Digitization: Role and types of Scanner, Digital Camera & OCR

By Dr. P. S. Rajput

7/27/2021

Duplex Scanner

- Manufacturer: Fujitsu Limited, Tokyo, Japan
- Features: 600 dpi optical resolution, 100-page automatic document feeder, dual color CCDs (charge-coupled device) scan both sides of a page in one pass, scanning speed up to 80 ipm for monochrome at 200 dpi(Dots per inch)
- How we use it: high-speed scanning of books and documents that can be disbound



Flatbed Scanners

- Features: scanning area 12.2" x 17.2"; 2400 x 4800 dpi resolution; includes 12.2" x 16.5" transparency adapter; scanning speed at 2400 dpi,
- How we use it: scanning photographic prints, photographic negatives in sizes from 35mm roll film to large format sheet film, glass plate negatives, and large documents
- Manufacturer: Epson America, Inc., Long Beach, CA, affiliate of Seiko Epson Corporation



7/27/2021

Epson 4990 Photo/Pro Scanner

- Features: Scanning area 8.5" x 11.7"; optical resolution 4800 dpi; transparency adapter built-in lid with film holders for 35mm slides/film, medium format strips, and 4" x 5" film; 8" x 10" film area guide; scanning speed 12.3 msec/line (Mili second per line)
- How we use it: Scanning photographic prints, photographic negatives in sizes from 35mm roll film to large format sheet film, glass plate negatives, and documents

www.epson.com

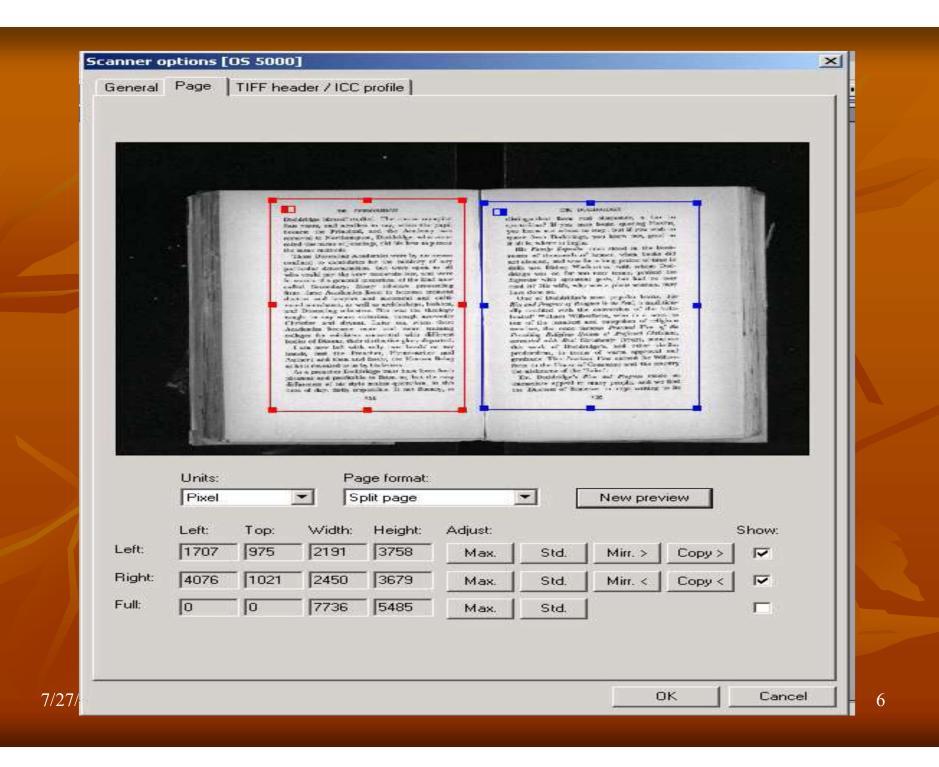


7/27/2021

Minolta Scanner

• One can use Minolta scanner for this purpose. The software generally used to scan the pages is ABBYY Fine Reader or Omni Scan. Using the software the scanning operate sets the various parameters for the scanning process such as 'dpi. Dpi or Dot per Inch specifies how many pixels in the scanned image will constitute in inch length in the actual page.





Barcode Scanner : Hand Held

These light weight barcode scanners are operated manually by firing a connected with computer generally trigger. It can be used in any area, where required scanning distance retail, libraries, service sector, courier industry, hospitals. These are most economical scanning option.



Camera: Canon



- Full-featured, compact 8.0 Mega pixel digital camera with a 12x Optical Zoom
- Canon Optical Image Stabilizer Technology and ISO 1600 for steady shooting
- Hot shoe adapter for the Speedlite EX Series external
 ^{7/27/}flashes

Camera: Canon

 Print/Share Button for easy direct printing and downloading, plus ID Photo Print and Movie Print with select PIXMA Photo Printers, Compact Photo Printers.

Shoot easy movies with movies capable of 30 fps VGA or 60 fps QVGA. Also a convenient to use Movie Button.

OCR (Optical Character Recognizer)

• It s method of converting print to digital.

 Optical Character Recognition, or OCR, is a technology that enables you to convert different types of documents, such as scanned paper documents, PDF files or images captured by a digital camera into searchable data.

 Two well known available OCR techniques are Xerox Texbridge and Caere's Omnipage incorporation technology.

The latest version of ABBYY Fine Reader supports Automated Tasks mode which is essential when you deal with routine tasks regularly.

OCR Process

- OCR (Optical Character Recognition) is the process of recognizing character from scanned document images. In this process, an image with textual content is read and the characters present in the text are output by the OCR software. Some important steps involved in ORC process are below:
- Scanning the document resolution has been fixed for text as 300 dpi whereas for table and image, the resolution is 600 dpi;
- Each table is marked as an image as OCR most often distorts table;
- The remaining document is OCRed and saved as Word document;
- Necessary corrections are performed such as spellings, special characters, color changing, layout of the text and references; and
- Each document is verified and passing quality is converted into PDF using
 Acrobat and other required format.

