EYES OF A COMPUTER

Scanners

- A scanner ´sees´images and converts the printed text or pictures into electronic codes. Thus the computer can understand the texts or pictures.

- When you have a flatbed colour scanner, you put the paper with the image face down on a glass screen. It is similar to a photocopier. Under the glass you can find the lighting and measurement devices.

- When the scanner is activated, it reads the image as a series of dots. After that the scanner generates the digitized image that is sent to the computer and stored as a file.

- The scanner operates by using three rotating lamps. Each of these lamps has a different coloured filter: red, green and blue. The three different separate images are combined into one by appropriate software.

- There are several ways of capturing an image on a computer. We can use a scanner, digital camera, camcorder, web camera or a camera phone.

Scanning the texts

- You can scan pictures as well as texts. For scanning the text, you need special software called OCR- optical character recognition. This interprets the text letter by letter and enables the computer to recognize the characters.

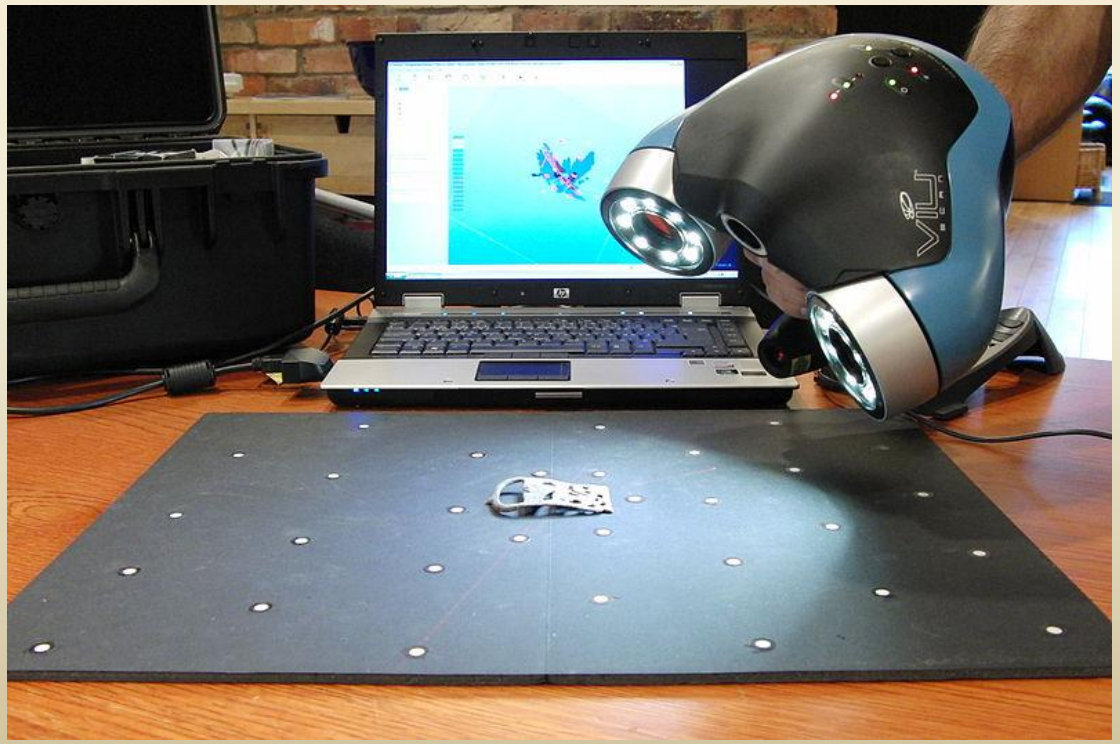
Types of scanners

- Flatbed scanners
- built like a photocopier
- for use on a desktop
- can scan text, colour pictures and even small three-dimensional objects
- are very convenient and versatile.

- **Slide scanners**
- used to scan 35 mm slides or film negatives
- work at very high resolution
- are more expensive than flatbeds.

- **Handheld scanners**

- are small, compact and T- shaped
- the scanning head is not as wide as the one in a flatbed
- can only copy images up to about four inches wide
- are used for capturing small pictures and logos



Digital cameras

- takes photos electronically and converts them into digital data (binary codes made up of 1s and 0s)

- doesn´t use the film which uses a traditional camera, but it has a special light-sensitive silicon chip

- photographs are stored in the camera´s memory card before they are sent to the computer

- some cameras can also be connected to a printer and you can print your pictures without using a computer

- you can also connect a digital camera to a TV and view your pictures on a TV screen

- some mobile phones have their own built-in camera

Camcorders

- records moving pictures and converts them into digital data that can be stored and edited by a computer with special video editing software

- are used by home users to create their own movies, or by professionals in computer art and video conferencing

- are also used to send live video images via the Internet (web cameras or webcams)

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