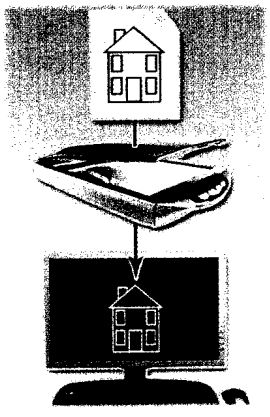
5 Input devices: the eyes of your PC

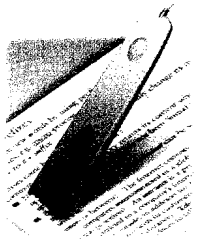
A Scanners

Input devices such as scanners and cameras allow you to capture and copy images into a computer.



A **scanner** is a **peripheral** that reads images and converts them into electronic codes which can be understood by a computer. There are different types.

- A **flatbed** is built like a photocopier and is for use on a desktop; it can capture text, colour images and even small 3D objects.
- A **film scanner** is used to scan film negatives or 35 mm **slides** – pictures on photographic film, mounted in a frame.
- A **hand-held scanner** is small and T-shaped, ideal to capture small pictures and logos.
- A **pen scanner** looks like a pen; you can scan text, figures, barcodes and handwritten numbers.



A pen scanner

Barcode scanners read barcodes on the products sold in shops and send the price to the computer in the cash register. **Barcodes** consist of a series of black and white stripes used to give products a unique identification number.

Barcode and reader

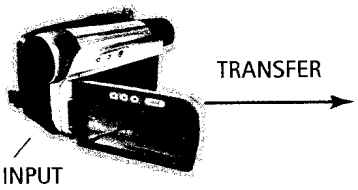
The **resolution** of a scanner is measured in **dpi** or dots per inch. For example, a 1,200 dpi scanner gives clearer, more detailed images than a 300 dpi scanner.

Most scanners come with **Optical Character Recognition** software. OCR allows you to scan pages of text and save them into your word processor; they can then be edited.

B Digital cameras

A **digital camera** doesn't use film. Photos are stored as digital data (bits made up of 1s and 0s), usually on a tiny storage device known as a **flash memory** card. You can connect the camera or memory card to a PC and then alter the images using a program like Adobe Photoshop, or you can view the images on a TV set. Many printers have a special socket so that you can print images directly from a memory card or camera.

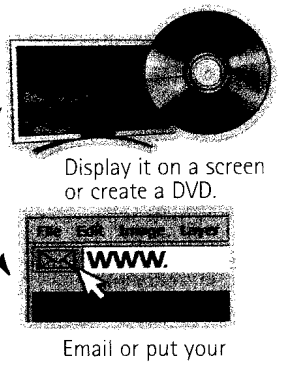
C Digital video cameras and webcams



INPUT
A **digital video (DV) camera** records moving images and converts them into digital data that can be processed by a PC.

PROCESSING
You can manipulate video images with **video editing software**. You can cut, paste, add effects, etc.

OUTPUT
You can store or export the result.



Display it on a screen or create a DVD.

Email or put your movie on the Web.

Webcams (short for Web cameras) let you send and receive live video pictures through the Internet. They're primarily used for **video conferences** – video calls – but they can be used to record photos and video onto your hard disk.

The resolution of webcams is expressed in **megapixels** (million pixels). Webcams connect to the PC via a USB (universal serial bus) or FireWire port; they display video at 24 to 30 **frames** (pictures) per second. Some include a **headset** with a microphone and earpiece.