INTRODUCTION

It is important to distinguish between data and information. Data is a raw fact and can take the form of a number or statement such as a date or a measurement. It is necessary for business to put in place procedures to ensure data are recorded. To ensure a call centre operator includes the postcode of every customer this can be written into their script and a validation check performed to check these data have been entered into the System.

A Common definition of information is that it is data that have been processed so that they are meaningful. This requires a process that is used to produce information which involves collecting data and then subjecting them to a transformation process in order to create information.

As stated information is generated through the transformation of the data. This can be achieved using a number of different transformation or data processes. Some examples of data process include aggregating which summaries data by which means as taking an average value of a group of numbers. Classification places data into categories such as on time and late deliveries. Sorting organizes data so that items are placed in a particular order. Calculations can be made on data such as calculating an employees pay by multiplying the number of hours worked by the hourly rate of pay. Finally data can be chosen based on a set of selection criteria, such as the geographical location of customers.

Although information is an useful resource for individuals and organizations not all information can be considered useful The differences between good and bad information can be identified by considering whether or not it has some or all of the attributes of information quality. Attributes can be related to the training, content and form of the information.

Timelines refers to that the information should be available when needed. If information is provided too early, it may no longer be current when used. If the information is supplied too late, it will be of no use. Also the information should cover the correct time period. A Sales forecast,
for example, might include information concerning past performance, current performance and predicted performance so that the recipient has a view of past, present and future circumstances. The content of the information refers to factors such as the accuracy of the information and relevance of the information to a particular situation and user. The form of the information refers to aspects such as the clarity of the information which should be appropriate to the intended recipient. The recipient should be able to location specific items quickly and should be able to understand the information easily. The information should also should contain the current level of details in order to meet the recipients information needs.

**Defining Systems**

A system can be defined as a collection of components that work together towards a common goal. The Objective of a system is to receive inputs and transform these into outputs. In the previous section “defining data and information” the use of a transformation process was used to explain how data is converted into information. Not every system has a single goal and often a system contains several subsystems with sub goals, all contributing to meeting the overall system goal. It can be seen that in systems data are used as the input for a process that creates information as an output. In order to monitor the performance of the system, some kind of feedback mechanism is required. In addition, control must be exerted to correct any problem that occur and ensure that the system is fulfilling its purpose. There are thus five components of a generic system in terms of input, process, output, feedback and control.

**Introduction to Business Information Systems**

When beginning the study of the use of information systems (IS) in business, it is important to understand a number of concepts drawn from a variety of different fields. In order to create, improve and manage business information systems (BIS), one must combine an understanding of information, systems concepts, business organizations and information technology (IT). In addition to explaining basic terms and concepts, The role of BIS in transforming organizations through the application of electronic commerce and electronic business. Understanding the terms and components that define IS is necessary in order that business users can communicate with
the IT suppliers building and maintaining their systems. All systems involve transforming inputs such as data into outputs such as information by a transformation process.

Information systems are the means by which organizations and people, using information technologies, gather, process, store, use and disseminate information. In simpler terms, a business information system can be described as a system that provides the information needed by managers to support their activities in achieving the objectives of a business. A computer-based information system can be described as an IS which uses information technology in the form of hardware, software and communications links. The term ‘information and communications technology’ (ICT) is often used to emphasize the growing importance of communications technology such as local area networks and the Internet.

Data and Information

Much of a manager’s work involves using information to make decisions and ensuring information flows in an organization are efficient. Increasingly, this information is captured in digital form by BIS and is shared throughout the organization and beyond. Many organizations are active in learning how best to use this information to achieve competitive advantage.

Data

Data are raw facts or observations that are considered to have little or no value until they have been processed and transformed into information. A single piece of data is called a datum. Unrelated items of data are considered to be essentially without meaning and are often described as ‘noise’. It is only when data have been placed in some form of context that they become meaningful to a manager.

There are several definitions for data that are in common use:

(a) A series of non-random symbols, numbers, values or words
(b) A series of facts obtained by observation or research and recorded
(c) A collection of non-random facts
(d) The record of an event or fact
Data can exist naturally or can be created artificially. Naturally occurring data need only to be recorded. Managers have to put in place procedures and tools to ensure data are recorded. For example, to ensure a call centre operator includes the postcode of every customer this can be written into their script and a validation check performed to check these data have been entered into the system. Artificial data are often produced as a by-product of a business process. Processing an organization's accounts, might produce the number of sales made in a particular month.

**Information**

As with the concept of data, there are several definitions of information that are in common use:

(a) Data that have been processed so that they are meaningful
(b) Data that have been processed for a purpose
(c) Data that have been interpreted and understood by the recipient.

Three important points can be drawn from these definitions.

This process involves collecting data and then subjecting them to a transformation process in order to create information. The concept of a transformation process will be discussed in more detail in the next section. Secondly, information involves placing data in some form of meaningful context, so that they can be understood and acted upon. Thirdly, information is produced for a purpose, to serve an information need of some kind.

The concept of an information need is described in more detail later on. A somewhat different view of information can be examined by introducing an additional definition:

Information acts to reduce uncertainty about a situation or event. Although uncertainty can never be eliminated entirely, it can be reduced significantly. Information can help to eliminate some possibilities or make others seem more likely. Managerial decision making can be improved by using information to reduce uncertainty. Information is said to influence decision behavior, the way in which people make decisions. Managerial decision making is dealt with in more detail in a later section.

- Involves transforming data using a defined process;
Creating Information
A number of different data processes can be used to transform data into information. Data processes are sometimes also known as ‘transformation processes’. The next section describes a range of common data processes

Data Process
- Classification. This involves placing data into categories, categorizing an expense as either a fixed or a variable cost.
- Rearranging/sorting. This involves organizing data so that items are grouped together or placed into a particular order. Employee data, for example, might be sorted according to surname or payroll number.
- Aggregating. This involves summarizing data, for example by calculating averages, totals or subtotals.
- Performing calculations. An example might be calculating an employee’s gross pay by multiplying the number of hours worked by the hourly rate of pay.
- Selection. This involves choosing or discarding items of data based on a set of selection criteria. A sales organization, for example, might create a list of potential customers by selecting those with incomes above a certain level.

It is worth noting that any action that serves to place data into a meaningful context can be considered a valid data process. In addition, several processes may be used in combination to produce information.

Value of Information
It is often possible to measure the value of information directly. The tangible value of information is often measured in terms of financial value. An example might be the use of inventory information to improve stock control procedures. A simple calculation can be used to determine the value of a given item or collection of information:

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\text{Value of information} = \frac{\text{Cost of gathering information}}{\text{Value of information}}
\]

It is not possible to calculate the value of information directly. Although it is certain that the information is of benefit to the owner, it is difficult – or even impossible – to quantify its value. In such cases, the information is said to have intangible value. A good example might involve attempting to measure the extent to which information can improve decision behaviour.

Improvements in decision behavior

Cost of gathering information

There can be little doubt that the ability to make better decisions can be of great value to any organization. However, one cannot readily quantify any improvements in decision making since a large number of other factors must also be taken in account.

**Sources of Information**

BIS should support both formal and informal communication. Formal communications can include reports and accounting statements. Informal communications can include conversations and notes.

**Formal Communication**

Information transmitted by formal communication tends to be presented in a consistent manner. Company reports, for example, will often use the same basic format. This allows the recipient to locate items of interest quickly and easily. Since formal communications tend to be presented in a more structured manner, they are also more likely to present a more comprehensive view of the situations or circumstances they describe. In addition, the information transmitted in this way is likely to be accurate and relevant, since it is normally created for a specific purpose.

Formal communication also has several disadvantages. The structure imposed on information is often inflexible, sometimes limiting its type, form and content. In addition, formal communications often overlook information obtained by informal means. This can affect the
decision-making process, reducing the quality and accuracy of any decisions made. Finally, formal communications often ignore group and social mechanisms. A formal report, for example, might marginalize or ignore staff opinions, causing offence and leading to reduced morale.

**Informal communication**

Informal communication is always present in an organization, regardless of its size or nature. Information of this kind can be considered a valuable resource and one of the aims of knowledge management (described later in this chapter) is to harness it to work for the benefit of the organization. Perhaps the most common means by which informal communication takes place is by word of mouth. This kind of communication is sometimes known as water-cooler conversation. In a sales organization, for example, a casual conversation between a salesperson and a client might yield information that can be used to enhance a product or find new ways of making it more attractive to customers. If this information is not recorded the feedback will not be available to the new product development group. Informal communication tends to offer a high degree of flexibility since there is more freedom to choose how information is structured and presented. Information obtained in this way also tends to be highly detailed, although it may often contain inaccuracies and may not be entirely relevant.

The scope of information obtained in this way is often very narrow, relevant only to localised problems and situations. However, even at a local level, this can improve problem solving and decision making since it allows managers to gain a more detailed and in-depth understanding of a given situation. One of the major disadvantages of informal communication is that it cannot deal with large volumes of information. Furthermore, as a means of communication, it is relatively slow and inefficient. Informal communication can also be highly selective, for example a person taking part in a conversation may be able to restrict what information is transmitted and who is able to receive it.

**Accounting Information Systems**

Managerial decision making normally relies upon an effective information system. At present many firms are using accounting software to prepare accounting reports very quick, perfectly and
in right time. Accounting Information Systems are most common information systems utilized in business, while it was previously paper-based process; hence, there is a greater scope for AIS in the present context as it plays a pivotal role in business as the management of such businesses takes decisions relying upon AIS. AIS are a perfect tool of information provisioning the environment for decision making and also eliminate the paper work as well as reduce the cost very significantly.

Information Technology Enabled Services (ITES) are ruling the world business activities. After the globalization the need for accounting information system rapidly increased a lot. The Financial Accounting Package Revaluation started in the late 80's India's software market was in it's infancy and the demand for personal computers was low and when duties on software imports were high. At present because of ITES (Information Technology Enabled Services) Business practices are carried out across the globe. This raises the need for AIS becomes necessary for all the business organizations to maintain accounts in a Systematic, way and with-out delay.

**History of Accounting**

Accounting is the language of any business enterprise. In the olden days barter system was practiced by the business people and goods were exchanged for goods. Hence, there was no need to maintain any accounting system; there after Koutilya in his book “Arthasastra”, he mentioned that there is a need for money value to measuring the exchanged value of goods. After that, goods are valued in terms money.

The accounting systems are believed to have existed as early as 4500 B.C., in the ancient civilizations. The double entry of today was propounded first in Italy in 1340. At that time, this system was used by stewards of the t city for rendering accounts to state governing authorities. Though the system of Double- Entry Book- Keeping was used earlier too but it developed in a proper form only at the end of 15th century. Though the system of accounting was developed first in Italy but it was in England and Ireland that it grew to its full stature. During the next three centuries, the accounting system was simplified through a number of treatises written from time to time.
**Need for Accounting Systems**

At present many firms are using accounting software to prepare accounting reports very fastly, perfectly and in right time, Double entry accounting system started with manual accounting maintained by several employees within organization. It requires a lot of manpower, stationery and time consuming, in this system there are several problems like it is a paper based system, delay in finalizing transition, higher labor cost, uncertainty of events, costly affairs and error prone.

In view of the problems associated with double entry accounting system, the accounting software systems were developed as auxiliaries to accounting. Indian traders have made a mark in the software space, pertaining to Financial Accounting. Normally at the beginning of the fiscal year, Corporate and even salaried individuals run around frantically looking but for investment options which will help them save a significant part of their hard-earned revenues or incomes from the taxman's net. Though charted accountants are in heavy demand during these taxing times, Information Technology has ensured that even individuals can calculate taxes on their own. As almost all organizations need a financial software package to manage their accounts and calculate tax of their employees to be deducted at source, the demand for Financial Accounting Packages picks up during this period.

The problems of accounting packages those are a majority of users in Small and Medium Enterprises sector use stand alone packages that are home grown or low-end products with limited functionality and reporting capability. SME's look for solutions which integrate with inventory, purchase and sales departments. But however, they have recently stated realizing the need for integrated solutions and therefore a great demand for complete finance modules of standard ERP products.