

PACS Migration

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Agenda/Objectives

- Why PACS migration
- Types of Migrations
- What is Migrated?
- Challenges and Issues
- Need for Filtering/Tag-morphing
- Lessons Learned
- Best Practices
- Implementation



Setting the Stage

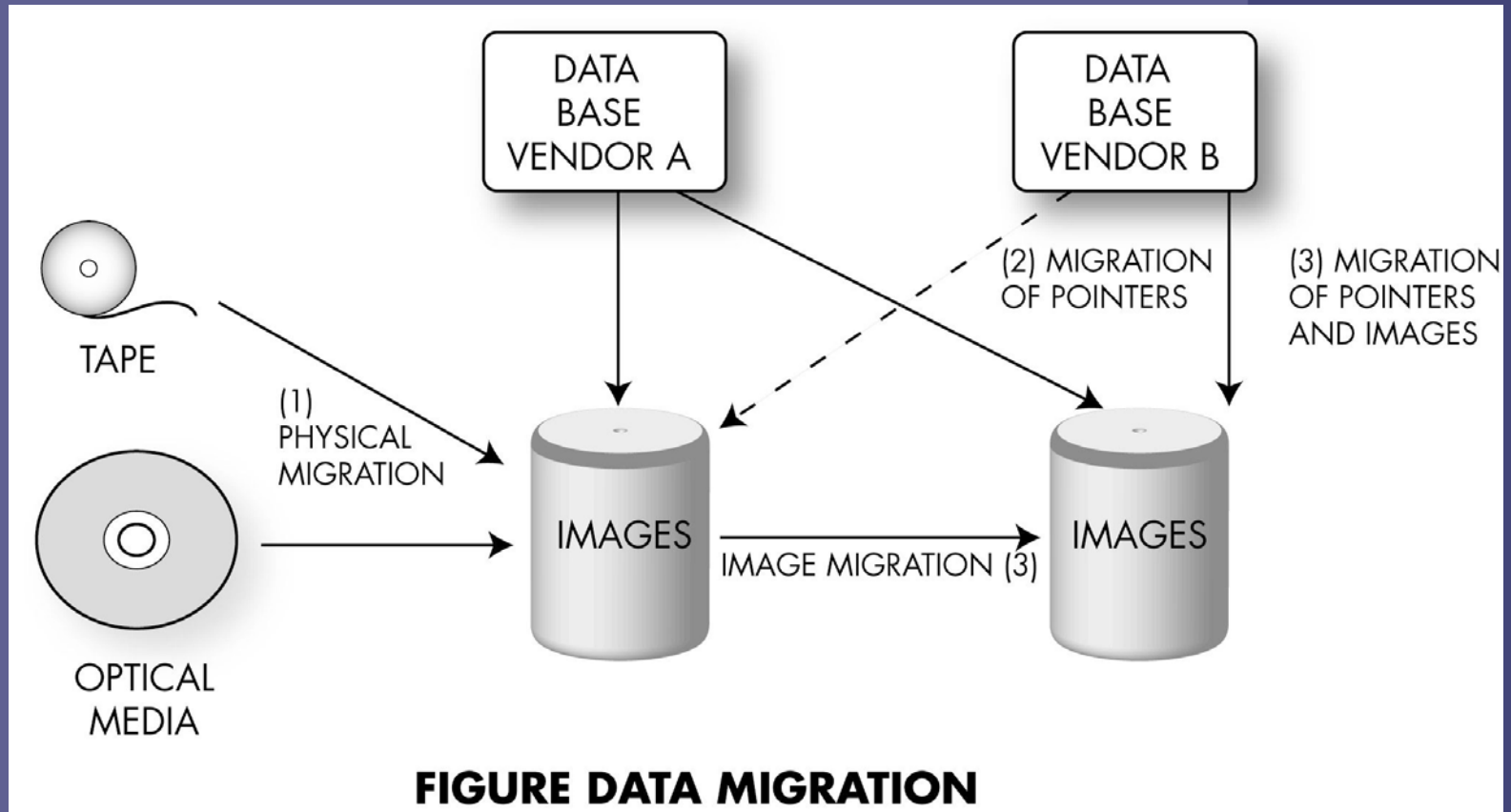
- Why PACS migration:
 - 25 % of users are very unhappy with their vendor
 - 15% is definitely planning to change vendor
- Also:
 - Import media from different departments
 - Consolidate multiple archives (cardiology, surgery, mammography)
 - Early adoption/implementation of VNA strategies



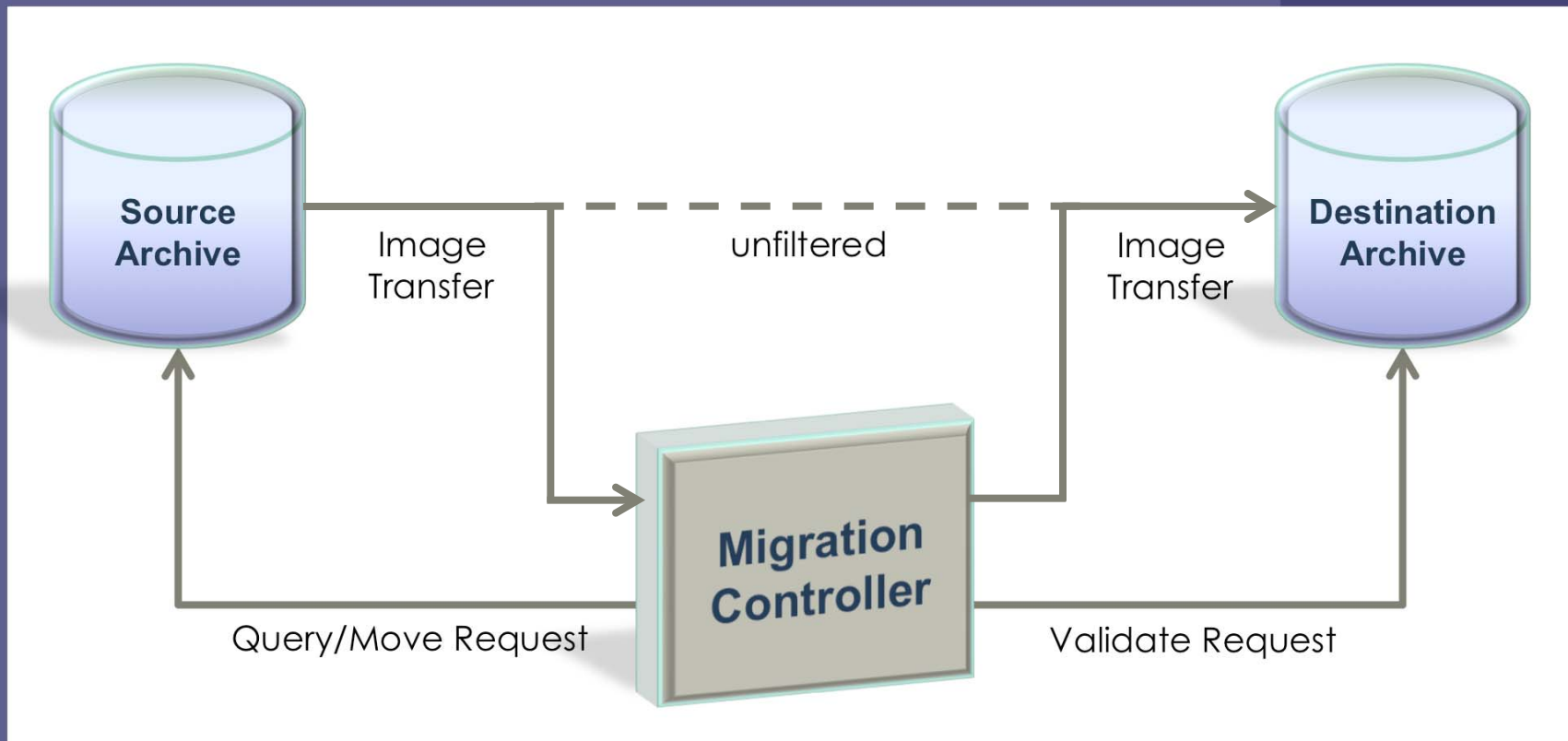
Types of Migrations

- DICOM Migrations
 - Q/R Source PACS
 - C-Move DICOM Images to Destination PACS or Destination VNA/LTA
- Non-DICOM Migrations
 - Backend storage migrations
 - Often same vendor PACS upgrade
 - Move data/volumes / Synchronize database

What is Migrated (non-DICOM)



What is Migrated (DICOM)



Challenges and Issues

- How to monitor migration: on-line, real-time; who monitors it? 1-5% correction rate!
- When to start conversion, how much on-line available (2 yrs?); How long (3mths-2yrs)
- How much would it cost ? Typically \$0.10 - 0.60 per study.
- Who does the migration:
 - 1) PACS vendor (typically the new vendor)
 - 2) Outsourced to 3rd party
 - 3) In-house using appropriate tools/tool vendor support

Challenges and Issues (cont.)

- What about the proprietary (custom) data migration/modification, such as:
 - Overlays
 - Annotations
 - Key images
 - Report status
 - Archive location
- And then there is compression!
- Re-evaluate retention rules: study date and type, age, patient status, etc.

Challenges and Issues (cont.)

- Required bandwidth: batch (non-DICOM) or use Q/R (DICOM)
- Requires “multiple simultaneous Associations”
- DICOM part 10 formats are good practice (w/o DICOMDIR) however not always available - There is no “archive” standard!
- Define Migration strategy: define for both Data (images, etc.) and data-base Migration
- Might be a good time to re-evaluate the advantages of ASP/SSP and/or VNA

Filtering / Tag-Morphing

- Change tags both in database and/or image header for:
 - Data integrity, i.e. identification: ID, Accession Numbers, especially when moving from dept to enterprise level
 - Fixing errors, i.e. length, invalid data types, invalid UID's
 - Facilitating workflow, study/series descriptions
 - Accommodating idiosyncrasies of PACS applications
 - Converting annotations to presentation states

Best Practices



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- 1 – Migration Project Planning
- 2 – RIS/PACS Reconciliation
- 3 - Prep for Exodus Migration Controller Install
- 4 - Install & Set-up Exodus Migration Controller
- 5 - Pre-Qualification / Assessment (iterative process)
 - 5A – Assessment Phase
 - 5B – Resolution Phase
 - 5C – Configuration Phase
- 6 – Perform Connectivity Test Migration
- 7 – Perform Representative Sample Migration
- 8 – Perform Full Migration
- 9 – Compile Final Migration Report

Exodus DICOM Migration Controller



- Used to Assess, Plan, and Manage Migration
- Provides Filtering/Tag-morphing using Original Attribute Sequence (maintain DICOM standard)
- Configurable Migration Scheduling
- Robust Validation Capabilities
- Extensive Reporting – “Know what happened & why!”
- Configurable & automated status & error altering
- Supports integration with MWL for pre-fetching and stat migration of Relevant Priors

Resources

- Remarks/Questions: herman@otechimg.com
- Books, e-learning, classes on PACS, DICOM and HL7: www.otechimg.com
- What should a system administrator know: www.pacsadmin.org
- Information and news resource: www.healthimaginghub.com
- Migration tools: www.laurelbridge.com