings and feasible number of keywords with appropriate page references.
- Scanning new and old items in terms of user's interest and preparing index file for those items by selecting significant key terms relevant to users' subject interest.

Step 3 & 4

Step 3: Analysis of the user's need

- Careful study of user profile.
- Asking user through an unstructured interview regarding his need.
- Preparing a search profile by selecting appropriate possible terms for searching information relevant to need.

Step 4: Information matching action

- Study of the search profile.
- Study of the document index file.
- Study of the bibliographic description of the concerned documents.

Step 5 & 6

Step 5: Notification to user

- Sending a bibliographical list of publications relevant to user's need.
- Assessing preliminary notification received by concerned user.

Step 6: User's response to information centre (IC)

- User may request for text information of specified items in detail after assessing the notified items.
- User may request for profile modification or change, if he doesn't satisfy with the notified items.
- User may request for additional new interest, if he wants more information than the notified items. Finally, the information centre will try to modify or attach user's additional need and thus the operation is going on as before.

Advantages

- It is possible to give a “tailor-made” service to individual users;
- The documents coming to the library are best utilized as they go to those persons to whom they will be most useful;
- The scanning time of the readers is reduced to nil;
- It requires no search strategy; The users need not remain alert themselves to keep track of the new literature coming in their fields as they are automatically alerted by the SDI system;
- The dissemination of any information through an SDI system is much quicker than dissemination of the same through any indexing or abstracting service;
- Because of the personalized nature of the service, SDI satisfies the users most.

Disadvantages

- It is sometimes difficult to pin-pointedly ascertain the interests and requirements of the users as they are often unable to express themselves in the manner required;
- It is difficult to satisfy a large number of users by a manual system and if any mechanical method is adopted, it may lose the personal touch which is a vital aspect;
- Many users are not alert enough to respond to all notifications, which affects the feedback mechanism and consequently the efficiency of the system;
- Properly trained staff in sufficient number are required for providing SDI service, which are usually not available in a small library.

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