

RSNA QIBA
Open Image Archives Requirements Project

Volumetric CT User Requirements Gathering Session

October 31, 2011

Goal

- RSNA needs to begin utilizing an Open Image Archive (OIA) to store, organize, and disseminate important imaging datasets.
- Understanding individual project requirements is critical to getting this right.
- The goal for this session is to walk through OIA requirements categories and capture Volumetric CT priorities and needs.

OIA Requirements Categories

- **Archive Representation and Input**
 - Sheet 3: Data Acquisition
 - Sheet 1: Data Model
 - Sheet 2: Metadata
- **Archive Functionality**
 - Sheet 7: View/Query/Analyze
 - Sheet 4: Business Analytics and Metrics
- **Additional Areas**
 - Sheet 6: Computing Environment
 - Sheet 5: Workflow
 - Sheet 8: Regulatory Aspects
 - Sheet 12: Performance
 - Sheet 14: Availability/Reliability
 - Sheet 16: Accessibility/Usability
 - ...

Notes

- Uses
 - Ad hoc image exchange
 - Curated archive of images
 - Store Data for
 - Algorithm development
 - Validation
- Current Practice
 - 1A, 3A, and 1C data is available on QI-Bench (MA) along with seed points, ROIs, ... metadata.
 - 1B is using some data from RIDER
 - FDA data is using NBIA
 - 1C has been using NIST file transfer and sneaker net...
 - Open Dissemination: Has made arrangements to use NBIA (dissemination is a key part of the plan)
 - Have not explored with NBIA annotation/metadata
 - Data paper created with ISP (publishing data papers is a good thing)

Notes

- Need HIPPA compliance/IRB procedure
 - Anonymization
 - Submission rules
 - Information on privacy and compliance
 - International privacy needs to be considered
- Convenient to have other image/data formats
 - TIFF is one example (pathologists use)
 - Masks
 - annotation/image markup (e.g. VTK Mesh)

Notes

- Need a better way to pull out the specific information you want
 - Need to define a specific data subset
 - DICOM object that refers to other DICOM objects
- Need to link data within the archive
- Need version control for the data
- Test the algorithm against dataset

Notes

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