The Digital Future -

Digitizing the Collection at the Naval Research Laboratory

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Who We Are

- Naval Research Laboratory's Technical Library
- Dispersed user population (NRL/DC; Stennis Space Center, MS; Monterey, CA; ONR HQ, VA)
- Multiple subject areas (Physics, Chemistry, Electronics, Space Sciences)
- Large research reports collection (classified and unclassified)
- Progressive program for desktop access to information

Research Reports Collection

- +185,000 *unclassified* reports
  - Issued by government, academia, industry
  - 16,000 authored or co-authored by NRL scientists
  - Average report size - 55 pages
- +100,000 *classified* reports
  - Produced by government and government contractors
  - Average report size - 100 pages

The Problem

- Space at a premium - became critical in 1988
- Deteriorating condition of paper documents
- Documents scattered to several storage locations
- Maintenance requirements high

Options Considered

- Move the reports
- Destroy some or all of the reports
- Change the media of the reports from paper to:
  - Microfilm
  - Microfiche
  - CD ROM
  - Optical Disk

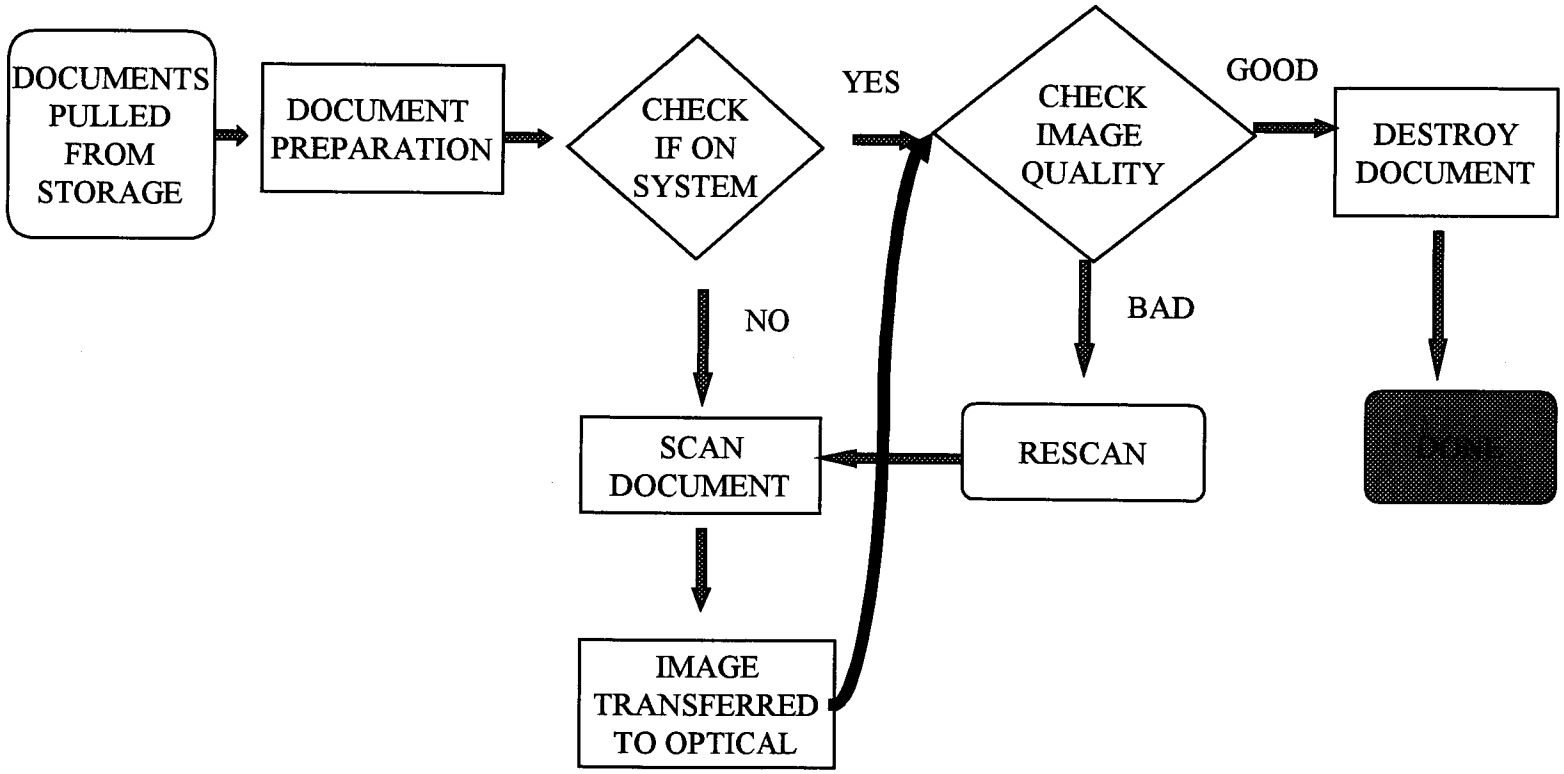
Why Optical Disk

- Storage - done in-house, transportable media, dense, flexible
- Maintenance - long shelf life, high quality images, order immaterial, changes and corrections can be added at any time
- Retrieval - fast, networkable, automatic

Library Experience with Optical Technology

- Use of optical disk storage began in 1989
- Over 185,000 reports - +9 million pages scanned
- Report images are linked to STAR online catalog
- GeneSys ImageExtender is linking software
  - Catalog search retrieves report record in STAR
  - Toggle to Docview (DDE) to retrieve report images

Optical Disk Project Work Flow



DocuScan DS - 4530 Scanner

- Scans at 300 dpi
- CCITT Group IV compression
- 40 sheets per minute
- Continuous or manual feed
- Scans both sides at once
- Equipped with preview monitor
- Offers “endorser” capability

Sony Autochanger

- About the size of a refrigerator
- Holds 50 12-inch WORM disks
- Each disk holds 6.5 GB (130,000 typed pages)
- 1 Autochanger stores contents of 500 file cabinets
- Autochangers can be daisy chained

Coming Soon ...

- Classified Internet access (SIPRNet)
- FASTLANE KG-75 (prototype)
- SIPRNet access available on all workstations of classified LAN
- STAR catalog on SIPRNet
- Hyperlinks to optical images of reports on SIPRNet

RAID Storage

- Redundant Array of Inexpensive Disks
- Controller with many magnetic hard drives (not as expensive to replace individually)
- Current configuration-600 GB (expandable)
- Built in redundancy
- Speed of access
- No mechanical parts to break down

National Digital *Reports* Library

- Signed MOA with DTIC - DTIC to scan classified documents; NRL to provide copies of unclassified images to DTIC
- Bibliographic data for all *unclassified* NRL reports available in WebCat with hyperlinks to ...
- Copies of *unclassified/unlimited* NRL reports availabl via TORPEDO
- All reports available on *classified* STAR system with images hyperlinked

Possible Pitfalls

- Proprietary software
- Non-standardized formats
- Interoperability
- Data compatibility
- Quality assurance
- Back-ups
- (Cont.)

Possible Pitfalls (Cont.)

- Can servers handle the traffic?
- Maintenance availability
- User interfaces
- Documentation
- Reliable power source (UPS)
- Spare parts
- What do you REALLY need?