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| Description: Description: O:\LOGOS\DICOM\DICOM LOGO - MEDIUM.tif | 1300 North 17th Street, Suite 1752  Arlington, VA 22209, USA  +1-703- 841-3281  [http://dicom.nema.org](http://dicom.nema.org/)  [**dicom@medicalimaging.org**](mailto:dicom@medicalimaging.org) |

# ***MINUTES***

## DICOM WORKING GROUP TWENTY EIGHT

(Physics)

**Date:** Tuesday, November 27, 2012

**Place:** McCormick Place, Chicago @ RSNA

**Presiding Officers:** Annalisa Trianni and Donald Peck – Co Chairs

**Secretary:** Lynne Fairobent (AAPM)

**Members Present Represented by**

AAPM (Henry Ford Health System) Donald Peck

European Federation of Organizations

for Medical Physics Annalisa Trianni

GE Healthcare William J. O’Connell J for Jennifer Esposito  
JIRA Tomohiro, Ito

Philips Healthcare Mark Pepelea/WG-07

**Members Not Present Voting Representative**American Academy of Oral and

Maxillofacial Radiology (AAOMR) Allan Farman/WG-22  
CEFLA Dentale Roberto Molteni / WG-22

CoreLab Partners David Clunie

**Alternate Voting Representatives, Observers, or Guests Present:**

Curran, Bruce Rhode Island Hospital/WG-07/IHERO

Flynn, Michael AAPM/ACR/Henry Ford Hospital

Harkness, Beth Henry Ford Hospital

Jones, Kyle MD Anderson

Kuhls-Gilcrist, Andrew Toshiba Medical Systems

O’Donnel, Kevin Toshiba Medical Systems

Pavlicek, W. Mayo, Arizona

Tarbox, Lawrence

1. **Preliminary Events**

* Chair called the meeting to order at 09.00.
* Reviewed and approved agenda
* Reviewed and approved minutes from the previous meeting in Charlotte, NC.
* Reviewed the antitrust rules

1. **Review of Work Item proposal on Patient Radiation Dose Structured Report from radiation exposures during diagnostic and interventional studies**

It has been posted for DICOM Standards committee action.

1. **Review of White Paper on Patient Dose determination from radiation exposures during diagnostic and interventional studies**

Working Group in AAPM may develop a review paper on dose estimation – CT, XA and nuclear medicine. Patient centric methodology for calculating dose. Bill Pavlicek, Annalisa Trianni and Kyle Jones to work on this.

1. **Discuss requirements for Patient Radiation Dose Structured Report with representatives from WG21 and WG03**

**WG-03**

* + - Charles Smith, WG-03: reviewing the current nuclear medicine radiopharmaceutical dose structured report to determine how this would fit in with the concept for WG-28
    - Every dosage is recorded today by law from the radiopharmaceutical. It can be stored on paper or in the system.
    - Imaging system would know when the administration has arrived in the biological system
    - In WG-03 for the thyroid uptake is the administration, the uptake probe might measure over the 2 -3 day uptake data, it is not stored currently in their system
    - How to handle dose to the fetus: is it a separate patient or considered a “tissue” of the mother? Consensus is that it is a “tissue” of the mother. It does not have a separate MRM.
    - Need to consider absorbed dose as the units and then display in the appropriate regulatory units for display, for WG-03 if you have to put in effective dose, then put in absorbed dose and then define the model used to calculate the effective dose
    - Summary of Issues between WG-03 and WG-28
      * Is there an issue with having organ and fetal dose through nuclear medicine dose structured report?
      * Concerned about use of effective dose, WG-28 recommends absorbed dose in Gray and that if effective dose is mandatory it needs to clearly reference how one goes from absorbed dose to effective dose
      * WG-28 needs to consider how to sum doses administered over multiple studies when the methodology for calculating effective dose may have been different. For example, study one is done using ICRP 60 methodology and study two is based on ICRP 103 methodology.
  + WG-21
    - Need to discuss with WG-21 the same concerns discussed with WG-03
    - Also need to discuss with WG-21 the Battelle Technical Report referenced below.

1. **Presentation by John R. Bush of the Battelle Technical Report -“A Framework for Expanding DICOM, DICONDE, and DICOS Data Formats to the X-ray CT Image Acquisition Interface**
   * Mr. Bush and Mr. Regensburger presented an overview of the work they completed for the Department of Homeland Security regarding “A Framework for Expanding DICOM, DICONDE, and DICOS Data Formats to the X-ray CT Image Acquisition Interface”.
   * The conclusion was that this information may be of interest to DICOM WG-21 and Donald Peck brings up in discussion with them.
   * WG-28 will try and factor in better method for determining the patient organ dose vs. refining it in the administration model, nuclear medicine is trying to record the entire event, good example is thyroid uptake.
2. **MITA/IEC Physics Mode/Collaboration Tool**
   * Update on pediatric dose issues following July 16, 2012 FDA public meeting
   * Update on the status of “ NEMA standard on X-ray equipment for interventional procedures: User Quality Control Mode”
   * Discussion of draft of Image Gently recommendations for fluoroscopy equipment manufacturers
3. **Discussion concerning development of the concept for an Operator Dose SR Work Item**

ACTION: defer but maintain as an agenda item for discussion

1. **Reports from Liaisons with other groups or organizations**
   * IEC – 62B-882: effort by IEC to require dose structured report in DICOM format; this group is discussing what should be mandatory
   * Is there a way for height and weight can come across automatically to minimize the multiple data entry of these values by the nurses and technologist or other staff. **ACTION: Ask Kevin O’Donnell if there is any way for this to be address by IHE Schedule Workflow.**
2. **Review the relevance to WG-28 of the below NCRP Report**
   * **NCRP Report 172: NCRP REPORT No. 172 -** *Reference Levels and Achievable Doses in Medical and Dental Imaging: Recommendations for the United States Recommendations of the National Council On Radiation Protection And Measurements* September 30, 2012

**ACTION:** All members will review this report to determine its relevancy to WG-28’s current work.

1. **New business**

None

1. **Future Meetings – time and place**

* SPIE, WG02 – WG28, also WG11 Orlando FL - February 11-14, 2013, WG28 is meeting 2/12
* ECR 2013, Vienna - March 9, 2013
* WG02 (May 14 -15) and WG28, Paris (other than May 13-17, 2013)

1. **Adjournment**

The meeting was adjourned at 17.00.

Submitted by Lynne Fairobent / AAPM

Secretary

Reviewed by: CRS 2013-02-28