DICOM Tag Morphing / Data Coercion

Clean and consistent data.

RadNet Technology Solutions

eRAD provides a simple solution for the complexity of receiving data from multiple disparate HIS/RIS/PACS systems and modalities.

Consistent and unique data is central to global worklist capabilities and communicating across disparate systems. The lack of standardization between PACS and modality vendors has made working in multi-vendor environments a real challenge for community radiology groups and Teleradiology service providers. Use of proprietary data objects and Private Tags simply lock the DICOM archive and data to the PACS—making a vendor-neutral approach impossible. Therefore, the more practical strategy for anyone wishing to pair data from more than one PACS with another is to manage the meta-data via dynamic tag morphing or tag mapping (for example, changing patient ID, Study Description or Accession Number) to enable full utilization of the data.

eRAD's solution to this is data coercion. eRAD puts the control of DICOM tag morphing directly into the user's hands via a powerful GUI interface, based on Boolean logic. Administrators can add or modify (and create rules for) attribute values of DICOM storage objects acquired by eRAD PACS. The Image Header then contains the original PACS metadata and a copy placed by eRAD in a Public DICOM tag. When the originating PACS requests the data back, the original metadata objects (in their original format) are still where the originating PACS expects them to be.

Tag Morphing in the global worklist environment is a practical solution for handling the inconsistencies in the way metadata is treated by many current PACS systems. You don't have to wait for PACS vendors to truly standardize.

Data coercion is central to the effectiveness of eRAD's rules engine. If a rule is written to pre-fetch head studies, then data coercion means that rule can be written once and applied to all incoming studies; the rule does not have to be written in all imaginable variations and configured on dozens of independent, third-party gateways.

Clean, consistent data even from disparate systems

Disparate systems become fluent with one another. By coercing data into a consistent format, eRAD ensures that information is accurate and complete, which is critical to optimum healthcare.

Data integrity

Each distinct system is able to preserve its idiosyncratic formats, even as data is made to conform to a consistent standard. Incoming data is not edited or changed but prefixed; those prefixes can be stripped when data is sent back to its source.

Dynamic and simple rules

Data coercion is key to the efficiency of eRAD's rules engine. Rules can be intelligent, not inflexible. They can process a request for a head CT, CT head or brain the same way. The admin doesn't have to write all the variations and implement on every gateway, since eRAD coerces on the inbound.

"Most radiology groups who cover multiple locations know what a nightmare the workflow can be. We had to use multiple worklists, multiple PACS systems, multiple dictation systems, even multiple microphones! You need extremely sophisticated data coercion and DICOM mapping tools to harmonize diverse data, retrieve the right prior images, and present this information to a busy radiologist. eRAD has the highly granular sophistication needed to perform all this, yet hides all this sophistication behind a simple interface for the radiologist. We now have the fluid solution that allows us to expand our business smoothly."

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