Secretariat: MITA
1300 North 17th Street, Suite 900, Arlington, VA 22209, USA
http://www.dicomstandard.org
dicom@dicomstandard.org
+1-703-841-3259

MINUTES

DICOM WG 23: Artificial Intelligence / Application Hosting

Date and Time: **11:00am – 12:00pm US Eastern Time**
Tuesday 20 August 2019

Presiding Officers: Gianluca Paladini, Industry Co-Chair
Lawrence Tarbox, User Co-Chair
DICOM Secretariat Lisa Spellman, DICOM General Secretary MITA

Present	First Name	Last Name	Organization	Voting Status
Present	Lawrence	Tarbox	AAPM/Univ. of Arkansas for Medical Sciences	Voting
Present	Hamid	Neshat	Agfa	Voting
	Jos	Jennes	AGFA HealthCare	Alt. Voting
	Rainer	Wegenkittl	AGFA HealthCare	Observer
	Sander	Smith	Aidence	Observer
	Guy	Reiner	Aidoc	Observer
Present	Kevin	Archie	Ambra Health	Observer
	Fima	Furman	AmbraHealth Inc	Observer
	Chris	Treml	American College of Radiology	Observer
	Steven	Horii	American College of Radiology 2	Alt. Voting
Present	James	Philbin	American College of Radiology 4	Voting
	Gabriela	Bauermann	Animati Computação Aplicada	Observer
	Robert	Godward	Apteryx, Inc.	Observer
	Tyler	Sutton	Apteryx, Inc.	Observer
	Patrick	Williams	Apteryx, Inc.	Observer
	Kenneth	Wang	Baltimore VA Medical Center	Observer
	Doug	Perry	Battelle	Observer
Present	Keith	Houston	Blackford Analysis	Observer
	Matt	Hughes	Calgary Scientific	Observer
	Richard	Neugebauer	Canon Development Americas	Observer
	Andy	Wilson	Canon Medical Research Europe Ltd	Observer
Present	Andy	Smout	Canon Medical Research Europe Ltd.	Observer
Present	Kevin	O'Donnell	Canon Medical Systems USA, Inc.	Voting
	Régis	Deshayes	Carl Zeiss Meditec AG	Voting
Present	John	Moore	Cerner Corporation	Observer
	Dennis	Stuhlman	Cerner Corporation	Observer
	Enis	Kurspahic	Cerner Sweden AB	Observer
Present	Elliot	Silver	Change Healthcare	Voting
	Bryan	Fan	CIMICS	Observer
	Jianming	Qu	CIMICS	Observer
	Chris	Wood	Clario Medical Imaging	Alt. Voting
	Norman	Young	ClearCanvas Inc.	Observer

	Steve	Rankin	Client Outlook Inc.	Observer
	Steve	Lord	DaPict, Inc.	Voting
	Carl	Crawford	DHS/Consultant	Observer
	Daisy	Hurtado	Dignith Health California Hospital Medical Center	Observer
	Paul	Pierre	DISYS Consulting Inc	Observer
	Jeremy	Parry	DLS Pathology Services	Observer
	Don	Jorgenson	Eclipse	Observer
	François	Gousset	ETIAM	Observer
	Gilles	Mevel	ETIAM	Observer
	Robert	Horn	Fairhaven Technologies	Observer
	Jan	Beger	GE Healthcare	Observer
	Dave	Deaven	GE Healthcare	Observer
	Jean	Labarre	GE Healthcare	Observer
	Chris	Lindop	GE Healthcare	Voting
	Tamas	Maroti	GE Healthcare	Observer
	Steven	Nichols	GE Healthcare	Alt. Voting
	Jouke	Numan	GE Healthcare	Observer
	Lino	Ramirez	GE Healthcare	Observer
	Donny	Cheung	Google	Observer
	Mikhail	Fomitchev	Google	Observer
	Patrick	Kling	Google CLoud	Observer
	Dusan	Zelembaba	Google Cloud	Observer
	Andrey	Fedorov	Harvard University	Observer
	Ravi	Managuli	Hitachi Healthcare Americas	Voting
	Thiago	Julio	Hospital Sírio-Libanês	Observer
	Stefan	Oancea	IB Lab GmbH	Observer
	Dennis	Loreman	ICON Plc	Observer
	Carlos Manuel	Azevedo Costa	IEETA-DET	Observer
Present	Michael	Egger	Imagebiopsy	Observer
	Sophie	Kwon	Infinitt Healthcare Co., Ltd.	Alt. Voting
	Ravindran	Padmanabhan	Innowave Healthcare Pvt Ltd.	Observer
	Bernard	Gibaud	Inserm	Observer
	Abhishek	Khowala	Intel Corporation	Observer
	Frederic	Lachmann	Intelerad Medical Systems Incorporated	Observer
	Steve	Pieper	Isomics	Observer
	Jörg	Riesmeier	IT Consultant	Observer
	Gunter	Zeilinger	J4Care GmbH	Observer
	Lev	Barinov	Koios Medical	Observer
	Razvan	Costea-Barlutiu	Laitek Inc.	Observer
	Bogdan	Petrovan	Laitek Inc.	Observer
	Douglas	Sluis	Laitek Inc.	Alt. Voting
	T. Roger	Keane	Laurel Bridge Software, Inc.	Observer
	Andy	Fay	Linxell	Observer
	Monica	Mojica	Mark Twain Medical Center Dignity Health	Observer
	Mathieu	Malaterre	Mathieu Malaterre Consulting	Observer
	Robert	Mehler	MaxQ AI Ltd	Observer
	Misha	Herscu	McCoy Medical Technologies	Observer
Present	Chung-Yueh	Lien	Medical Image Standards Association of Taiwan	Voting
	Iliyas	Ouchikc-Mohamed	Medical Student	
	Mark	Halliday	Medtronic, Inc.	Observer

	Yassin	Jdaoudi	Micrima	Observer
	Dongbai	Guo	Microsoft Corporation	Observer
	Zack	Hornberger	MITA	
Present	Luiza	Kowalczyk	MITA	Alt. Voting
Present	Lisa	Spellman	MITA	Observer
	Mariza	Foster	MRI + Radiology Centre	Observer
	Robert	Leif	Newport Instruments	Observer
	Wo	Chang	NIST	Observer
Present	Sridhar	Balasubramanian	Nuance	Observer
	Sander	Kloet	Nuance Communications	Observer
Present	Brad	Genereaux	NVIDIA	Voting
	Nicholas	Haemel	NVIDIA	
	Risto	Haukioja	NVIDIA	Observer
	Huy	Nam Doan	NVIDIA	Observer
	Michael	Onken	Open Connections GmbH	Observer
	Gareth	Pulham	Optos plc	Observer
	Jeroen	Medema	Philips	Voting
	Chris	Melo	Philips	Observer
	Clemy	van Gogh	Philips	Observer
	Folkert	Tijdens	Pie Medical Imaging BV	Observer
	David	Clunie	PixelMed Publishing	Voting
	Binny	Thomas	ProEmTech Infosystems Pvt. Ltd.	Observer
Present	Chris	Carr	Radiological Society of North America	Observer
	Michael	Owens	RefleXion Medical	Observer
	Oliver	Burgert	Reutlingen University	Observer
	John	Freymann	SAIC-Frederick Inc.	Observer
Present	Daniel	Forsberg	Sectra AB	Observer
	Krister	Valtonen	Sectra AB	Alt. Voting
	Dezheng (Bruce)	Li (Lee)	Shanghai United Imaging Healthcare	Observer
	Thomas	Moeller	Siemens Corporate Research, Inc.	Observer
	Andreas	Klingler	Siemens Healthcare GmbH	Observer
	Ashish	Singh	Siemens Healthcare India	
	Abhijit	Gulab	Siemens Healthineers	Observer
	Bimalendu	Gupta	Siemens Healthineers	Observer
Present	Gianluca	Paladini	Siemens Medical Solutions USA, Inc.	Voting
	Joel	Chabriais	Société Française de Radiologie	Observer
	Hildur	Olafsdottir	Spectralis	Observer
	Stephen	Vastagh	Standards Management Company	Observer
	Michael	Muelly	Stanford University	Observer
Present	Chris	Hafey	StatRad	Observer
	Mani	Benjamin	TeraRecon	Observer
	Ekkehard	Maier	ulrich GmbH & Co. KG	Observer
	Emanuel	Arguinarena	Universidad Nacional del Centro de la Provincia de Buenos Aires - PLADEMA	Observer
	Pierre	Jannin	Universite De Rennes	Observer
	Andrew	Pokropek	University College London	Observer
	Haley	Clark	UBC/British Columbia Cancer Agency	Observer
	Thomas	Schwere	Varian Medical Systems, Inc.	Alt. Voting
	David	McNamara	Virtual Radiologic Corporation	Observer
	Martin	Bellehumeur	Visage Imaging	Observer
	Marc	Kaemmerer	VISUS Health IT GmbH	Observer

	Sebastian	Korber	VISUS Technology Transfer GmbH	Alt. Voting
	Dennis	Schlevoigt	VISUS Technology Transfer GmbH	Alt. Voting
Present	Jonathan	Whitby	Vital Images, Inc.	Alt. Voting

1. **Opening**
   1.1. Welcome and roll call.
   1.2. Antitrust and patent rules review
   1.3. Agenda review and approval.
   1.4. Minutes from 23 July 2019 were approved with no changes.

2. **Use Case 1 & 2 status update review & discussion**

Use Case 1: WG-20/HL7 Passing Discrete Data in the Image Generation Workflow

UC1 Lead: Neil Teneholtz, Chris Lindop

- **Chris Lindop via email:** WG-23 members, I won't be able to call. The IHE Integration Profile proposal, based on our use case has been submitted. Co-collaborators/editors include me, Brad Genereaux, Keith Houston, and Chris Treml. As a minimum, please look at what we put together and volunteer to help. We can continue to do much of the work with this committee as a joint effort. The IHE planning committee meeting will be reviewing and providing their input/approval on August 23rd.
  Link to review: https://docs.google.com/document/d/1OSYGW0J5YC7wRIkNzWJSCz-VVmtQIu4WGF5gSUF3XsE/edit?usp=sharing (link works better when pasted directly into browser.)

- Kevin noted that IHE Planning has a short list of potential items and he encouraged WG feedback
- Kevin submitted an IHE Profile Proposal for JSON representation for when and where systems store, draw from and start to look at content that DICOM not get into such as code sets, display behaviors, and so on
- Please see at: https://wiki.ihe.net/index.php/Radiology_Proposals_2019-2020
- Lawrence noted that NCI-Cancer Institute also looking at AI results reporting

Use Case 2: Passing Discrete Data in the Reading Workflow

UC2 Lead: Steve Pieper

- Use Case 2 was not discussed today

3. **AI-JSON update (Kevin, David)**

- David reviewed on the 23 July tcon. Scope is to create a simple JSON to reflect report results.

Next Steps:

- First read will be Monday 9 September 2019, 1530-1630 at WG-06 meeting
- Public Comment (PC): Targeting November 2019 for Public Comment
- Link to access document: ftp://d9-workgrps:Private15@medical.nema.org/MEDICAL/Private/Dicom/WORKGRPS/WG23/Supnnn_SimpleSRInJSON/
- Several comments were submitted including from Keith Huston, Andrey Federov and others (thank you for the feedback – the editors appreciate the input.)
- Kevin and Lawrence gave a brief overview of the first read process including that the goal of the first read is to focus to assess if the proposal has the right structure, are proposed changes going into the right place and so on. Lawrence reminded that everyone is welcome to attend and listen in person or via tcon
- Link to WG-06 tcon info http://workspaces.nema.org/dicom/Lists/Calendar/DispForm.aspx?ID=3189&Source=http%3A%2F%2Fworkspaces%2Enema%2Eorg%2Fdicom%2FLists%2FCalendar%2Fcalendar%2Easpx

4. Potential for F2F meetings in 2019

4.1 C-MIMI 2019

- C-MIMI: https://siim.org/page/2019cmimi, 22-23 Sept 2019,
- Kevin & Brad spoke with SIIM regarding the AI Town Hall event which has occurred twice: at C-MIMI18 and SIIM19. While not yet finalized, the thinking is that holding the Town Hall once per year would be an appropriate cadence.
- WG-23 will not be meeting in person at C-MIMI19

4.2 Possible joint meeting with WG-27 at RSNA19

- WG-27 might meet on 2019-12-04, 9:00-17:00 local, 10:00-18:00 US ET. If they decide to meet, they would like to meet jointly with WG-23 for 2-3 hours to discuss topics of common interested to include JSON, use case development and other topics.
- Next steps: WG-27's next tcon is 5 Sept – they will decide at that time and let us know.

5. ACR update (Chris Treml)

- No update was given today.

6. Old or New Business

- No old or new business was presented.

7. Next meetings

Teleconference (tcons) (Every other Tuesday, usually 11am – 12pm US ET, unless schedule conflicts)

Tuesday 3 September, 11am-12pm US ET: https://global.gotomeeting.com/join/605193781

Tuesday 17 September, 12:30-1:30pm US ET: https://global.gotomeeting.com/join/760930557

8. Adjournment

The call adjourned at 11.36am US ET. Report prepared by Lisa Spellman, DICOM General Secretary.

Report reviewed by MITA/NEMA legal counsel. CRS, August 20, 2019.