

# IHE-RO Technical Committee Conference Call

December 21, 2023

10:30 am – 11:50 pm ET

## Technical Committee Chairs:

Scott Hadley, PhD, University of Michigan

David Wikler, IBA

**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

David Wikler (IBA)  
Jim Percy (Elekta)  
Bruce Rakes (Mevion)  
Scott Hadley (UMich)  
Walter Bosch (Wash U)  
Jill Moton (AAPM)  
Harold Beunk (Demcon)  
Bruce Curran (VCU)  
Richard Vögele (Brainlab)  
David Holst (Raysearch)  
Dan Pawlak (Epic)  
Thomas Schwere (Varian)  
Bob Pekarek (Accuray)

## Minutes

- I. Call to Order at 10:35 am ET
- II. Review Agenda – wrap-up for 2023 and scheduling for 2024
- III. Review Minutes
  - a. Minutes from the Nov 16, 2023 TC Teleconference were reviewed. **Motion to approve by Jim Percy; seconded by Bruce Curran; approved without objection or abstention.**
- IV. Subcommittees status [report by chairs]
  - a. Hospital Information Systems [Rishabh]
    - i. Extensions of XRTS Profile
      1. Broaden scope to include Prescription and Plan information.
      2. Rendering and/or conversion to CDA report.
      3. Export to state registries and clinical trials/research registries.
    - ii. Overlap with ROTH and possible merger of XRTS and ROTH groups was mentioned. Consensus to have the subgroups continue working in parallel.
  - b. Treatment History [Scott]
    - i. Progress was noted on use cases and defining treatment history content.
    - ii. Work in progress on extending XRTS/FHIR to represent the manifest.
  - c. Deformable Image Registration (DIR) [Stina]
    - i. A second DRRO Workshop was held Dec 4<sup>th</sup> and 6<sup>th</sup> with four vendors present. Dan Polen and Martina Murr directed testing. The workshop focused on testing the application of Deformable Spatial

Registration to images, doses, and structure sets. Digital phantoms were constructed to evaluate deformations under several conditions.

- ii. Formal testing is anticipated in 2024.
- d. High-Definition Structure Set (HDSS) [Richard]
  - i. Profile and sample data has been uploaded to Box.
  - ii. Implementation of HD Structure Sets is quite limited at this time. To motivate wider implementation among vendors, the subgroup plans to publicize the HDSS Profile in the AAPM Newsletter and target reviewers for Public Comment of the Profile within AAPM SRS and SBRT Task Groups. Richard and Walter to meet with AAPM TPC Jan 17, 2024.
  - iii. ACTION: David to place review of HDSS for Public Comment on the Jan 2024 TC agenda.
  - iv. ACTION: Richard and Bruce to draft article for AAPM Newsletter (500-600 word white paper) due Feb. 2, 2024
- e. Treatment Session Workflow (TSWF) [Thomas]
  - i. The group is working to extend TDW-II to include imaging by combining the UPS for treatment delivery with instructions for IGRT.
  - ii. For DPDW, two options are being considered for Context Exchange: DICOM UPS and FHIR cast. Both technologies are based on a Treatment Session Manager concept. It is hoped that a comparison of these technologies will to lead to a decision in 2024 Q2.
- f. WG7 Brachy Subgroup [Jim]
  - i. The Brachy Profile includes both treatment plan and treatment record. Work is in progress to simplify Actor names to “Content Creator” and “Content Consumer”. There is currently no implementation of brachy treatment record in TMS.
- g. WG7 Ion Subgroup [David]
  - i. TPPC-Ion is being tested informally. A CP is pending to clarify Range Shifter Setting.
  - ii. TDRC-Ion is in Public Comment.
  - iii. TDPC-Ion to be drafted next.
- h. Test Tools Subcommittee [Walter]
  - i. XRTS Validator has been updated to the latest version of the Profile.
  - ii. Current Work Priorities for Demcon:
    - 1. UPS Server for TDOR development (Add N-CREATE SCP/SCU to existing UPS Validator) for Jan 2024
    - 2. DRRO Validator update / Improved data selection for DRRO Validator and Content Validator.

#### V. Schedule 2024 meetings [Jill]

- a. Face-to-Face Technical Committee Meeting in Europe (IBA, Belgium)
  - i. Other meetings/holidays in 2024 for coordination:
    - 1. IEC 62C meeting in Belgium April 22-26, 2024
    - 2. DICOM WG7 meeting in Chicago June 10-14, 2024
    - 3. ESTRO meeting in Glasgow May 3-7, 2024
    - 4. AAPM SCM in St. Louis, March 24-26, 2024
    - 5. ASTRO Sept 29 – Oct 2, 2024
    - 6. Easter is March 31, 2024
  - ii. Possible dates for TC meeting at IBA were identified:
    - 1. March 18, 2024
    - 2. April 8, 2024
    - 3. April 15, 2024
  - iii. ACTION: Jill to send poll for TC meeting attendance at these dates.
  - iv. ACTION: David to check on availability of IBA facilities on these dates.
- b. Virtual Technical Committee Meetings
  - i. It was noted that most Profile development work is ongoing in the subgroups.
  - ii. A 2-day online TC meeting may be scheduled in September 2024.
- c. Connectathon in USA (AAPM, Alexandria, VA, USA)
  - i. Oct 21-15, 2024 at AAPM HQ was selected as tentative date for 2024 IHE-RO Connectathon.

- ii. Follow-up meeting to be held via Zoom on Wed., Oct 30, 2024 10:00 am – 12:00pm ET
    - d. Profile-specific Workshops
      - i. To be scheduled as needed by the subgroups
    - e. Monthly Calls
      - i. Third Thursday at 10:30am ET (same as 2023).
- VI. TC information management for profiles development activities [Jim]
  - a. IHE Website, IHE Wiki, IHE Gazelle, IHE RO Google Drive
  - b. IHE-RO Wiki – Public-facing information
    - i. Updated summary of PC and TC activity
    - ii. Access from [https://www.ihe.net/ihe\\_domains/radiation\\_oncology/](https://www.ihe.net/ihe_domains/radiation_oncology/)
    - iii. Profile status information is now in pages linked from [https://wiki.ihe.net/index.php/Profiles#IHE\\_Radiation\\_Oncology\\_Profiles](https://wiki.ihe.net/index.php/Profiles#IHE_Radiation_Oncology_Profiles)
    - iv. Users with access to edit the wiki: Jill, David, Jim, Walter
  - c. AAPM Website, AAPM Box, AAPM IHE-RO Google Calendar
    - i. Internal TC documents, including Connectathon information is to be stored in AAPM Box
- VII. Status of Profiles in Public Comments [David] – Discussion was deferred to next TC meeting
  - a. TPPC-Brachy
  - b. TDRC-Brachy
  - c. TDRC-Ion
- VIII. TC roadmap for 2024 [Scott] – Discussion was deferred to next TC meeting
  - a. Each profile leader to propose goal for next year. See [IHE-RO Profile Status List.xlsx](#)
- IX. Next TC meeting is scheduled Jan 18, 2024 at 10:30am ET
- X. Adjournment at 12:03 pm ET