ALL YOU NEED TO KNOW ABOUT PACS REQUIREMENTS FOR THIRD-PARTY DICOM INSTALLATIONS

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

1. Archive studies from the PACS to the third-party DICOM long-term archive at configurable events, such as when the study has been QC'd and when the study has been finalized (read by a radiologist)

2. Upon archiving, the system must have the ability to maintain the study's state and pointers so that users are aware that the study has been archived to the third-party DICOM long-term archive

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

3. Retrieve studies into the PACS from the third-party DICOM long-term archive as needed, including during pre-fetch and ad-hoc operations

4. Store all information pertaining to the study to the third-party DICOM long-term archive using standard (non-proprietary) DICOM objects and tags, including, but not limited to:

    - Presentation states
    - Key image object notes
    - Radiographer notes
    - Annotations
    - Overlays
    - Image orientation

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

Where these objects are not stored to the third-party DICOM long-term archive using standard DICOM objects and tags, the PACS vendor will either:

- Store the items as proprietary DICOM objects or tags, but will provide information as to how to interpret these proprietary DICOM objects or tags so that they may be understood by other systems that use the standard DICOM objects and tags

- Store the items within the PACS database, but will provide the ability to access this information directly (read-only) from the database via third-party tools or applications. In addition, the PACS vendor will provide information as to how to interpret these database data so that they may be understood by other systems that use the standard DICOM objects and tags

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

5. Propagate changes made in the PACS to the third-party DICOM long-term archive, if the data has already been archived to the third-party DICOM long-term archive. These changes include, but are not limited to:

    - Study deleted in the PACS
    - Image(s) deleted from a study in the PACS
    - Image(s) moved from one study to another study in the PACS
    - Study information added or updated in the PACS (for example, annotations, accession number, study description, or any other information that has already been stored to the third-party DICOM long-term archive)
    - Two studies are merged in the PACS

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

6. Allow deletions made in the third-party DICOM long-term archive to propagate to the PACS. Thus, when a study is deleted at the end of its configured useful lifecycle in the third-party DICOM long-term archive, it will be removed from the PACS database

7. Provide an on-demand data reconciliation output file to include the patient name, patient ID, study ID, accession number, and number of images for every study stored in the PACS between two user-specified dates and times. This will be used to compare against the third-party DICOM long-term archive for potential discrepancies

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

8. Allow both the PACS data and the third-party DICOM long-term archive data to be evaluated against the pre-fetching rules. Thus, if the PACS were configured to retrieve the 3 most relevant studies, and the PACS contained two studies and the third-party DICOM long-term archive contained four studies, all six of the studies in the combined list would be evaluated against the pre-fetching criteria. The study/studies would be retrieved from the third-party DICOM long-term archive, if deemed necessary by the criteria

9. Prevent studies that were retrieved by the PACS from the third-party DICOM long-term archive to be re-archived to the third-party DICOM long-term archive, unless there was a modification to the data (see #5, above)

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

10. Communicate with the third-party DICOM long-term archive using JPEG2000 lossless compression, where possible. Where this is not possible, JPEG lossless compression will be used

11. Must provide a harmonized population of key DICOM tags, including procedure type/code (using the study description tag), body part, modality, and study source/origination facility

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

12. Allow archived objects that <u>were</u> originally archived by the PACS to be retrieved from the third-party DICOM long-term archive with coerced patient information, such as name, birth date, and gender without causing the study to be placed in a "quarantine" status since this information does not exactly match the PACS database information for the same patient and study

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

13. Allow archived objects that <u>were not</u> originally archived from the PACS to be retrieved from the third-party DICOM long-term archive into the PACS without causing the study to be placed in a "quarantine" or "to be QC'd/examined/finalized (read)" status. These studies should be available for the radiologist as prior comparisons but should not flow through the normal PACS workflow and should not be re-archived to the third-party DICOM long-term archive

PACS Requirements

Must support a third-party DICOM long-term archive, including the following functions:

14. Does not require an order or other event to occur prior to studies being sent from the third-party DICOM long-term archive

15. Does not require separate hardware or software licensing to interact with a third-party DICOM long-term archive

16. Describe vendor's method of "pre-loading" or indexing studies that were stored into the third-party DICOM long-term archive prior to the PACS implementation

ALL YOU NEED TO KNOW ABOUT PACS REQUIREMENTS FOR THIRD-PARTY INSTALLATIONS

For more information about developing a Vendor Neutral Architecture, please visit: www.teramedica.com

For more information on the VNA Institute of Technology or to enroll for CPHIMS (CE) Continuing Education Hours, visit www.vnait.org*.*