QIBA fMRI-DICOM Work Group Update Call
Wednesday, October 12, 2011
10 AM CDT
Call Summary

In attendance
James L. Reuss, PhD (chair)
Paul L. Carson, PhD
Barbara Croft, PhD
Cathy Elsinger, PhD
RSNA
Paul L. Carson, PhD
Barbara Croft, PhD
Cathy Elsinger, PhD
Julie Lisiecki

Call Summary

General discussion

- Discussion of Dr. Reuss’s proposal document, “Incorporation of Imaging-Based Functional Assessment Procedures into the DICOM Standard,” in preparation for the WG-16 DICOM meeting; tags have been added
- Group discussed the workflow and how to incorporate new DICOM tags
  - Want to show standard that is being used and data associated with the workflow
  - Immediate, basic, and extended goals have been identified
  - e.g., Immediate goal: distinguishing between temporal and hardware synchronization
    - To what degree has DICOM synchronization been adopted among MR scanner vendors?
    - Would Siemens consider MR multi-frame as part of its “Mosaic” program?
    - An update of the multi-frame is important; working to inform the scanner manufacturers.

Other considerations

- New DICOM tags proposed – scale measurement and threshold would be helpful.
- Want to synchronize the first emitted pulse from the scanner to the presentation management software
  - Important variable: the time between synchronization pulses (first-trigger pulse emitted) and the time to the first image being stored; common ID for paradigm execution and imaging needed
  - In a scan session with multiple data acquisitions, the series is unknown, as the data is not synchronized; some common identification for paradigm execution is needed
  - Datasets can get lost or are incomplete – a tag to differentiate between datasets is needed.
  - A UID within a session, associated with the “start scan” button would be ideal, because the “series ID” is not consistent across scanners
  - The proposed ID associated with the “start scan” button would also need to be the start of a physical series not a prescribed series
  - A consistent number used in the DICOM header would be helpful – even if no button on the console is possible

Next steps:

- Consider “real-time” clocks on each of the software pieces being used with help from the fMRI Tech Ctte; look at time sync issue.
- Follow up on immediate considerations: What has been adopted? What future recommendations may be made to WG-16?
- Drs. Reuss and Elsinger to report back to the QIBA fMRI Tech Ctte regarding the WG-16 meeting.

Next call: TBD