## Data Why it is Important

By **data**, we mean known facts that can be recorded and can be interpreted to provide information. Data alone has no significance, but once interpreted and suitably correlated, it provides information that allows us to improve our knowledge of the world. For example, the *string* ‘John Smith’, and the *number* 2254, written on a piece of paper, are two pieces of data that are meaningless by themselves. If the sheet is sent in response to the question ‘Who is the head of the department and what is his telephone extension?’, then it is possible to interpret the data and use it to enrich our knowledge with the information that John Smith is the head of the department and that his extension is 2254.

In many applications, data is intrinsically much more stable than the *procedures* that operate upon it. Let’s consider the data relating to bank applications. Queries about the availability of funds on credit cards can be asked through simple devices located in shops, hotels, or companies which allow purchases made anywhere in the world to be charged to the credit card owners. The data involved in these applications has a structure that has remained virtually unchanged for decades, while the procedures that act upon it vary continually, as every customer can readily verify. Furthermore, when one procedure is substituted for another, the new procedure ‘inherits’ the data of the old one, with appropriate changes. This characteristic of stability leads us to state that data constitutes a resource for the organisation that manages it, a significant heritage to exploit and protect.