Minutes
DICOM WORKING GROUP TWENTY EIGHT
(Physics)

Date: Wednesday, August 1, 2012

Place: At AAPM Annual Mtg.
Westin Charlotte, Charlotte, NC - USA

Presiding Officers: Donald Peck – Co Chair/AAPM

Secretary: Lynne Fairobent (AAPM)

Members Present

AAPM (Henry Ford Health System) Donald Peck
GE Healthcare William J. O’Connell
JIRA Makoto Suzuki

Members Not Present
American Academy of Oral and Maxillofacial Radiology (AAOMR) Allan Farman/WG-22
CEFLA Dentale Roberto Molteni
CoreLab Partners David Clunie
European Federation of Organizations for Medical Physics Annalisa Trianni
Philips Healthcare Mark Pepelea/WG-07

Alternate Voting Representatives, Observers, or Guests Present:

Arbique, Gary UT SW Med Center, Dallas, TX
Boon, Sjirk Philips Healthcare, Interventional XR
Busch, Ulrich Varian/WG-07 Chair/IHERO
Cardan, Rex University of Alabama /HERO
Cialdea, James Aware Inc
Curran, Bruce Rhode Island Hospital/WG-07/IHERO

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WG-28 (Physics) of the DICOM Standards Committee
Dooley, John
UNC
Fairobent, Lynn
AAPM
Flynn, Michael
AAPM/ACR/Henry Ford Hospital
Gingold, Eric
T. Jefferson Hospital, Philadelphia
Hasse, Richard
Emory University
Jones, Kyle
MD Anderson
Junck, Kevin
Univ of Alabama Birmingham,
Kuhls-Gilcrist, Andrew
Toshiba Medical Systems
Langer, Steve
Mayo Rochester
Nilsson, Elisabeth
RTI
Pavlicek, W.
Mayo, Arizona
Schadt, Christof
Brainlab/WG-07 Vice Chair/IHERO
Shephard, Jeff
MD Anderson
Supinach, Mark
Henry Ford Health System
Uzenoff, Robert
Fujifilm Medical Systems, USA
Vastagh, Stephen
General Secretary DICOM/MITA

1. Preliminary Events

   a. Call to order – 09.00
   b. Self-introduction by participants
   c. Reviewed the agenda – no revisions made
   d. Reviewed the minutes from the previous meetings in Vienna, Austria and Udine, Italy. It was noted that the Udine minutes have not been submitted to NEMA for approval to date.
   e. An overview of how the DICOM Standard is developed was presented.
   f. Stephen Vastagh reviewed the DICOM anti-trust and other rules with the participants.

2. Determination of tissue dose for diagnostic radiology procedures

   a. Review methods to do patient dose estimations – Previous discussion: Skin is an organ and will initially be treated the same as another organ. When the work item is approved, skin might be separated out. It was noted by some that for skin we calculate peak skin dose vs. average dose over the organ. It was also discussed that how to present organ dose may depend on the biological impact – i.e. whether it is stochastic or deterministic. If we are going to look at only deterministic than skin and eye may have to be handled separately.
   b. Discussed the current concept of estimating dose.
   c. Working Group 7 already has an object to determine a patient dose; it is a 3-D array of dose at certain points registered to the patient frame of reference. The image space is acquired from a CT image set from a treatment simulator study. This is not practical for determining dose for many diagnostic studies.

     i. It was discussed that representatives from WG-07 should be involved with this activity at all WG-28 meetings to assist in the development of this IOD.
d. Reviewed the list of desired “data” needed for estimating patient dose. Some modifications were included in the list developed in Udine.
   i. It was noted at this time for CT we are not talking large field of view, e.g. cone beam CT, but this will need to be considered.
e. Development of a Patient Dose SR (PDSR) Work Item Proposal should be done for the RSNA
f. It was discussed that there needs to be a review all IOD and determine extensions that may be necessary for Organ Dose estimation, e.g.:
   i. CT
   ii. CR/DX
   iii. XA/RF
   iv. Mammography
   v. Nuclear Medicine

3. Discussion concerning development of the concept for an Operator Dose SR Work Item

   There was a brief discussion concerning this request.

4. Reports from Liaisons with other groups or organizations

   Did not discuss due to lack of time

5. ACTION Items:

   Need physics representatives on all DICOM WG and these should also be members or observers of WG28.

6. Future Meetings – time and place

   a. Next Meeting: Tuesday, November 27, 2012 Room TBD all day.
   b. ECR 2013 March 2012

7. Adjourned at 11:00 AM EDT.

Reported By: Lynne Fairobent, AAPM
Secretary
2012-08-10

Reviewed by: CRS 2012-08-16