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MINUTES
DICOM WG-26 Pathology
WSI Annotations Ah-Hoc Group
November 26, 2019

Attendance	Members and Guests	Representing	Member Type
Yes	Dan Hosseinzadeh	Pathcore	DICOM WG26 CoChair
Yes	Mikael Wintell	UGR	DICOM WG26 CoChair
Yes	Kevin Schap	CAP	DICOM Secretariat
Yes	David Clunie	PixelMed	DICOM
Yes	Norman Zerbe	Charite	DICOM
Yes	Gabor Garanyi	3DHISTECH	DICOM
Yes	Matthew Hanna	Kettering Cancer Center	DICOM
Yes	Raj Dash	Duke University Medical Center	IHE
Yes	Uwe Horchner	Roche Tissue Diagnostics	DICOM
Yes	Nick Haarselhorst	Phillips	DICOM
Yes	Fusheng Wang	Stony Brook University	DICOM
Yes	Alex Andryushkin	Corista LLC	DICOM
Yes	Mohit Herani	Spectral Insights	DICOM
Yes	Andrey Fedorov	Harvard University	DICOM
Yes	Lasse Jyrkinen	Neagen	DICOM
Yes	Simon Doran	Institute of Cancer Research	DICOM
Yes	Sean Nichols	Pathcore	DICOM
Yes	Oliver Turner	Novartis	DICOM
Yes	Ulli Wagner	NCI/CBIIT, Leidos Biomedical Research, Inc	DICOM

Opening:

1. David Clunie, called the meeting to order at 9:00 am US Central Time. http://dicom.nema.org/Dicom/DICOMWSI/
2. **Minutes:** No previous minutes because it was the first call for this group.
3. Anti-trust rules were reminded.
4. **Reminder:** Listserv mailing list for WG-26 WSI Annotations: wg26-annotation-ahg@lists.nema.org
    a. Please remember that any individual who wants to send an email to the group, **needs to be** listed on a mailing list for other members to receive that email.

DICOM Annotations for WSI:

Specific deliverables of this group are expected to include:

1. informative guidance (+/- template and code set improvements) to leverage existing DICOM mechanisms (e.g., SEG, SR) for semantically interoperable (i.e., not PS) annotations of relatively small numbers of objects
2. new DICOM IOD for encoding vast numbers (millions) of locations or contours for cellular structures +/- associated measurements and observations (similar perhaps to the MR tractography approach) +/- appropriate compression mechanisms prn.
3. explore the use cases for interactive retrieval of selective annotations or frames +/- define a DICOMweb API extension

This effort will entail:

1. documenting use cases
2. surveying existing proprietary and open source approaches (and the scientific literature)
3. surveying other industry solutions for similar problems (esp., GIS and spatial query databases)
4. exploring options for encouraging adoption in open source commercially reusable implementations (libraries, proprietary converters and viewing and annotation tools)
5. including testing and demonstration of standard annotation creation, storage and visualization in upcoming DICOM WG26 Connectathons
6. liaising with other stakeholder organizations including The Alliance, DPA, API, FDA, IHE, SIIM, NCI, etc
7. liaising with other DICOM WGs, esp. WG 23 AI/ML, WG 27 Web Services

Call Highlights

- Individuals on the call introduced themselves
- Reviewed definition of annotations and various types
- Reviewed DICOM's historic methods of doing annotations
- Noted that this effort is meant to include gross, multispectral, and other types of images and how they can be linked back to the WSI
- Discussion around the need for image converters. Converting images to the standard DICOM format will be necessary for incorporating DICOM annotations
- Discussion around the need to create a query interface for pulling annotation data with images to avoid pulling all annotation data when images are loading

Action items

- Matthew Hanna and Kevin Schap to work together to build a list of vendors and open source tools that documents their coordinate systems, types of graphic data elements used, and methods for storing their annotations.
- All members are to send Kevin Schap questions and additions they would like to have on the agenda.

Documentation

The Group has started this GoogleDoc for documenting the perceived limitations:
https://docs.google.com/document/d/171AddB_Q8Fpg4lG_KxpZDKbCH_xcQ-KL7VPztCy2tms/edit?usp=sharing

Next Meeting

- December 10th at 9:00 AM CST via GoToMeeting (Link Below)
- https://global.gotomeeting.com/join/444448237

Adjournment

The meeting was adjourned at 10:00 CST.

Submitted by Kevin Schap, Secretary of WG-26 Pathology
Reviewed by Luiza Kowalczyk, DICOM Secretariat
Reviewed by counsel: Clark Silcox, November 27, 2019.