Minutes

Discrete Positioning and Delivery Workflow (DPDW)

Conference Call

August 23, 2016

11:00am – 12:05pm EST

DPDW Subgroup Chair:

Thomas Schwere, Varian Medical Systems
(thomas.schwere@varian.com)

IHERO Task Force Co-Chairs

Dick Fraass, Ph.D., FAAPM, FASTRO, FACR

John Buatti, MD

**Mission Statement:** *The American Society for Radiology Oncology (ASTRO) has formed 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, American Association of Physicists in Medicine (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.*

**In Attendance:**

Antonella Patio (Astro)

Thomas Schwere (Varian)

Harold Beunk (ICT)

Chris Pauer (Sun Nuclear)

Gergely Parditka (Brainlab)

Sanjay Bari (Elekta)

# Call to Order

The meeting was started at 11:00am EST.

# Design Topics

## Introduction of a new normalized service for RO-DPD-201 (Retrieve Device Position Information)

The chair elaborated on the current proposals for RO-DPD-201 Retrieve Device Position (see details in meeting minutes from 2016-06-28):

* RT Device State Storage SOP
* Device Position UPS (with session scope)

The first proposal is way too complex to simply communicate six values. For the second proposal we would have to introduce a new UPS workitem code. How should we call that workitem code? The main issue is that this UPS does actually not do any work but is rather used for reporting instead.

Harold proposed to include the Device Position in the Acquisition UPS using the following mechanism:

1. TSM gets the Device Position after the initial positioning was performed by the PPD (e.g. Patient Position Modification Result IOD).
2. TSM includes the Device Position in the Scheduled Processing Parameters Sequence of the acquisition UPS.
3. TSM notifies the PPAS to start performing the acquisition UPS.
4. PPAS acquires the patient position and annotates the result with the device position as received in the Scheduled Processing Parameters Sequence.

(The transaction for the initial patient positioning is missing in the current version of the profile 🡪 added Open Issue #32.)

This approach only works for "static" scenarios, i.e. the device position does not change anymore after the PPAS was requested to start the acquisition of the patient position. Manual adjustments of the patient position would not be possible anymore. To support "dynamic" scenarios (in the sense that the device position can change prior to the acquisition but not during the acquisition), the actor has to actively request the device position (which would be supported by the new normalized service (see following section).

The chair introduced the group to the new "Treatment Session-related Normalized Service" that has been worked out together with Uli. In summary that service allows an actor to retrieve treatment session related information from any other actor while performing the treatment session. That service uses new IODs that can be requested by N-GET (similar to RT Machine Verification Service Classes or Display System Management Service Class, see DICOM Standard Part 4). The proposal currently lists two IODs, the RT Treatment Patient Positioner Information IOD and the RT Treatment Device Information IOD. Currently only RO-DPD-201 would use that service. However, there might be additional scenarios in the future where similar information is needed. That service could be easily extended by introducing new IODs.

The chair will distribute the proposal about the new service to the group. The discussion will go on in the next TCon.

Chris mentioned to revisit and potentially improve the description of the actors in the DPDW profile (mainly regarding their responsibilities). The chair will do that.

## Walk through updated sections in current version of DPDW profile

Deferred to next TCon.

## Actor Combinations

Deferred to next TCon.

# Process / TCons / Meetings

## Next DPDW TCon

Tuesday, September 27, 2016: 11:00am – 12:30pm EST.

# Adjournment

The meeting was adjourned at 12:05pm EST.

Appendix A: Administration and Process Information

Documents are published at the following locations. If you have problems in accessing the document, please contact the Chair (thomas.schwere@varian.com).

## Process of Authoring:

Steps:

1. Download a local copy of the document from locations below
2. Open this copy and remove all change bars
3. Ensure, that Changes Bars are switched on
4. **Make your changes**
5. Provide the updated version to the Chair

##  Location of Documents:

DPDW Subgroup Minutes

<http://wiki.ihe.net/index.php?title=RO_DPDW_WorkingGroup>

DPDW Profile

The DPDW Profile is an IHE-RO document.

The current version is available in the IHE-RO Org Wiki:

<http://www.ihe-ro.org/>

Please find the current document under this page:

<http://www.ihe-ro.org/doku.php?id=doc:profiles>

Supp 160

DICOM Supplement 160 (Patient Positioning and Workflow) in s DICOM WG-07 document.

The current version is available at the DICOM ftp server:

ftp://d9-workgrps:goimagego@medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/WG07/Sup/Sup160\_PatientPositioningAndWorkflow

##  Mailing List:

The mailing list for the DPDW subgroup is:

iherodpdw2015@aapm.org

Appendix B: Task Assignments

Per end this TCon (2015-01-27).

| **No** | **TX / Area** | **Old Number** | **Title** | **Group** | **Owner** |
| --- | --- | --- | --- | --- | --- |
| 1 | ./. | ./. | Use Case Delivery-Device Independent Imaging |   | David Wikler |
| 2 | RO-DPD-200 | RO-DPD-01 | Worklist Query for Positioning Acquisition | Acquisition | Martin Vonach |
| 3 | RO-DPD-201 | RO-DPD-02 | Retrieve Device Position Information | Acquisition | Martin Vonach |
| 4 | RO-DPD-202 | RO-DPD-03 | Request RT Patient Position Correction | Correction | Martin Vonach |
| 5 | RO-DPD-203 | RO-DPD-04 | Store RT Patient Position Modification Instruction | Correction | Martin Vonach |
| 6 | RO-DPD-204 | RO-DPD-05 | Store RT Repositioning Results to Object Storage | Correction | Martin Vonach |
| 7 | RO-DPD-205 | RO-DPD-06 | Worklist Query for Repositioning | Correction | Martin Vonach |
| 8 | RO-DPD-206 | RO-DPD-07 | Notify on Radiation Delivery Status Change | Delivery | Thomas Schwere, Sanjay Bari |
| 9 | RO-DPD-207 | RO-DPD-08 | Retrieve RT Patient Position Correction Instruction | Correction | Martin Vonach |
| 10 | RO-DPD-208 | RO-DPD-09 | Subscribe/Unsubscribe to Treat UPS Status | UPS Notification | Thomas Schwere |
| 11 | RO-DPD-209 | RO-DPD-10 | Notify on Radiation State | Delivery | Thomas Schwere, Sanjay Bari |
| 12 | RO-DPD-210 | RO-DPD-11 | Retrieve Positioning Acquisition Results | Registration | Chris Pauers |
| 13 | RO-DPD-211 | RO-DPD-12 | Worklist Query for Positioning Registration | Registration | Chris Pauers |
| 14 | RO-DPD-212 | RO-DPD-13 | Worklist Query for Position Monitoring | Monitoring | Stephen Phillips  |
| 15 | RO-DPD-213 | RO-DPD-16 | Store Monitoring Results to Object Storage | Monitoring | Stephen Phillips  |
| 16 | RO-DPD-214 | RO-DPD-17 | UPS Final Update at Session Termination | Framework | Thomas Schwere, Sanjay Bari |
| 17 | RO-DPD-215 | RO-DPD-18 | UPS Completed / Cancelled at Session Termination | Framework | Thomas Schwere, Sanjay Bari |
| 18 | RO-DPD-216 | RO-DPD-19 | Indicate Ready for Monitoring | Monitoring | Stephen Phillips  |
| 19 | RO-DPD-217 | RO-DPD-20 | Notify Device to start UPS | UPS Notification | Thomas Schwere, Sanjay Bari |
| 20 | RO-DPD-218 | RO-DPD-21 | Create Positioning Acquisition and Positioning Registration UPS | Workflow | Thomas Schwere |
| 21 | RO-DPD-219 | RO-DPD-22 | Create Treat UPS and Radiation Delivery Instruction for Continuation | Workflow | Thomas Schwere |
| 22 | RO-DPD-220 | RO-DPD-23 | Notify Treatment Session Actors on Starting Session | UPS Notification | Thomas Schwere, Sanjay Bari |
| 23 | RO-DPD-221 | RO-DPD-24 | Notify Device to stop UPS | UPS Notification | Thomas Schwere, Sanjay Bari |
| 24 | RO-DPD-222 | RO-DPD-25 | UPS Progress Update for Discrete non-Treatment Steps | UPS Notification | Thomas Schwere, Sanjay Bari |
| 25 | RO-DPD-223 | RO-DPD-26 | Worklist Query for Positioning Correction Reconciliation | Registration | Chris Pauers |
| 26 | RO-DPD-224 | RO-DPD-27 | External Verification | External Verification | Sanjay Bari |
| 27 | RO-DPD-225 | ./. | Notify Device to resume UPS  | Monitoring | Stephen Phillips  |
| 28 | RO-DPD-226 | ./. | Create new Positioning UPS | Monitoring | Stephen Phillips  |
| 29 | RO-DPD-227 | ./. | UPS Final Update after Positioning Information Acquisition | Workflow |  |
| 30 | RO-DPD-228 | ./. | UPS Final Update after Treatment Interruption | Workflow | Thomas Schwere |