

Minutes

Discrete Positioning and Delivery Workflow (DPDW)

Conference Call

February 4, 2020

10:30am – 11:30am EST

DPDW Subgroup Chair:

Thomas Schwere, Varian Medical Systems

(thomas.schwere@varian.com)

IHERO Task Force Co-Chairs

Bruce Curran, MEng, FAAPM, FACMP, FACR

Bridget Koontz, 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:

Jill Moton (AAPM)
Thomas Schwere (Varian)
Sanjay Bari (Elekta)
Bob Pekarek (Accuray)
Bruce Rakes (Mevion)
Istvan Matyas (Siemens Healthineers)

1 Call to Order

The meeting was started at 10:30am EST.

2 Reconciliation of Offline Delivery Artifacts

Sanjay provided a first use case: **In Session interruption**

- TDD receives the Plan and worklist item from TMS
- Plan is treated successfully.
- TMS crashes or network is down.

How do you send the treatment records back to TMS for recording?

Option 1:

PUSH – TDD pushes treatment record from TDD to TMS and let the TMS handle to link to correct fraction and worklist items

Option 2:

PULL – TMS will query for the treatment record from TDD

Discussion:

- Option 1: Is this just a C-STORE of the records? TDD would not deal with setting the UPS into a final state (including references to the records in the Output Information Sequence) and closing the UPS? Ideally the TDD stores enough information locally to complete the session on the TMS along the regular transactions once the connection to the TMS is restored (this may be even hours later). This would be kind of a deferred closing of the session.
- PUSH workflow seems to be preferred. TMS could issue a N-EVENT-REPORT (SCP Status Change) once the SCP is restored again.
- Some manual cleanup (including manual recording) may still be needed on TMS for example
 - in case, after a TDD crash, the TDD could not fully recover its internal state and can not close the session along the regular transactions anymore
 - in case the TDD crashed and cannot recover within meaningful time, so the patient has to be sent to a different machine for the completion of the fraction
- At any point in time the TMS should be able to receive treatment records from the TDD.
- To run under the TDW regime, the assumption is that there is always a treatment UPS. Treating w/o UPS is not considered a TDW workflow.
- How to record a session that has been started already in offline mode (by running from a local cache that has been previously populated with the C-FIND RQ/RSP and C-MOVE RQ/RSP)? Dedicated “Record Session” UPS vs. Playback of regular TDW transactions.
- Should we introduce a Session UID? Or is fraction number good enough?
- How to detect/prevent from double recording?
 - Same instance UID can easily be detected by the TMS
 - Other scenario: Manual recording because TDD crashed but later TDD records the same fraction upon successful recovery from the crash (may be hours later).

- Introduce a “flag” on TMS saying that a session was manually closed/recorded on TMS?
- We may introduce a dedicated error code in case the TDD, upon recovery, tries to finalize a UPS that has been manually closed in TMS in the meantime.
- We need something to relate a treatment record to a treatment session. This could then be used to detect if a record is coming in for a session that has already been manually recorded in TMS. TMS may provide tools allowing the user to replace the manually recorded record with that real one from the machine (as this may contain much more details).
- Treatment Session UID (from Supp 199) to be included in the UPS (Scheduled Processing Parameters Sequence introduced with IPDW) and in 1st gen RT Treatment Record. To be discussed in WG-07 in March 2020 meeting.

3 New DPDW Use Cases from Imaging Vendor Workshop

Deferred to next call as Jon Treffert was not in the call.

4 Adjournment

The meeting was adjourned at 10:55am 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](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:

2020.iherodpdw@aapm.org