

# IHE-RO Technical Committee Conference Call

April 15, 2021

10:30 am – 12:00 pm EST

## Technical Committee Chairs:

Scott Hadley, PhD, University of Michigan

Jon Treffert, RaySearch

**Mission Statement:** *The American Association of Physicists in Medicine American Society for Radiology Oncology (AAPM) supports a multi-society Task Force to undertake an initiative to promote the Integration of the Healthcare Enterprise (IHE) – Radiation Oncology (RO), fostering seamless connectivity and integration of radiotherapy equipment and the patient health information systems. The Task Force will include members from ASTRO, RSNA, AAPM, the American College of Radiology (ACR) and the Medical Imaging and Technology Alliance (MITA). In addition, members of the International community have also been invited to participate in IHE-RO. The IHE-RO Task Force, in close collaboration with radiotherapy product manufacturers, will develop appropriate integration profiles for radiation therapy and setup a demonstration of seamless communication among the full array of radiotherapy products.*

## Attendance

Jon Treffert (Raysearch)  
Walter Bosch (Wash U)  
Sanjay Bari (Elekta)  
Jim Percy (Elekta)  
Harold Beunk (DEMCON)  
Stina Svensson (Rayseach)  
Jill Moton (AAPM)  
Thomas Schwere (Varian)  
Michelle Casagni (MITRE)  
Richard Voegele (Brainlab)  
Bruce Curran (VA/VCU)  
Bob Pekarek (Accuray)  
Stefan Boman (Raysearch)  
Rishabh Kapoor (VA/VCU)  
Chris Pauer (Sun Nuclear)  
Anthony DiDonato (MITRE)  
Naveen Kumar (Phillips)  
Tucker Meyers (Epic)  
Scott Hadley (U Mich)

## Minutes

- I. Call to Order at 10:40 am ET
- II. Review Agenda – The proposed agenda was reviewed and approved.
- III. Minutes Review – Minutes from the 3/15/2021 TC meeting were reviewed and approved without objection.
- IV. Review of DRRO Public Comments
  - a. Stina Svensson reviewed Public Comments (two responses) to the DRRO Profile draft
    - i. Additional requirements for derivation codes and referenced source instances in RT Structure Set have been removed (section 7.4.1.9.2.2) since they may not be applicable to all ROIs in the RT Structure Set.
    - ii. Agreement that Frame of Reference Identity code (125021) is to be used for the identity transformation. A CP to require this code for rigid registrations in the MMRO-\* Profile is to be drafted as well.
    - iii. NaN values are to be allowed in the deformation map. Consuming Actors must handle NaN values safely.
    - iv. It is appropriate that Content Creator's Name attribute is Type 2 (accommodates automated use case).
    - v. Metadata regarding deformation process and parameters is not adequately captured by the DICOM Standard. Conveying this meta-information is currently outside the scope of the DRRO Profile (add to Open Issues).

- b. Discussion of whether there has been adequate clinical review of the Profile content. Clinical experts, including Rojano Kashani (U Mich) have participated in the DRRO sub-group discussions.
- c. ACTION: Stina to incorporate revisions in the Public Comment version (Rev 1.0-2021-01-xx ) of the Profile.
- d. ACTION: Stefan to draft a CP to require the use of the Frame of Reference Identity code (125021) in MMRO.

V. Intro to TPPC-Brachy

- a. Jim Percy presented a preview of the TPPC-Brachy Profile (v2.16)
  - i. The profile includes content requirements for RT Structure Set as well as RT Plan and supports multiple brachytherapy use cases: HDR, PDR, LDR permanent, and LDR temporary.
  - ii. Additional work with WG-07 is needed for Ultrasound Storage requirements.
- b. The TC will address content requirements and optionality choices when the Profile is reviewed in detail.
- c. ACTION: Jill to announce availability of the updated Profile document.

VI. Incorporation of CP2006 (Unattached contours) – to be discussed on the next TC call

VII. Committee updates

- a. XRTS
  - i. Rishabh reported on progress in defining Actors and Transactions.
  - ii. Testing infrastructure will be needed for this Profile. Harold Beunk indicated that several online and open-source FHIR tools are available.
  - iii. The intent is that all extensions needed for XRTS will be incorporated into the FHIR standard.
  - iv. XRTS is essentially content-based.
  - v. Tools will be needed to test adherence to FHIR and IHE-RO requirements.
    - 1. IHE-RO requirements would not be validated by existing online tools.
    - 2. It should be possible to customize open-source software.
    - 3. Test tools could be deployed on the AAPM VPN Test Server.
  - vi. ACTION: Harold Beunk (Demcon) to research available tooling and test data for validating IHE-RO XRTS Actors.
  - vii. Link (from Michelle Casagni) may be helpful for generating test data <https://synthetichealth.github.io/synthea/>
- b. IHE Domain Report – Jon is drafting a report on RO Domain progress

VIII. 2021 Goals/Deliverables

- a. Planning Committee presentation and feedback – Jon to send out homework

IX. Meeting adjourned at 12:02pm ET