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MINUTES  
**DICOM WORKING GROUP TWENTY**  
**(Imaging Integration Information Systems)**  
 &  
**HL7 IMAGING INTEGRATION WORK GROUP**  
 May 7-9, 2019  
 @HL7 WGM  
 Montreal, Canada

Presiding Officer: Jonathan Whitby, Vital/Canon  
 DICOM Secretariat: Luiza Kowalczyk, MITA

Present	Organization	Tues Q1	Tues Q2	Tues Q3	Tues Q4	Wed Q1	Wed Q2	Wed Q3	Wed Q4	Thurs Q1	Thurs Q2
Wouter Devriendt	Agfa Healthcare		X			X		X			
John Moehrke	By Light								X		
Kevin O'Donnell	Canon		X	X					X		
Elliot Silver	Change Healthcare	X	X	X		X		X	X	X	X
Ioana Singureanu	Department of Veterans Affairs (VA)					X					
Harry Solomon	DICOM (Laitek)		X								
Ken Sinn	eHealth Ontario					X					
Vlad Epshtein	eHealth Ontario										
Eric Labadie	eHealth Ontario					X					
Arthur Krughkov	eHealth Ontario					X					
David Thabet (P)	eHealth Ontario						X				
Radhika Verma	eHealth Ontario					X					
Joelly Rajendram	eHealth Ontario					X					
Daniel Rutz	Epic			X							
Will Maethner	Epic		X			X		X			
Isaac Vetter	Epic					X		X		X	
Michael Donnelly	Epic							X			

Vassil Peytchev	Epic								X		
Ewout Kramer	FHIR/Furore/HL7								X		
Michael Ruften	Firely								X		
Tamas Maroti	GE Healthcare							X	X		
Steven Nichols	GE Healthcare	X								X	
Nicole Golestani	GS1 Canada						X				
Reinhard Egelkraut	HL7 Austria; CGM Clinical Austria	X	X	X	X	X	X	X	X	X	X
Anthony Julian	Mayo Clinic								X		
Tony Julian (InM)	Mayo Clinic								X		
Luiza Kowalczyk	MITA/DICOM	X	X	X	X	X	X	X	X	X	X
Brad Generoux (P)	NVIDIA	X									
Richard Esmond	PenRad						X				
Chris Melo	Philips		X	X							
Ricardo Quintano	Philips Healthcare					X		X			
Chris Carr	RSNA							X			
Niklas Svenzen	Sectra					X		X		X	
Chuck Edson	Siemens	X	X								
Diana Ovelgoenne	Siemens Healthineers					X					
Andreas Klingler	Siemens Healthineers							X			
Jonathan Whitby	Vital / Canon	X	X	X	X	X	X	X	X	X	X

## 1. Opening

- 1.1. The meeting was called to order at 9:00 Local Time Zone, May 7, 2019
- 1.2. The antitrust rules were reviewed, and DICOM patent policy as well.
- 1.3. The agenda was approved.
- 1.4. Approval of previous minutes was postponed until Thursday of this week.

## 2. Reviewed Workgroup Metrics

- 2.1. Reviewed the Administrative Steering Division Health metrics (administrative SDWorkGroupHealth\_2019May)
- 2.2. Reviewed PBS Metrics  
<https://confluence.hl7.org/display/TSC/2019May+Final+Work+Group+Health+Reports>

## 3. WG-23 DICOM WG-23 Artificial Intelligence/ Application Hosting

- 3.1. Members of WG-23 are working on the DICOM Structured Report. It is a SR working document not the end of the process. Members of WG-23 need to be aware of the mapping between AI results and objects in FHIR
- 3.2. Link to DICOM WG-23 minutes: <http://dicom.nema.org/Dicom/minutes/WG-23/2019/>
- 3.3. **Reminder of upcoming AI meetings:**
  - **AI Coalition** at SIIM 2019 & C-MIMI 2019 [https://siim.org/page/19m\\_ai\\_coalition\\_town\\_hall](https://siim.org/page/19m_ai_coalition_town_hall)
  - **SIIM 2019:** Fri 28 June 2019, 5:15-6:45pm in Adams B at the Gaylord Rockies – call-in will also be available
  - **C-MIMI 2019:** 22-23 Sept 2019, TBD, probably the same, on Monday afternoon

AI Coalition Town Hall: A coalition of medical industry associations including ACR, MITA, DICOM and SIIM will host a town hall to field discussion about the AI & ML challenges faced by the medical imaging community. The first half of the session will highlight the conception and progress of a DICOM project, started by a similar meeting at the September 2018 C-MIMI conference that aims to provide a standardized method for displaying AI results. The second half of the session will be an open forum for interested members to voice concerns about issues like usability, ease of integration, development, or standardization.

- Information for WG-23: Be sure to know how to store AI results in observations. Members of WG-23 need to collaborate with II to make that happen. Where the traceability goes?
4. Joint sessions with Orders and Observations (O&O)
- 4.1. **Link for O&O minutes:** <https://confluence.hl7.org/display/00/00+WGM+Meeting+Minutes+-+May+2019>
- 4.2. Overlap of scope of Media and DocumentReference
- Several proposals were discussed and the merger of Media and DocumentReference was proposed to be trialed.
  - Discussion pages:
    - <https://confluence.hl7.org/pages/viewpage.action?pageId=40735720>
    - <https://confluence.hl7.org/display/IMIN/Draft+of+Change+Proposal+to+merge+Media+and+Document+Reference>
- 4.3. PSS Updates for O&O project that II are co-sponsor for:
- 682 – Specimen CMET: O&O intends to archive
  - 1010 – Ordering Service Interface Spec: O&O intends to change to informative publication. They are interested in keeping it open and moving forward.
  - 1343 – Eye Care on FHIR: This is on hold. Lorraine Constable was the O&O lead, and they will ask her for an update on what the plan is.
  - 1453 – IHE Digital Path Workflow Metadata: this is active.
- 4.4. Other discussion with O&O
- There was a fair amount of discussion of structured reporting for Clinical Genomics, and the Radiology reporting use case was raised. This was primarily around being able to identify sections (Impressions, Background, etc.) around narrative content.
  - II raised the issue of how to convey informal radiology “notes” (i.e., from the tech to the radiologist) which are typically temporary and do not form part of the patient record. It was suggested that we look at the Flag resource. II intends to review how this resource would accomplish this, and if there is a need for change. (For example, there was a suggestion that Flag is missing a focus element of type reference to Any, so that a particular Flag is indicated as relevant to a particular ImagingStudy).

**Action Item:** Include discussion on upcoming II/WG-20 t-con agenda

5. Structured Docs

- 5.1. Part 20, II/WG-20 wants to move this project forward. (2019 September WGM)

6. DMP document

- 6.1. HL7 modified the Decision-Making Process template that all WGs will now use in January 2018. II's previous DMP had significant deviations from the standard DMP due to the DICOM coordination. Brad Geneaux prepared a comparison of the two documents in January of 2018 (<https://confluence.hl7.org/display/IMIN/DMP+Alignment>). II should determine the necessary changes to the current template and ensure it gets adopted/approved.

**Action Item:** Schedule a t-con to review the document. II/WG-20 wants to move forward with it.

7. CIMI – Breast Radiology Reporting Project

- 7.1. Richard Esmond gave a short update on the breast cancer project.
- 7.2. [http://tscwiki.hl7.org/wiki/index.php?title=CIC\\_PSS:\\_Breast\\_Cancer\\_Modeling](http://tscwiki.hl7.org/wiki/index.php?title=CIC_PSS:_Breast_Cancer_Modeling)
- 7.3. Rich confirmed that they are hitting the current ballot cycle. When they have the url, it will be forwarded to DICOM WG-20 II.
- 7.4. If anyone is interested in this project or wants to share any ideas, please contact Richard Esmond, PenRad.
- 7.5. Rich has volunteered to give a presentation to any DICOM WGs that are interested in this project.

**Action Item:** Follow up with Rich on more details of the project-Luiza

8. Dentistry (contact Todd Cooper)

- 8.1. Not discussed

**Action Item:** Follow up with Todd on the status of the project.

9. BRIDG –

Not discussed. There was some work with DICOM in the past but it looks like not much has happened here lately.  
<https://bridgmodel.nci.nih.gov/>

9.1.

**10. InM (Infrastructure and Messaging)** - Since the HL7 CCOW work group was merged into the Infrastructure and Messaging in work group in 2010, the Technical Steering Committee (TSC) thinks that FHIRcast should be under the InM ownership not II/WG-20.

**Action Item:** Reach out to Isaac and InM regarding FHIRcast's ownership-Jonathan

## 11. Sponsored Projects

**11.1. Project 1392 FHIRcast: Application Context Synchronization in FHIR)**

- FHIRcast ballot comment resolution. All resolution will be consolidated in the Ballot Reconciliation spreadsheet.
- Link to comment resolutions:<https://github.com/HL7/fhircast-docs/issues?utf8=%E2%9C%93&q=is%3Aissue+is%3Aopen+label%3Aballot+-label%3Aresolved>
- Link for GitHub: <https://github.com/HL7/fhircast-docs/wiki/FHIRcast-High-Level-Use-Cases>

**11.2. Project 1230: HL7 Endorsement of DICOM PS3.20: Imaging Reports using HL7 CDA**

- We will discuss it in September 2019.

**Action Item:** Plan joint session and discussion for 2019 September WGM. Potentially plan discussion on upcoming II/WG-20 t-con agenda

## 12. Co-sponsor

12.1. [Project 1343](#) (Eye Care and Ophthalmology on FHIR)

- Still on hold (next milestone May 2020, discuss it with O&O)

12.2. [Project 1010](#) (Ordering service interface spec)

- (O&O) Ending project Sep 2019

12.3. [Project 862](#) (Unique Specimen Identifier Requirements)

- Withdrawn/archived.

12.4. [Project 682](#) (Specimen CMET)

- Still on Hold (next milestone January 2019, ending January 2020)

**13. Dental Interop Project #1482** Discussion (II is an "interested party")

**14. Review Imaging Integration 3 Year Plan** ([Project 1315](#))

- No discussion. Next review planned for January of 2020.

## 15. Imaging References:

- There is a need to be able to reference specific instances and frames, or sets of instances (particularly instances in a series making up a volume) from other FHIR resources. To do this, II proposes to bring back ImagingManifest. However, there were concerns about overlap with DICOM KOS use, so ImagingManifest will be modified to more closely target the identified use cases (e.g., removal of multiple study and series references)
- Link: <https://confluence.hl7.org/display/IMIN/ImagingStudy+-+Use+Cases+and+Edge+Cases>
- Review of STU3 ImagingManifest for necessary updates was started:
  - ImagingManifest
    - remove short name
    - Definition: a selection of DICOM SOP instances and/or frames within a single Study and Series.
  - identifier
    - confirm cardinality (probably 0..\*)
    - this should not be a UID or tied to SOP Instance UID since this is specifically not a KOS. Need to figure out what a more appropriate identifier would be.
    - Do we need a separate identifier, or just an id?
    - clear short name
    - definition: ?
  - patient
    - change to subject, and align with ImagingStudy.
  - authoringTime
    - confirm current styling (issued? effective?)
  - author

- consider changing to performer (as per DiagnosticReport and Observation); add PractitionerRole.
  - title
    - change valueset name from KOSTitle. Figure out what the actual value set should be (don't use a DICOM CID).
  - study
    - Remove, and promote all subitems to top level.
  - study.uid
    - Rename to studyUid and change type to id (or is it Identifier?)
  - study.imagingStudy
    - rename to studyReference (?) or basedOn (?) derivedFrom?
  - study.endpoint
    - ok
  - study.series
    - Remove and promote all subitems to top level.
  - study.series.uid
    - rename to seriesUid. Confirm type as id?
  - study.series.endpoint
    - remove
  - study.series.instance
    - ok.
  - study.series.instance.sopClass
    - change to 0..1
  - study.series.instance.uid
    - confirm type as id?
  - study.series.instance.frameNumber
    - ok.
- Review which elements should be in summary. Review against the event pattern. Review against FHIR's W5 pattern.

**Action Item:** Create an action item to move forward with it. New Resource Proposal is needed. -Elliot Silver

#### 16. Tracker Items:

- [17179](#): ImagingStudy status codes - conforming to Event pattern
- [19637](#): Update cardinality of ImagingStudy.procedureReference
- [17441](#): Update description in Endpoint to use DICOMweb thumbnail API
- [17279](#): Confirm ImagingStudy.modality and ImagingStudy.series.modality binding
- 20166: Closed
- [17179](#): ImagingStudy status codes - conforming to Event pattern-Opened
- [19637](#): Update cardinality of ImagingStudy.procedureReference-Solved
- [17441](#): Update description in Endpoint to use DICOMweb thumbnail API
- [17279](#): Confirm ImagingStudy.modality and ImagingStudy.series.modality binding
- 18064:Solved
- 20177 Review and provide additional guidance on ImagingStudy.status – Opened
- 22118 Separate accession number from ImagingStudy.identifier – Opened
- [17441](#): Update description in Endpoint to use DICOMweb thumbnail API-Resolved

**17. Change of leadership of II/WG-20-** We are pleased to announce the appointment of Jonathan Whitby, Senior Analyst at Vital, a Canon Group Company, as the new DICOM WG-20 Imaging Integration Vendor Chair. He has been involved in DICOM standards development since 2009, initially as part of DICOM WG-27 and WG-11 and with Imaging Integration DICOM WG-20 since 2014. Congratulations Jonathan! We look forward to working with you in this new capacity.

#### 18. FHIR-I

18.1. "Topics to consider during this WGM" (email from Lloyd McKenzie)

In addition to thinking about the proposed timelines shared in the FHIR report distributed earlier this evening, work groups are asked to consider the following at this WGM:

1. For those work groups planning to take resources normative in R5, working back from the timelines indicated, what do you need to do to ensure all resources are at FMM 5+ maturity prior to the January cycle review?
2. Do you need any assistance identifying/getting implementation to meet the implementer requirements? Are there any terminology actions you need to take that might involve proposals to external terminology agencies (through the HTA) or going through the HL7 terminology harmonization process (and if so, how soon can you initiate those processes)?
3. What are your FMM targets for your remaining resources?
4. What do you need to do to hit those targets? How will you get there? How will you know you're on track?
5. Is there anyone from your work group who would be good candidates to build skills in IG development and/or IG review?
6. If you're planning to bring forward IGs for ballot, how will you ensure the implementability of those IGs prior to ballot?

- II responded with its intent to get ImagingStudy to normative status for R5, and ImagingManifest to FMM3. The other issues were discussed with FHIR-I representative Ewout Kramer.

#### 19. PPT overview for the June WG-06 Meeting – HL7 Review

- The PPT was reviewed and partly updated.

**Action Item:** Make any necessary updates after the meeting is over-Luiza

#### 20. Next Meetings:

##### T-cons:

FHIRcast ballot comment resolution (Project 1392 FHIRcast: Application Context Synchronization in FHIR)

- Tuesday, May 21, 2019, 10:00-11:00 US ET
- Tuesday, May 28, 2019, 10:00-11:00 US ET
- Thursday, May 30, 2019, 10:00-11:00 US ET
- Tuesday, June 18, 2019, 11:00-12:00 US ET
- Thursday, June 27, 2019, 10:00-11:00 US ET

Regular WG-20 II calls

- Wednesday, May 22, 2019, 10:00-11:00 US ET
- Thursday, June 20, 2019, 10:00-11:00 US ET

**Action Item:** Include a roster of DICOM WG-27 Web Services since there might be some interest in the web sockets in FHIRcast on the DICOM side, and vice versa- Luiza

##### In Person

- HL7 – September 14-20, 2019, Atlanta, GA, 33<sup>rd</sup> Annual Plenary & WGM

**Future Meetings of HL7** <http://www.hl7.org/events/workgroupmeetings.cfm?ref=nav>

##### **2020**

- February 1-7, 2020, Sydney, Australia, International Conference & WGM
  - **Since the 2020 HL7 WGM January meeting will be held in Australia, Sydney, we need to start thinking if II/WG-20 is going to hold a meeting there as well.**

**Action Item:** Communicate with secretaries of WG-2 TC 215, DICOM WG-10 & WG-29 regarding meetings in Sydney.

- May 16-22, 2020, San Antonio, TX, WGM
- September 19-25, 2020, Baltimore, MD, 34<sup>th</sup> Annual Plenary & WGM

#### 21. Adjournment

The meeting was adjourned on Thursday at 12:30 local time.

Submitted by Luiza Kowalczyk, DICOM Secretary

Reviewed by counsel: CRS, May 31, 2019.