



# COMPUTERS FOR LOG TRANSPORT

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## **INTRODUCTION**

Computers in the workplace are becoming more common. Many of the bills you and your Company receive will have been processed using a computer. Do these modern business machines have any place in your log transport business? Will a computer system save you money or only cost you money? The answers depend on how well you evaluate your needs and how well you manage your business now and in future.

This Report examines the steps to follow to evaluate the place of a computer system in your office. It is intended to bridge the information gap between computer sales people and owners or managers of a log transport operation. The objective is not to force computers on people, but to enlighten them on what is available. A properly implemented computer system will provide useful management information quickly. It should have a noticeable affect on the day-to-day running of a log transport operation.

## **TERMINOLOGY**

An understanding of the common terms is required. A number of useful guides (Ref. 1) which may contain a complete glossary are available from bookstores.

The basic terms needing explanation from the outset are as follows :

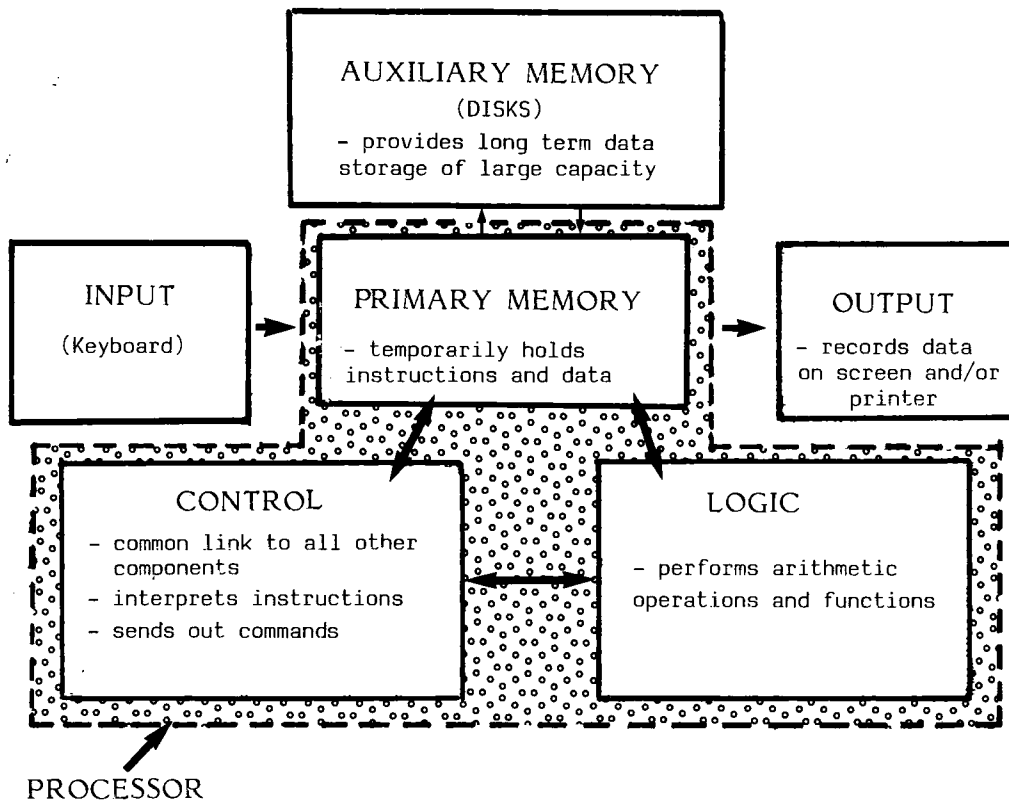
*Hardware* - this refers to the physical equipment or components which make up a computer, e.g. computer, printer, screen, etc.

*Input/Output devices* - for the applications considered here, the keyboard is the main input device and the screen (visual display unit, VDU) or printer are the output devices.

*Processor* - this is the electronic unit which carries out the instructions contained in a program. It also controls the other components of the computer. (central processing unit, CPU). It is the "heart" of the computer.

*Storage* - There are two information storage or memory areas in most systems. The "primary memory" is where the information is stored temporarily while the system is being used. It is contained within the computer terminal itself and has a limited capacity. The "auxiliary storage", the long term memory, is commonly contained on magnetic disks (floppy or hard). All business microcomputers require both types of memory facilities. For auxiliary storage, the decision between using floppy or hard disks will depend on the office conditions and the particular application.

*Software* - "Software" refers to the programs (sets of instructions) and data (information) which command the computer system to perform various calculations and functions. Programs can be written in any one of a number of computer languages, e.g. BASIC, COBOL, PASCAL. The language used depends on the applications. Most computer systems can be operated using a number of different languages but the purchaser must investigate the options before buying.



*Figure 1 - Functions within a computer system*

One further term which requires explanation is "BYTE". It is just a basic unit of information, and is equivalent to one letter or number. One typewritten page of information contains approximately two to four thousand bytes ("kilobytes", Kb) of information. The power or capacity of a computer system is expressed as the number of kilobytes of information it can handle, e.g. 64 Kb, 256 Kb.

Before assessing a computer system, a more complete knowledge of terms is necessary. This can easily be picked up from books, computer consultants, or salespeople. (Warning - occasionally computer people will ramble on in incomprehensible computer jargon!).

### **WHAT CHOICES EXIST?**

In choosing a computer system, there is a logical method to follow. Software is the first decision to be made. Here the options are between having a custom program written for your needs or buying a standard software package. A custom program will most likely be uneconomical unless the firm is managing a large number of trucks, e.g. more than 30-40. For most applications in a small- to medium-sized firm, either a set of standard accounting packages or a standard transport package will suffice. If necessary, some minor program modifications can usually be made once the system is in operation. However, the matter does warrant close investigation. It pays to check with other operators who are already using a computer system for log transport management for their opinions.

### **CHOOSING YOUR FIRST SYSTEM**

Unless you have plenty of experience with computers, you will need to enlist the help of others in outlining your needs and making the proper choice from the many systems available. These may well include your accountant, a computer vendor, your manager (wife?), and possibly a consultant. If you plan to use a consultant, select them carefully, based on :

- experience (not less than five years)
- qualifications (formal, either in commerce or computing)
- competence (based on contact of previous clients)
- independence from computer hardware suppliers

In the final analysis, the consultant's ability to understand the specific needs of your business may well be the deciding factor.

### **REQUIREMENTS STUDY**

To gain the benefits of computers, it is not necessary to purchase a complete unit yourself. If your needs are small and there are services available through either sharing a computer or buying time on one from a bureau, then these may well be suitable options. However, for log transport management, factors such as information privacy and the requirement for daily data entry may lean you towards an individual system for your business. This is the option which we will explore further.

A detailed study of your requirements is then necessary to evaluate software packages whether they are standard or custom-built.

For a company running a small number of trucks, the following information can be handled by computer :

#### Daily information

- driver's time sheets
- truck work (trip distances, payloads, rates)
- fuel and oil consumed
- travel distances : on and off-highway
- repair and maintenance details (costs, parts, time)

#### Fortnightly information

- wage calculations
- cash flow analysis

#### Monthly information

- truck earnings summary
- fuel, oil consumption summary
- parts cost summary
- tyre repairs cost summary
- road user charges purchase requirements
- invoices, statements to pay
- truck/trailer usage report

Some operators may argue that much of the monthly information listed above is not necessary or is not worth the time needed to analyse it. However, others will realise that :

- (1) All records cannot be kept in one's head
- (2) Relying solely on debtors and creditors information can result in incorrect payments or charges
- (3) Rising costs at today's interest rates require close attention
- (4) Less time spent on tedious wages work and other repetitive calculations leavestime for more important work (e.g. checking specific tyre costs, wear rates, changes in fuel consumption, etc.).

## **A TYPICAL SYSTEM**

One standard transport computer system commercially available is known as "TRANSPACK". This is a fully integrated Management Reporting and Accounting system. It is designed especially for the transport industry. (Note that it is quoted as an example of such a special purpose system. LIRA does not necessarily endorse its use over other systems).

The system consists of several interconnected modules, including :

- Accounts receivable (debtors)
- Accounts payable (creditors)
- Wages
- Vehicle costing and analysis
- Docket processing
- Road user charges
- Private ledger

The information is entered into all appropriate modules in the system from daily driver's sheets by entering it only once. Any aspect of the business can be looked at by selecting a module to be either displayed on the screen or printed out.

This system, with a capacity of 256 Kb, will handle transport operations up to 100 trucks and trailers, and costs approximately \$16,000 for all the software, hardware, and training. Small "home" computers with limited capacity (64 Kb) can be bought for \$2,000 to \$3,000. However, this would not include software and there are no suitable software packages available for those home systems at present. Having your own software written for you can easily cost a lot more than the computer itself.

## **CONCLUSIONS**

Computer systems can be of great assistance in helping you manage your log transport business more effectively. Sending out invoices sooner and knowing what bills to pay and when, buying RUC's, etc. will improve your cash flow. They will give you more accurate and faster feedback on your operations than most "seat of the pants" methods. Knowing what your rig costs per km, per tonne, or per hour will help you make better decisions.

However, there is only one sure way to approach the situation. Be informed of the options and the problems. Be fully committed to giving computers a fair go if you decide to proceed with a system. Make the decision a well managed one by doing a complete study of your requirements first.

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### Relevant courses :

- (1) "Micro-computers for Managers". A one day course put on by the N.Z. Institute of Management, Auckland.
- (2) Introductory computer courses put on at your local Community College.

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### References : (available on loan from LIRA's library)

- (1) Mitchell, K.I., Clarke, B.J., "Choosing your First Computer System", Wellington, Pitman Publishing N.Z. Limited, 1983.  
Frates, J., Moldrup, B., "Introduction to the Computer", Englewood Cliffs, N.J., U.S.A., Prentice Hall Inc., 1980.

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