

White Paper on

Non-destructive & High Resolution Scanning of

Large Number of Bound Publications

Introduction

This document discusses the techniques and tools required for executing projects which require non-destructive & high resolution scanning of large number of *bound publications* such as books.

Flatbed scanners : Unsuitable

Flatbed scanners are not suitable for scanning large number of books (with each book having hundreds of pages) due to following reasons:

- Extremely time consuming, laborious and tiring as book need to be lifted and turned upside down for every scan.
- The book can never be as flat as individual paper/document while scanning. Due to this, scanned pages contain curvatures due to binding at the center.
- Scanned pages are of unequal size due to human error in positioning book for each scan.
- The alignment of the content in scanned pages are incorrect due to human error in positioning book for each scan.
- Can damage binding and pages of old, precious books due to repeated flattening pressure on the book.
- All of the above problems result in low volume, poor quality scanned books.

Unbinding/rebinding of publication for scanning : Undesirable

Unbinding/rebinding of publication for scanning is not recommended for following reasons

- Unbinding (and rebinding after scanning) publication can damage/tear pages
- Once unbound, pages become loose. Loose pages can be misplaced, mixed with other book pages or lost. If there is only one copy of the publication, lost pages mean permanent loss of data!
- Unbinding and binding is time consuming and error-prone.
- If scanner with V-shaped cradle is used, there is no need to unbind pages for scanning. All pages inside the publication can be scanned perfectly without disturbing its binding. Please see details below for scanner with V-shaped cradle.

Desired Specifications : Scanners with V-shaped cradle

Desired specifications for large scale, non-destructive & high resolution scanning of books

- **V-shaped cradle:**
 - V-shaped cradle (book holder) and V-shaped transparent top perfectly flatten pages for accurate, curvature free scanning.
 - This V-shape also protects old, fragile books and pages as it eliminates pressure on the book binding.
- **High Speed Scanning:**
 - Able to scan 500+ pages per hour
 - Large volume of scanning can be achieved with minimum human efforts and stress.
- **High-Resolution dual camera setup:**

- Duel camera capture two separate pages at a time.
- High resolution cameras ensures accurate capturing of content (text and images) in finest details.
- **High quality, high precision scanning:**
 - Book position on the cradle maintained during scanning as it doesn't need to be lifted. This ensures high precision in scanning.
 - Distance between camera and pages remains constant for any page number. This ensures consistently sharp scans for all pages in the book.
- **LED based light panel:**
 - Ensure homogeneous, shadow-free illumination of the book while scanning.
 - Minimize power consumption.
 - LED based lights are robust and long-lasting.

More info available at : www.scancraft.in

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