FACSIMILE

1.13 DESCRIPTION

Facsimile (FAX) is a method of transmitting and receiving written messages, printed text, maps or drawings, over Telecom telephone lines. Its operation is similar to that of a photocopier, where minimal operator expertise is required.

1.14 SYSTEM

Fax transmission utilises the Telecom telephone system and is therefore subject to disruption especially in disaster-affected areas. Under normal circumstances fax transmissions are made one at a time, but systems are available that provide for the multiple simultaneous transmission, eg 'Faxstream'.

1.15 COPY LIFE

The reproduced document is subject to deterioration. If, long term retention is required, consideration should be given to plain paper copying of the facsimile.

1.16 Proof of the transmission may be provided to both, the originator and the receiver.

Figure 1:5
Facsimile Machine

TELEX

1.23 Telex is a medium for transmitting and receiving messages in typed form only and unlike basic Facsimile is capable of transmitting to one or more addressees simultaneously. It uses dedicated Telecom lines and is less likely to suffer congestion. However, a trained operator (typist) is required. An extensive network exists in Australia, and should not be overlooked by emergency service personnel.

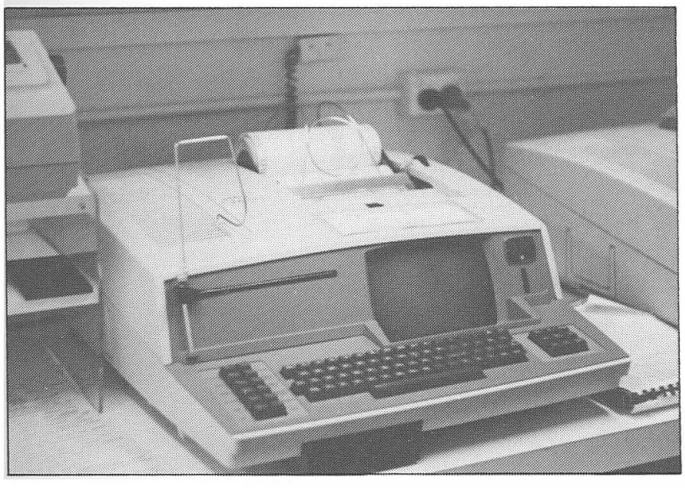

Figure 1:6
Telex Machine

DATA TRANSMISSION

1.24 Data transmission is a method whereby information can be exchanged at variable speeds, utilising two or more computers. Interconnection between units may be via specialised links for short distances, or by Telecom networks for longer distances. A trained operator is required.

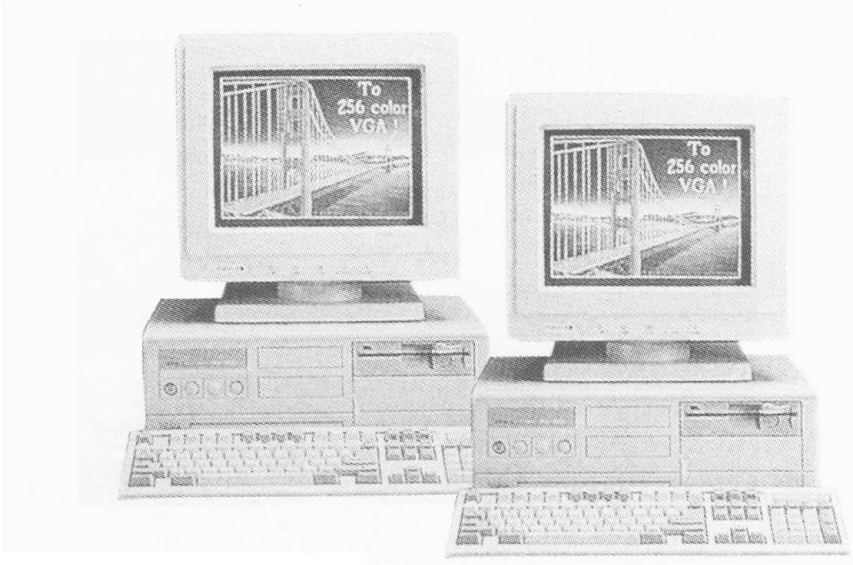

Figure 1:7
Personal Computers

PAGERS

1.25 Pagers are inexpensive, personal, 24 hour communication devices which can be carried by an individual. They provide one way communication from a central dispatch point to the pager concerned and can be used to contact individuals or groups remote from telephones, at short notice. The message transmitted may consist of voice, numbers and letters (alpha-numeric) or a tone which requires a predetermined response. Tone, voice or alpha-numeric pagers do not necessarily verify the receipt of the message.

Figure 1:8
Alpha-Numeric Personal Pager

SATELLITES

1.26 LONG RANGE COMMUNICATIONS

Communications Satellites offer users the ability to communicate over long distances on high quality circuits. Unlike High Frequency (HF) radio, these circuits are not subject to fading or disruption from ionospheric effects. A parabolic dish antenna is used to beam the signal up to the satellite which then relays the signal back to earth where it is received by another dish antenna. Geostationary satellites orbit the earth at the same speed as the earth, and are located approximately 36,000 kilometres above the equator. This distance causes a delay in the communications path of about 0.3 seconds which needs to be considered.

1.27 VERSATILITY

Earth antennas are normally fixed, but can be made transportable to permit high grade communications from remote areas. Some expertise is necessary to establish these stations. Satellites are capable of voice, facsimile, video and data transmission. However the cost of satellite communications and their vulnerability (due to loss of the satellite) indicate that terrestrial communications systems will have a role for many years.

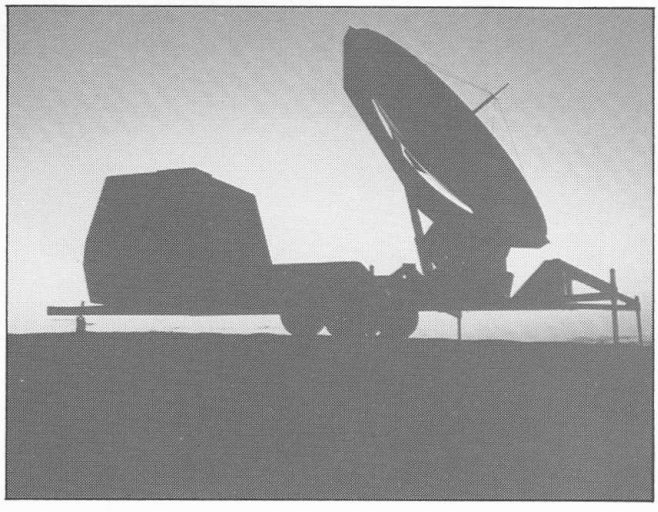

Figure 1:9
Satellite/Earth Station