



**An Introduction
To
Telecommunications**

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An Introduction To Telecommunications

There are 2 methods of communicating with computers on remote sites:

- Modem
- ISDN

Modems

Modem stands for Modulator/Demodulator, this is the converting of digital signals from the computer (modulates), into a series of bleeps, that will transmit into sounds down the telephone line. A modem on the remote computer translates (demodulates), them back into digital signals which can be 'read' on the computer. Most computers have modem cards fitted inside the computer as standard.

Modems come in various speeds, but for sending graphic files the fastest needs to be considered.

The main use of modems is for using the internet. The internet uses host computers scattered around the world to relay information between the sender and the receiver. To connect to the internet an Internet Service Provider (ISP) is required. The ISP will provide connection software and a telephone number.

The simple way of sending or receiving files is by attaching the file to an email. A message is created and the file is imported into the email. This is known as an 'attachment', which can be a QuarkXPress, PageMaker, Illustrator, Photoshop or PDF file.

Attachment files should not be bigger than 2MB, as it can slow down the modem.

ISDN

ISDN stands for Integrated Services Digital Network. This is an upgraded version of the ordinary telephone network, which allows both ordinary phone services and data to be sent at much faster speeds. Typically ISDN will be 5-10 times faster than a modem.

To use ISDN a special line needs to be installed, this in fact is 2 lines in one box. An ISDN card is required in the computer, this plugs into a PCI slot. Software is required to manage the sending and receiving of data. Files can be transferred at speeds of 1MB per minute if both channels are used at once.

Channels can be used separately - one to send and the other to receive files. Plug-ins are available for the main graphics programs so that files can be sent from within PageMaker and QuarkXPress.

It is recommended that file size should not exceed 40MB.

QUESTIONS ON TELECOMMUNICATIONS

- (1) Name the two methods of communicating with computers on remote sites ?
- (2) Describe how a modem works?
- (3) What is the main use of a modem?
- (4) What is required before a computer can be connected to the internet?
- (5) What is an 'attachment'?
- (6) State the largest size file that can be used as an attachment?
- (7) What is the main advantage of a ISDN network?
- (8) How many lines on a conventional ISDN network?
- (9) What needs to be installed in a computer to send and receive data using the ISDN network?
- (10) State the largest size file that can be sent on an ISDN line?