Electronic Data Processing

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ELECTRONIC data processing is of recent origin; it refers to a series of operations necessary to convert data to information. Data are raw materials and information is the output. Information is an essential ingredient of decision making which is needed by every administrative and managerial function in taking decision. Various types of data processing were in vogue before the advent of electronic computer. The computer made the data processing a complete system accepted everywhere because of its highest economy due to its speed and accuracy. I may quote Burian and Fink who wrote in their book, Business Data Processing "Industrial revolution transformed the European economy by allowing articles to be manufactured at faster rate and hence, at a much lower cost per unit made by hand, similarly modern electronic computer by performing logical and arithmetic operation at a much faster rate than can be accomplished by hand reduces the cost per unit of computation". This is possible as a modern computer can read 800,000 characters (latter or digit) of input data in a second and it can perform 5000,000 arithmetic calculations in a second. Let us analyse know-how much time the computer requires to do a particular processing work with reference to the BUET computer which processes data in all fields.

Now a days data processing is applied not only in business industry government and education but also in library and information centre. In fact an electronic computer entertains any data in any field, if designed for a particular information. Data actually includes any figure, facts letters words charts symbols maps that represent an idea, object condition or situation.

In the present context the library data processing is referred which is quite new in this country. As the library and information systems of Bangladesh are not mechanised and as quick and correct information is always necessary to take correct decisions in development works, it was felt indespensible to computerise the library and information system. With this end in view various test programmes were successfully completed in the BUET computer. Here a few examples of those works are cited in order to show how maximum library economy (national economy) can be obtained.

It is not only the BUET library in Bangladesh which spends lakhs of Taka every year to acquire books and journals, there are other university and Government libraries each of which also spends almost similar amount. It is not out of place to mention that acquisition of library materials is a difficult work. As the cost of foreign books and journals is very high without any economic process in spending huge revenue in this field there may be a great national loss. So electronic acquisition system can help build an ideal library as well as saves a national loss. From this system the following advantages are available.

1. Addition of prices to sum prices and sum prices to total prices from unit cost are quickly possible.

2. Alphabetical lists on author title and publisher may be printed, which may enable the selectors and the users of the system to obtain different information, say it can help find out the existing copies if adjusted with the master data base.

3. No accession or stock register needs to be separately prepared; it may be prepared from the acquisition data. It may be mentioned that the foregin book sellers sent their invoices in computer printer. An example of BUET data processing is cited here. An acquisition file of nine data records each being of 160 characters on 11 fields was processed. In this file computer was instructed to prepare an order list with main heading and sub headings. The output was printed in one minute fifty seconds on 132 characters printer.

Electronic data retrieval system can save the valuable time of readers by giving quick reply to his inquiry about books. Three examples are cited in this connection. An inquirer asked the computer whether a particular author is available. The computer printed the desired author's name in one minute and forty three seconds. Secondly, he asked whether the particular subject is available the computer printed that subject with four different authors in 1 minute and 29 seconds. Thirdly he asked whether a particular title is available, the computer printed the same title in 3 minutes and 16 seconds. There were 12 data records each being of 80 characters and the printer is of 132 characters.

Eletronic data sorting is a wonderful job. In library sort work is very essential. It is needed in updating issue records and catalogue cards of different types. It can sort alphabetically or numerically either on ascending or dessending order. An example of sorting is also cited here. The BUET computer sorted 1640 titles on ascending order in less than 4 minutes. All the records were of 80 characters. It is quite incredible in manual sorting. So electronic data sorting is a great boon to the library for saving national economy.

It may be noted that in advanced countries various types of computers are being used in processing day-to-day business transactions in the form of data. Bangladesh being well aware of the importance of computer service should not lag behind the developed nations. Sooner the introduction of computer takes place in major fields of significance particularly in big libraries and information centres, better for the country to progress in national life with greater economy.