Minutes

Discrete Positioning and Delivery Workflow (DPDW)

Conference Call

March 21, 2014

11:00am – 11:55am EST

DPDW Subgroup Chair:

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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:**

Walter Bosch (Wash. Univ. ATC / IROC)

Bruce Curran (Brown Univ. / ASTRO)

Chris Pauser (Accuray)

Sanjay Bari (Elekta)

Martin Vonach (Brainlab)

Ulrich Busch (Varian)

Thomas Schwere (Varian)

Stephen Phillips (Varian)

Nathan Culala (Varian)

# Call to Order

The meeting was started at 11:10 EST.

# Further Discussions

To gain time for main business, this topic was skipped.

# Review of Transaction Assignments

3 Members have provided new content on Transactions:

* Chris Pauer: RO-DPD-211: Worklist Query for Positioning Registration
* Martin Vonach: RO-DPD-200: Worklist Query for Positioning Acquisition
* Thomas Schwere: RO-DPD-218: Create Positioning Acquisition and Positioning Registration UPS

The group went through RO-DPD-211 of Chris Pauer.

RO-DPD-211: Worklist Query for Positioning Registration was reviewed based on the version provided by Chris Pauer. The group discussed through the following items:

1. Input Information Sequence:
RT Patient Position Reference Acquisition Geometry is not needed here, since that is part of the UPS for the PPAS
ACTION: C. Pauer

2. Input Information Sequence:
It was questioned, whether we will always need a RT Registration Instruction. It could be left optional – no decision made yet.

3. OST:
It was re-stated, that the OST is an actor with his own AE Title to handle data objects. This provides the flexibility to defined storage actors for objects to retrieve or new objects to store independent from the TMS actor with its AE Title. However, the TMS is entitled to define the OST actor locations on its' discretion (same provision as in TDW II and IPDW).

3. Input Information Sequence:
May contain other Acquisiton objects? Yes, and it will be useful to add some typical examples (like CT, MR, RT Images), but also state, that devices may expect other items (per Conformance Statement).
ACTION: C. Pauer

4. Input Information Sequence:
The UPS for PPRS will contain the reference object (e.g. CT or RT Images as reference images) populated at the time of scheduling on the TMS. However, after the PPAS has acquired the objects, they need to be added that UPS; so that the PPRS knows whom to register against whom. This should be specified in a new specialized transaction, which will replace RO-21 in Figure 3.4 1 Discrete Positioning Workflow (DPDW 2) Profile Scenario 1.
ACTION: U. Busch (add to scenario and add tx template – tx itself will be assigned later)

5. Figure 3.4 2 Discrete Positioning Workflow (DPDW 2) Profile Scenario 2: RO-DPDW-217 is missing to notify the PPRS to start.
ACTION: U. Busch

6. Worklist Query:
The group discussed the scope of the worklist query: The purpose it to retrieve typically the one UPS, which is relevant for PPRS (and similar for other actors) at this point in the session. The TSM knows the current state of the session.

T. Schwere noted, that such a query would not be needed, if RO-DPD-217 'Notify the Device to Start' could be specified in a way, that the UPS UID is conveyed therein already. In this case a simple N-GET (instead of the queries) would be sufficient. It is anyways not clarified yet, what services the transaction RO-DPDW-217 could use to notify the devices in an individual way.

The chair stated, that this does not invalidate the content definitions of RO-DPD-211 and alike (as RO-DPDW-200 and similar), so we can proceed with the content definition of those transactions. Just the service might change.

Generally we have to sort out how to do RO-DPD-217, and derive from there the way how to retrieve the UPD by the performing device.

The group concluded the review with section 5.211.4.1.2 Message Semantics.

In general it turned out during the review, that various aspects of DPDW beyond the transaction itself have surface up in the course of transaction authoring and review (e.g. missing transactions in scenarios of Volume 1 etc.). The chair noted that this is exactly what is expected and needed now and achieved by transaction authoring. It was very satisfactory to see, that the first review meeting turned out to be quite productive right away in that sense.

# Process / TCons / Meetings

## TCons

**Conclusion**

A solution for a teleconferencing facility would be useful. Lnyc is not appropriate for the meeting (see also below: Post-Meeting Informal Conferencing Test).

For the time being, we will go with ASTRO, if available. Otherwise we look for special solutions for the specific TCon.

ACTION: Everyone is invited to check with his institution, if there is a facility available which he can offer to use.

## Mailing List

The mailing list for the DPDW subgroup is established by Amber Sims.

The address is: iherodpdw2014@mail.aapm.org

## Next DPDW TCon:

* Wednesday, April 23, 2014
11:00am – 13:00pm EST.
The conferencing infrastructure is not determined yet. Members are invited to help out.

# Adjournment

The meeting was adjourned at 11:55 EST.

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**Post-Meeting Informal Conferencing Test:**

After the adjournment of the meeting, the following four attendees made a test using a Lnyc Meeting and an Audio meeting (in this case setup by U. Busch):
Sanjay Bari (Elekta), Martin Vonach (Brainlab), Ulrich Busch (Varian), Thomas Schwere (Varian).

The results have not been satisfactory:

Audio worked with reasonable quality, but could be better.

Lnyc meeting: One could not connect at all. Others could connect, but the connection needed a long time to be available, and the update of the presented content has been pretty slow.

Appendix A: Location and Handling of Documents

Documents are published at the following locations. If you have problems in accessing the document, please contact the Chair (ulrich.busch@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

## DPDW

The DPDW Profile is an IHE-RO document. The current versions of the profiles are always available in the IHE-RO Org Wiki.

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

Please see the current document here:

<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. It is available at the DICOM ftp server:

ftp://d9-workgrps@medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/WG07/Supp160

Appendix B: Task Assignments

Per end this TCon (2014-02-13).

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| --- | --- | --- | --- | --- |
| **TX / Area** | **Old Number** | **Title** | **Group** | **Owner** |
| ./. | ./. | Use Case Delivery-Device Independent Imaging |   | David Wikler |
| RO-DPD-200 | RO-DPD-01 | Worklist Query for Positioning Acquisition | Acquisition | Martin Vonach |
| RO-DPD-201 | RO-DPD-02 | Retrieve Device Position Information | Acquisition | Martin Vonach |
| RO-DPD-202 | RO-DPD-03 | Request RT Patient Position Correction | Correction | Martin Vonach |
| RO-DPD-203 | RO-DPD-04 | Store RT Patient Position Modification Instruction | Correction | Martin Vonach |
| RO-DPD-204 | RO-DPD-05 | Store RT Repositioning Results to Object Storage | Correction | Martin Vonach |
| RO-DPD-205 | RO-DPD-06 | Worklist Query for Repositioning | Correction | Martin Vonach |
| RO-DPD-206 | RO-DPD-07 | Notify on Radiation Delivery Status Change | Delivery | Thomas Schwere, Sanjay Bari |
| RO-DPD-207 | RO-DPD-08 | Retrieve RT Patient Position Correction Instruction | Correction | Martin Vonach |
| RO-DPD-208 | RO-DPD-09 | Subscribe/Unsubscribe to Treat UPS Status | UPS Notification | Thomas Schwere |
| RO-DPD-209 | RO-DPD-10 | Notify on Radiation State | Delivery | Thomas Schwere, Sanjay Bari |
| RO-DPD-210 | RO-DPD-11 | Retrieve Positioning Acquisition Results | Registration | Chris Pauers |
| RO-DPD-211 | RO-DPD-12 | Worklist Query for Positioning Registration | Registration | Chris Pauers |
| RO-DPD-212 | RO-DPD-13 | Worklist Query for Position Monitoring | Monitoring | Andrea Morgan |
| RO-DPD-213 | RO-DPD-16 | Store Monitoring Results to Object Storage | Monitoring | Andrea Morgan |
| RO-DPD-214 | RO-DPD-17 | UPS Final Update at Session Termination | Framework | Thomas Schwere, Sanjay Bari |
| RO-DPD-215 | RO-DPD-18 | UPS Completed / Cancelled at Session Termination | Framework | Thomas Schwere, Sanjay Bari |
| RO-DPD-216 | RO-DPD-19 | Indicate Ready for Monitoring | Monitoring | Andrea Morgan |
| RO-DPD-217 | RO-DPD-20 | Notify Device to start UPS | UPS Notification | Thomas Schwere, Sanjay Bari |
| RO-DPD-218 | RO-DPD-21 | Create Positioning Acquisition and Positioning Registration UPS | Workflow | Thomas Schwere |
| RO-DPD-219 | RO-DPD-22 | Create Treat UPS and Radiation Delivery Instruction for Continuation | Workflow | Thomas Schwere |
| RO-DPD-220 | RO-DPD-23 | Notify Treatment Session Actors on Starting Session | UPS Notification | Thomas Schwere, Sanjay Bari |
| RO-DPD-221 | RO-DPD-24 | Notify Device to stop UPS | UPS Notification | Thomas Schwere, Sanjay Bari |
| RO-DPD-222 | RO-DPD-25 | UPS Progress Update for Discrete non-Treatment Steps | UPS Notification | Thomas Schwere, Sanjay Bari |
| RO-DPD-223 | RO-DPD-26 | Worklist Query for Positiong Correction Reconciliation | Registration | Chris Pauers |
| RO-DPD-224 | RO-DPD-27 | External Verification | External Verification | Sanjay Bari |
| RO-DPD-225 | ./. | Notify Device to resume UPS  | Monitoring | Andrea Morgan |
| RO-DPD-226 | ./. | Create new Positioning UPS | Monitoring | Andrea Morgan |