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MINUTES
DICOM WORKING GROUP TWENTY
(Imaging Integration Information Systems)
 &
HL7 IMAGING INTEGRATION WORK GROUP
 September 17-19, 2019
 @HL7 WGM
 Atlanta, Georgia

<u>Voting Members Present</u>	<u>Represented by</u>	9/17	9/18	9/19
Agfa HealthCare	Bill Wallace		x	
GE Healthcare	Chris Lindop	x	x	x
Change Healthcare	Elliot Silver	x		
Philips	Chris Melo		x	
Siemens Healthineers	Eric Martin			
Vital/Canon	Jonathan Whitby	x	x	x
<u>Voting Members Not Present</u>	<u>Represented by</u>			
AAPM	Lawrence Tarbox			
ACR	Jim Philbin			
Carl Zeiss	Regis Deshayes			
Canon Medical Research	Kevin O'Donnell			
Corista	David Allen			
Laitek	Fred Behlen			
NCI/CBIIT	Ulrike Wagner			
NVIDIA	Brad Genereaux			
PixelMed	David Clunie			
Sectra	Niklas Svenzen			
Web3D Consortium	Nicholas Polys			
<u>Alternate, Observers, Guests</u>	<u>Represented by</u>			
By Light Professional Services	John Moehrke/HL7		x	
Epic	Isaac Vetter/HL7		x	x
FHIR/Furore/HL7	Ewout Kramer		x	
HL7 Austria and DICOM Usergroup Austria	Reinhard Egelkraut	x	x	x
Mayo Clinic	Anthony Julian	x		
MITA/NEMA	Luiza Kowalczyk	x	x	x
Kaiser Permanente	Sandra Stuart	x		
Regenstrief Institute	Daniel Vreeman		x	

Presiding Officers: Jonathan Whitby, Vital/Canon
Christopher Lindop, GE Healthcare
DICOM Secretariat: Luiza Kowalczyk, MITA/NEMA

1. Opening

- 1.1. The meeting was called to order at 09:00 a.m. local time.
- 1.2. The antitrust rules were reviewed, and DICOM patent policy as well.
- 1.3. The agenda was approved: <https://confluence.hl7.org/display/IMIN/2019-09+WGM>

2. Administrative

- **Announcement of a new co-chair of WG-20 II: Christopher Lindop, GE Healthcare. Congratulations, Chris! Thank you for stepping up to this position!**
- Reviewed PBS Metrics (Sep 2019 interim / [Sep 2019 final](#))
- Reviewed Workgroup Health Metrics (Sep 2019 interim / [Sep2019 final](#))
- Reviewed joint meeting agendas
- DMP document
 - It will be reviewed at the next WG-20 II mtg.
- 3-year plan
 - It will be reviewed at the next WG-20 II mtg.
 - Change in years: from 3 to 5 years.
- HL7 review at the DICOM WG-06 Base Standard 2019 November meeting.
 - Action item: Prepare a PPT for the review.

3. FHIRcast

- FHIRcast work will remain under WG-20 II.
- InM Group (Infrastructure and Messaging) will be the primary sponsor for this project with II as a co-sponsor.
- Members of InM will be invited to participate in each scheduled FHIRcast call.
- STU 1 Ballot
 - Balloted at STU1 May 19, 2019
 - 161 issues
 - Comments addressed and merged in one document.
 - An email went out to withdraw any negative votes.
- Changes from STU 1 Ballot
 - SMART is recommended, not required
 - Events are named based on FHIR resources
 - OAuth scopes got more interesting
 - Remove query for current context
 - Hub.topic is a guid, not url
- Websocket proposal: <https://github.com/HL7/fhircast-docs/wiki/Websocket-proposal>
- Please click on the following link for more details on the FHIRcast roadmap: https://drive.google.com/file/d/1FqCYaKQm1IOZQwuVOhXjfYzr7_mFnEVw/view
- Specification & Documentation:
 - Published: <https://fhircast.hl7.org>
 - Latest: <https://fhircast.org>

- Reference implementation: <https://github.com/fhircast/sandbos>
- Source code: <https://github.com/fhircast>

Next steps:

- Publish STU 1
 - NIB submission
 - Nov. 17th - Notification of intent to Ballot deadline
- HL7 Calendars: <https://confluence.hl7.org/display/HL7/HL7+Calendars>
 - https://confluence.hl7.org/display/HL7/HL7+Calendars?preview=/35717168/51225807/pubs_schedule_2019.pdf
- Websockets support, enable native apps
- Connectathon track: Link for the track in September: <https://confluence.hl7.org/display/FHIR/2019-09+FHIRcast+Track>

Note: If anyone wants to provide any feedback for Websockets for STU 2 ,please go to GitHub: <https://github.com/HL7/fhircast-docs/wiki/Websocket-proposal>

4. Projects

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

Action items:

1. Follow up with Diana .O – L. Kowalczyk
2. Schedule a t-con
3. Remove Elliot Silver as a facilitator from this project: <http://www.hl7.org/special/committees/projman/searchableprojectindex.cfm?action=edit&ProjectNumber=1230>
4.
 - **Project 1343** (Eye Care and Ophthalmology on FHIR)-Ongoing
 - A call will be scheduled with O&O on this project.
 - **Project 1010** (Ordering service interface spec)-Ongoing
 - More lab, pharmacy focused as of now, not imaging yet.
 - II to add use cases
 - Link for OO WGM mtg minutes. Read Q2, 19/9, II, <https://confluence.hl7.org/display/OO/OO+WGM+Meeting+Minutes%3A+September+16-20>
 - **Project 862** (Unique Specimen Identifier Requirements)-Ongoing
 - **Dental Interop Project #1482** Discussion (II is an "interested party")-Ongoing

5. Track Items:

- https://gforge.hl7.org/gf/project/fhir/tracker/?action=TrackerItemEdit&tracker_item_id=22118
- https://gforge.hl7.org/gf/project/fhir/tracker/?action=TrackerItemEdit&tracker_item_id=22144

6. Work in progress

- Please click on the following link to see work in progress:

<https://confluence.hl7.org/display/IMIN/Works+in+Progress>

- **ImageManifest resource**
 - **Reviewed and updated:** Draft of ImagingReference for R5. Please click on the link for more details: <https://confluence.hl7.org/display/IMIN/Draft+of+ImagingReference+for+R5>

The following use cases on Imaging Manifest were discussed:

- 1) Communication of split/sort between applications. Suppose I have an MG study, with 8 objects, TOMO and single-image instance LCC, RCC, LMLLO, RMLLO, and the source systems sends those in as 2 series,

one for all single images and one for all tomos. I'd like to be able to communicate that such a study is sorted into either of: All View types, with single image first, followed by multi-frame in same series. Or, all view types, single image, then all view types tomo. There isn't an obvious other place to put such information.

- 2) Storage of set-aside/remember view – like #1 more or less, but also includes some extra information on what is currently in view, and what GSPS is applied.
- 3) XDS.i synchronization – like to query FHIR to XDS.I without needing any new framework (yes, this is ugly as sin, but it is still useful)
- 4) Communication of measurements AS measurements from imaging application to reporting application – where only the measurement information is of interest, and the reporting application isn't actually showing the image, but needs to ensure exact copying of the measurement. This requires adding some sort of communication of measurement values AS measurement, not as "GSPS". My suggestion is include an AIM/TID.1500 section at the series or instance level.
- 5) FHIRCast – communication of what is currently displayed in given viewports – where we only care about series/instance/frame information that is actually displayed right at the moment (so really a manifest of ONLY what is visible, nothing else. It is complete for that purpose)
- 6) Storage of what to display initially – the problem with XDS.I display is that there is no organization in the manifest. So, if you have a multi-echo MR, all in one series, it doesn't tell you anything. I'd really like something in the manifest that says "display this stuff first, and in this order." Make that available on the XDS.I side as well so that you DON'T have to load every single instance before you can start displaying, and you still don't need to worry about the order of the instances.
- 7) Storage of what images were used for generating a report. So, if the study gets more images after the report is generated, it is obvious exactly what images are new, and it is easy to review just the new stuff. This might reference some series as only for 3d reconstruction (eg thin slice data), which requires slightly more sophisticated references. This could be done with KO, but it isn't QUITE key objects, but rather used/used/viewed/handled images.
- 8) FHIRCast – communication of what key image is currently interesting for a report generation. Note that this is subtly different from storing the key image itself, it is more about the fact that RIGHT NOW this key object got generated and it is what the author of the report is using for the report. It is also probably a dynamic representation, and at the time the author says yes, store this report, then the actual key object gets generated.

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- a) Indication of complete, partial or delta (complete means full reference, partial means reference to everything currently of interest, delta means that it only adds to the previous (if any) manifest)
- b) Indication of suitability for display (suitable means that the images can be displayed in order, and if you don't have enough space, then display the first ones first, or perhaps the marked instances first)
- c) For series, indication that this is a repeat, and a title for the repeat and the reason for this repeat
- d) For series and image level, the annotation relevant to this level (either as GSPS link or as AIM data, or perhaps both)
- e) The purpose of the manifest – with some standard values such as "regrouping", "xds", "fhircast", "set aside" – not sure what all here.

Action Items:

1. Organize the connectathon tracker item for 2020 May.
2. Target for the connectathon in May 2020.
3. Send an email to WG-20 II to see how much interest in it within a group.

7. New Business

8. Next Meetings

T-cons

- Monday, October 7, 2019, 9:00-10:00 US ET, FHIRcast.
 - STU1 Publication Request Review
- Monday, October 28, 2019, 9:00-10:00 US ET, FHIRcast.
 - STU2 Notice of Intent to Ballot Preparation
- Friday, November 15, 2019, 9:00-10:30 US ET, WG-20 II
- Monday, December 16, 2019, 10:00-11:30 US ET, WG-20 II
- Thursday, January 9, 2020, 10:00-11:30 US ET, WG-20 II

Dial-in information: <http://workspaces.nema.org/dicom/Lists/Calendar/calendar.aspx>

Future Meetings of HL7 <http://www.hl7.org/events/workgroupmeetings.cfm?ref=nav>
2020

- **February 1-7, 2020, Sydney, Australia, International Conference & WGM**
 - **Secretary note: WG-20 II will not have an official meeting in Sydney.**
- May 16-22, 2020, San Antonio, TX, WGM
- September 19-25, 2020, Baltimore, MD, 34th Annual Plenary & WGM

9. Adjournment

The meeting was adjourned on Thursday, September 19, 2019, 12:00 p.m. local time.

Submitted by Luiza Kowalczyk, DICOM Secretariat

Reviewed by counsel: Clark Silcox, legal counsel, October 18, 2019.