Minutes

Discrete Positioning and Delivery Workflow (DPDW)

Conference Call

April 26, 2016

11:00am – 12:10pm EST

DPDW Subgroup Chair:

Thomas Schwere, Varian Medical Systems  
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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:**

Thomas Schwere (Varian)

Ulrich Busch (Varian)

Istvan Matyas (Siemens)

Martin Vonach (Brainlab)

Harold Beunk (ICT)

Chris Pauer (Sun Nuclear)

David Wikler (IBA)

# Call to Order

The meeting was started at 11:00am EST.

# General Design Topics

## Extensions in Unified Procedure Step Service and SOP Classes

Uli presented DICOM CP-1557 "Add UPS Assigned Notification Event Type". This CP adds a new event type "UPS Assigned" in the N-EVENT-REPORT which is raised from the SCP whenever the Scheduled Station Name Code Sequence or the Scheduled Human Performers Sequence is changed (during initial creation of the UPS or N-SET later on). This mechanism could be used to support the "Start UPS" transaction of the DPDW. However, for that transaction we already agreed to use existing means of the UPS Service (filtered subscription and issuing the appropriate UPS when it's about to perform it).

During the March meeting Uli presented the white paper about the UPS extensions to WG-07. It turned out that the proposals are well-defined but the rationale for the proposals could be strengthened. Uli will work with Thomas to extend this part. Furthermore the UPS grouping addressed in this paper is actually not needed anymore in DPDW after changing to the new concept having the TSM issuing UPS groups per "atomic unit of work" (see previous meeting minutes). This part will be removed from the paper.

Finally, if these extensions don't get approved by WG-06, we still have the option to define a private service based on the standard UPS services. Therefore the DPDW transactions shall be shaped along the proposed extensions.

## RO-DPD-220 "Notify Treatment Session Actors on Starting Session"

Thomas asked for feedback about the sequence diagram showing the concept of this transaction. Chris had some general questions about this new Treatment Session Orchestration UPS and its relation to the UPS initially coming from the worklist provider. Thomas explained that the new approach is to work on local copies of the original UPS (having their own instance UIDs and states). It's up to the implementer of the TSM when to update the original UPS on the worklist provider using the information from the local UPS (in-session vs. end-of-session update). The Treatment Session Orchestration UPS can be seen as a helper UPS defining the envelope of a treatment session and to which the actors can subscribe on the TSM to get notified about start and end of the session.

## Interruption Handling for Monitoring Use Cases

There was not enough time to discuss the main open issue in the monitoring scenario in detail (which is about how the TDD knows that the treatment session includes monitoring). Chris proposed to have dedicated workitem codes for treatment with and without monitoring. Uli as well as Thomas were reluctant to introduce new workitem codes for this. Discussion will go on offline.

# New version of the DPDW profile

Thomas will rework the DPDW profile along the latest discussions/concepts. The goal is to have a new version available prior to the next TCon.

# Other Business

## Next DPDW TCon

Tuesday, May 24, 2016: 11:00am – 12:30pm EST.

# Adjournment

The meeting was adjourned at 12:10pm 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](mailto: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](mailto: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 |