Chapter 3

Serial Control: Automated Serial control

3.1 Introduction

Over the years key terms such as serial and periodical have been used inconsistently in various literatures in the field of library science. Hence the proper definition of the term ‘serial’ is necessary.

A publication in intervals of fixed amount of time is called a serial. Serials may either be cover only a single particular domain or cover a broad area of subjects and domain. They can even cover a cluster of various subjects and domains which are sometimes inter-related. Their periodicity i.e. time interval of publication may also vary widely from daily, weekly, monthly, bi-monthly, quarterly, bi-annually, and annually, etc.

Definitions are essential for better understanding of the term “Serial”. Some of the definitions of serials by different authors are as follows:

The 1988 revision of the Anglo –American Cataloguing Rules second edition (AACR2) defines serial as “A publication in any medium issued in successive parts bearing numeric or chronological designations and intended to continue indefinitely. Serials include periodicals; newspaper; annuals (reports, yearbooks, etc.); the journals, memoirs, proceedings, transactions, etc., of societies; and numbered monographic series.”

Wyer (1930) defines a serial as “A publication which appears in successive parts or numbers, usually at regular intervals and which from its character, auspices, or name, seems to carry assurance of indefinite appearance.”

Therefore a publication in any medium that is issued in successive parts bearing numeric or chronological designations intended to be continued indefinitely. Serials include periodicals; newspapers; annuals (such as reports and yearbooks); the journals, memoirs, proceedings, and transactions of societies and numbered monographic series.
3.2 Serial Publication Pattern

The term “Serial control” refers to those tasks which support the procurement and management of serial collection in a library. Serials are published at different intervals, that is, daily, weekly, monthly, bi-monthly, quarterly, bi-annually, and annually by an academic or institution, etc. Some serials are published on subject bases while some are on general topic. It is the serialization that distinguishes serials from books and monographs, and it is the period that dictates format and price.

Librarians agree that managing serials is a very challenging task because they are continuous publications with unpredictable publication patterns. A monograph is a completed work - what you see is what you get but a serial is an unfinished product. It has a past history, a present status, and an unknown future. The library has to investigate its past, understand its present, and be alert to its future development. Managing serials is not only a long-term project but also a complicated task; the complexity comes mostly from changes. On a serial’s long publication path, changes may occur, such as title changes, frequency changes, or price changes. Each time there is a change, serial records have to be altered to reflect that change, and a managerial decision may be required to deal with that change.

Some of the common changes related to serial publications are discussed below:

3.2.1 Title changes

When a serial title changes, it requires major changes to all serial records related to this title. Yet title changes are a common phenomenon. Librarians try to make publishers understand that a title change means extra work for the library and unnecessary title changes are not welcome.

3.2.2 Frequency changes

Frequency change is also common and annoying. A monthly can be changed into a quarterly, or vice versa. Some inconsiderate publishers will change frequency in the middle of a volume and then compound the crime by asking for a price increase
because the publication frequency has been increased with monographs—a frequency change from quarterly to annual can cause a major headache in deciding where to shelve the title.

In addition to changing the frequency, a serial can be temporarily suspended. Temporary suspension means a serial stops publication for a period of time. Reasons for suspension could be that the publisher has financial trouble or there are not enough qualified manuscripts, the editor has taken a leave, etc. Usually the publisher doesn’t announce the suspension until pressed by subscribers’ claims.

3.2.3 Other changes

Publication size can be changed. A periodical that was nineteen centimetres tall may suddenly change its size to twenty eight centimetres. If the change occurs in the middle of the volume, it creates a binding problem with issues in different sizes having to be bound into one physical volume.

3.3 Serials Publications in Different Format

Serial Publications can be found in different format. But most of the libraries can be seen to keep the printed journal and electronic publishing which are available to the users in any institution through subscribed consortium.

3.3.1 Printed journal

A printed journal is a periodical publication which is published in printed format issued in parts, usually bearing issue numbers, issue dates, or both. Serials include magazines, newsletters, newspapers, annuals like reports, yearbooks, and directories, journals, memoirs, proceedings, and numbered series.

3.3.2 Electronic Journals

The definition of electronic journals is vague because the term is used with various meanings. In its broad sense it can include any serials that are published originally in or converted to the electronic format and received either online or off-line. Their development is being followed closely by scholars, librarians, vendors, and
publishers. Journals may be published regularly or irregularly whenever an article is ready to be delivered to subscribers. An electronic journal is a periodical publication which is published in electronic format, usually on the Internet.

3.3.3 Microform

Micro images are texts and graphics reduced to such small size that they can no longer be read without the assistance of equipment known as readers. Microform is a generic term used for information borne in micro images. Serials librarians deal with at least two kinds of microforms: microfilm and microfiche.

3.3.4 Serials on CD-ROM

CD-ROM is the acronym for compact disc-read only memory. The silver colour 43/4 compact disc looks very much like a music CD, and the information stored on the disc is for reading only. This means the end user can retrieve information but cannot write on, add, or delete information from the disc.

3.4 Automated serial control system

Serial automation covers several distinct concepts, including automating serial control procedures in libraries, the electronic journals, automating bibliographic access to serials, and automated vendor services. Automated serial control performs such tasks as data entry (title of the serial/journal, periodicity, date of issue, individual article and author, locus, abstract and key words, etc.) order of new serials; renewal of subscription for titles on current subscription list; cancellation of subscription; recording receipt of issue; sending reminders; outputting of various like periodicals received during a specified periods); holding with status (on shelf, on bindery, on circulation, etc.) budget control; binding control; etc.

The application of computer technology to library functions is generally considered to begin during the 1960s or 1970s. The Kansas Union List of Serials, issued in 1965, was reportedly the first computer-produced, multiple-institutions serials holding list. The major automation developments of the 1980s were Online Public
Access Catalogues (OPAC) and integrated systems—both of which often treated serials very less importantly. Serials presented an automation challenges because of their ongoing nature, frequent title changes, and the number of exceptions involved in serials work. During the 1980s a number of microcomputer-based serials control systems for small and medium-sized libraries entered the market.

A major trend of the mid to late 1990s is the shift to client/server integrated systems. In the 1990s the vendor market remained somewhat volatile. Davis and Huesmann opined on serial control system as “In the past year, several serials control systems have been phased out of production, others have been replaced or updated by dramatically different versions, and new systems have been introduced. It is a dynamic, growing field.”

The problem of controlling serials by computer remained a challenge for a long time. Serials presented an automation challenges because of their ongoing nature, frequent title changes, and the number of exceptions involved in serials work. Computers were first used to assist in the control of serials in the 1960s.

A monograph is a single entity at hand whereas serials are published at regular or irregular intervals; their contents usually vary from issue to issue article as a single bibliographic unit may be published in more than one issue and even in more than one volume. Secondly an issue of a serial may not be a bibliographic unit in itself but a bibliographic unit embodied in a particular article comprising more than one issue or volume. Obviously, users may be interested in an issue of a serial as a bibliographic unit or an article spread over a number of issues as a bibliographic unit. This conflict between the physical unit and the bibliographic unit and their management problem make serials control a complex task. Computers were first used to assist in the control of serials in the 1960s.

Computerized Serial control system comprises several sub system. These are:

- INVENTORY. Preparation of lists of serials in cards and to make input to the computer, designing and implementation of data files.

- ACQUISITION. Selection, ordering and acquisition of serials newly
subscribed.

- CATALOGUING. Preparation of catalogues of serials and other records designed to meet the needs of users.

- ACCESSIONS. Receiving of serials, checking-in, placing claims if not received, renewal of subscription, checking gaps, if any, updating of holding records, placing orders for back volumes, preparation of data files, record maintenance, etc.

- CIRCULATION. Making available serials issues in separate volumes in the bound form, keeping records of circulation, checking and making arrangements for binding, preparation of lists of titles or lists of articles, etc.

### 3.4.1 Inventory

Inventories of serials may be prepared primarily in the card form under the title and the subject with cross references from previous files, if any. Each title is recorded by the date of the first volume and subsequent volumes indicating any missing issues. Location is indicated by the call number given to periodical title or the shelf mark. While inventories are prepared in any form as required in the individual library, these may be edited and recorded in the required format. The records then may be kept in the computer in punched cards, or magnetic tape or disk. The magnetic tape file may be sorted for preparing various kinds of inventories and printout obtained from the computer. Once main files or database files are input to the computer, updating with keypunching will be simpler and easier. The updating of input data may be of three kinds-additions, deletions, and changes. Higher degree of accuracy is achieved by the computer.

### 3.4.2 Ordering and Acquisition

The initial ordering of a serial is akin to ordering a monograph. Ordering entails processes like requesting, approving, checking, ordering and accounting in respect of each new serial title. In the accounting system, the total amount of money to be spent on serial is usually called the serials fund which is divided among subjects or
departments. The serials fund is further sub-divided under a number of heads, such as back-sets and duplicate volumes purchases, and binding etc. Financial data file is maintained which shows in general two kinds of transactions: (1) those made under each head and (2) those made with each of the suppliers and/or the parties with whom any transaction is made. New orders are input to computer with all details of price, cost invoice, amount paid or ready for payment.

The acquisitions function may be divided into two parts i.e. Receiving and claiming. When an issue is received, it must be checked to ensure that this is the correct or latest item received and then the main data file must be amended to show new receipts. Typicality a file of punched cards should be created for all the serials to be received.

The claiming function is a smaller but a complex job. The point, at which the claiming procedures should start, mainly depends upon the professional judgement of the librarian. The computer easily provides list of outstanding issues that the librarian needs in order to send claims.

Preparing record for renewal of subscription is a routine job. The data file for acquisitions may include the details of the date when subscriptions fall due to be renewed and the amount to be paid.

3.4.3 Accessions

Each new issue of the serial is recorded in the library. If it is a new serial, it should be input to the data file with bibliographic detail. When all the records are input and the files are updated, the issue may be sent to the reading room or the place where to send. The next useful job which is performed by the computerised accessioning subsystem is the production of a current list of recent arrivals of journals. It may be used as a part of current awareness service.

3.4.4 Integrated System

It may be mentioned that in computer-based networks (e.g. OCLC) ordering, acquisition or check-in system depends upon centrally located full bibliographic
data base. The member libraries use this facility only through their nodes. They are
directed to adhere strictly to the practice/standard approved by the system and
create files accordingly at their respective centres.

3.4.5 Cataloguing

It may be mentioned that in computer-based networks (e.g. OCLC, WLN or RUN)
ordering, acquisition or check-in system depends upon centrally located full
bibliographic data base. The member libraries use this facility only through their
nodes. They are directed to adhere strictly to the practice/standard approved by the
system and create files accordingly at their respective centres.

3.4.6 Circulation and Binding

Circulation of serials is practised on limited scale. For an ordinary loan circulation
control system for monograph can suffice for serials. However routing of serials is
important in special library and must be computerized. To operate such a system a
list of users, their location, department and details of the serials see are input and
lists of readers for each issue of a serial are produced.

Ideally the list should be produced in an order which minimizes the movement of
an issue between different departments and locations and also reflects the priorities.
The bound issues or back-sets of a serial may be loaned to readers in some
libraries. The technique for circulation is usually the same as for lending books.

The Serials Control module must provide the ability search for records by:

- Keyword search of every indexed bibliographic field
- Vendor
- Fund number
- Purchase order number
- Location
- System assigned number
- Bibliographic utility assigned number
The Serials Control module must detect and alert operator about duplicates between firm orders and subscription for monographs in series.

The journals and periodicals are the most difficult media for handling for a library. Since the journals do not have any specific periodicity and have many issues like the change of frequency, change of name, non-receipt issues. Serials control adheres to the standard MARC 21 Format for holdings Data and provides functionality for the following tasks:

1. Creating and maintaining holding information
2. Checking in serials
3. Predicting issues
4. Creating routing list
5. Producing reminders
6. Producing and transmitting claim.

![Structure of Serial](image)

Fig 3.1 Structure of serial

(Library automation for 21st century by Aswal, R. S)

### 3.5 Serials control procedures

Record keeping represents a major component of serials processing. Important files for serials automation include bibliographic, holdings, order, vendor, binding, claims, check-in, and fund accounting records, and currency conversion. An
automated serials system offers the advantages of greater speed, accuracy, efficiency, and the ability to provide new services.

An early impetus to library automation was the desire to reduce staff and increase savings, although it is doubtful that automation results in either. An automated serials system can generate data that are quite useful in collection management, especially in the areas of macro evaluation and budgeting. A report of serials expenditures by subject or department in a series of previous fiscal years can assist in reaching or evaluating such budgeting issues as the overall serial budget's division among subject areas, the proportion of departmental materials' expenditures devoted to serials, and the projection of budgetary requirements for forthcoming fiscal year. As a downside, it can sometimes be difficult to extract the needed data from the system or customize it to your library's particular needs. Data from serials subscription agent may be limited to the library's subscriptions with that agent.

An automated system can be quite expensive and considerable staff time and effort is required to implement it. Vendors may advertise automated products it are not fully developed. An automated system has a finite life expectancy-often estimated at five to seven years. Most present serials control systems are tied to the traditional ownership paradigm and are geared to ordering, claiming, checking-in, etc. serial titles that will be housed in the library's collection rather than handling electronic journals or document delivery of articles. There may be unforeseen and unintended consequences.

Decision to automate a serials department may be taken for a variety of different reasons, although most will be based upon financial considerations. It may be that the manual system is no longer considered to be an efficient or effective method of dealing with the growing complexities of the collection and the current requirements of collection management and development policies.

Alternatively, the introduction of a new integrated library system might be the
first realistic opportunity to introduce all automated serials control system. Whatever the background, it is essential to ensure that the system will contribute to improved performance in achieving organisational, library and departmental objectives. The overall objective of the serials department IS to ensure, on continuing basis, that the serials collection is relevant and reflects the needs of, the user community. It is important to recognise that the introductions of an automated system will not only have a major impact upon the organisation of specific staff duties and tasks. It will also affect the organisational structure, policies and procedures. If the library has decided to implement a large scale integrated library system then it is usual to appoint a project team with designated project co-ordinator. The project team will comprise individuals drawn from each of the library sections to be affected by the new system. Serials librarians should therefore be involved in project development from the very early stages.

In smaller libraries, where it is more likely that a stand-alone serials control system will be chosen, the librarian responsible for serials acquisition and management might liaise and consult with senior management on a more informal basis. Regardless of the type of library and the type of system chosen it is important to achieve the correct balance of staff consultation and participation. If planning activities are shrouded in secrecy then speculation, resentment and defensiveness will occur. Such negative attitudes do not bode well for the successful implementation of the project.

Factors relating to the physical environment also need careful consideration during the planning stages. These include the layout of the new work areas and workstations, provision of power points and lighting, noise levels, temperature and humidity, and ergonomic and visual consideration for staff working for prolonged periods with visual display units (VDUs).

The functions that an individual library will require in an automated serials system will vary according to the type of library and the range and scope of its serials collection. The first step is to draw up a detailed operational specification of all the desirable features required in the new system.
The benefits of producing such a document are twofold. Firstly, it is an opportunity to involve all serials staff in the system design at an early stage and to utilise their various areas of knowledge and expertise. Secondly, the document will act as a detailed checklist which can be used when viewing potential systems and talking to suppliers. It is possible to automate a wide range of serial control functions; the following list gives some indication of the options available to libraries:

- Check-in
- Claiming
- Routing
- Binding
- Ordering and subscription renewals
- Financial control
- Management
- Union lists
- On-line user access
- Circulation.

Whilst compiling the system specification, it is also essential to give careful consideration to the bibliographic database. Building an accurate and dependable database represents a considerable financial investment in terms of staff time. If properly constructed, the bibliographic database may prove to be the most lasting component of an automated serials system. A number of publications exist staff training, but, where an integrated library system is being introduced, also user training.

Training programmes are an essential feature of the smooth transition from manual to automated systems.