

MINUTES

Joint meeting of DICOM WG 01 Cardiac & Vascular & DICOM WG-12, Ultrasound

Date and Time: Monday 29 July 2019
 10:00am – 11:30 am US ET

Presiding Officers:
 WG-01 User co-chair: Bruce Bray, University of Utah
 WG-01 Vendor co-chair: Antje Schroeder, Siemens-Healthineers
 WG-12 User co-chair: Bruce Bray, University of Utah
 WG-12 Vendor co-chair: Sander Dekker, Cablon Medical

DICOM Secretariat Lisa Spellman, General Secretary, DICOM

WG-01	WG-12	Present	First Name	Last Name	Organization	Voting Status
	Y		Donald	Peck	AAPM	
Y			Bruce	Bray	ACC/University of Utah Health	Voting
	Y	Present	Bruce	Bray	ACC/University of Utah Health	
Y		Present	Paul	Sovellius	Advanced Surgical Visualization Consortium	Observer
	Y		Paul	Sovellius	Advanced Surgical Visualization Consortium	
Y			Paul	Seifert	Agfa	Voting
	Y		Terry	Dillon	Agfa	
	Y		Willy	Rose	Agfa	
Y			Paul	Varghese	American College of Cardiology	Alt. Voting
	Y		Paul	Varghese	American College of Cardiology	
Y			Mythreyi Bhargavan	Chatfield	American College of Radiology	Observer
Y			Peter	Tilkemeier	American Society of Nuclear Cardiology (ASNC)	Voting
	Y		Emmanuel	Cordonnier	b<>com	
Y			Rami	Barti	Bar-Code Computers Ltd.	Observer
Y			Minoru	Mashimo	Bard Electrophysiology - C.R. Bard	Observer
Y			Mati	Amit	Biosense-Webster (ISRAEL) Ltd.	Observer
	Y		Jens	Rasmussen	B-K Medical ApS	
	Y		Hugo	Robert	Bracco Diagnostics Inc.	
	Y	Present	Sander	Dekker	Cablon Medical B.V.	

	Y		Kevin	O'Donnell	Canon Medical Research USA, Inc.	
	Y		Kazuya	Akaki	Canon Medical Systems USA, Inc.	
Y			Satoshi	Oagawa	Cardiovascular Division, Dept of Medicine	Observer
Y			Neil	Weissman	Cardiovascular Research Foundation	Observer
	Y		Christy	Adams	Carestream Health, Inc.	
	Y		Jay	Na	Carestream Health, Inc.	
	Y		Jun	Sun	Carestream Health, Inc.	
	Y		Elliot	Silver	Change Healthcare	
	Y		Edwood	Yiu	Change Healthcare	
	Y		James	Rogers	Coastal Consulting Group, Ltd.	
Y			Katsu	Takenaka	Department of Laboratory Medicine	Observer
Y			Kiyoshi	Yoshida	Division of Cardiology	Observer
Y			Mitchell	Krucoff	Duke University Medical Center	Observer
Y			Donald	Van Syckle	DVS Consulting, Inc.	Observer
	Y		Masao	Kobayashi	EBM Technologies Japan, Inc.	
	Y		Marco	Maglione	Esaote	
	Y	Present	Stefano	Pedri	Esaote	
	Y		Luigi	Pampana-Biancheri	ESAOTE S.p.A.	
Y			Nico	Bruining	European Society of Cardiology	Voting
Y			Robert	Horn	Fairhaven Technologies	Observer
	Y		Wojtek	Grabski	Flux Inc.	
	Y		John	Freeland	Freeland Systems	
	Y		William	Hensen	FUJIFILM Sonosite, Inc.	
Y			Bob	Conway	GE Healthcare	Observer
Y			Brian	Nantz	GE Healthcare	Observer
Y			Steven	Nichols	GE Healthcare	Observer
Y			Francisco	Sureda	GE Healthcare	Observer
	Y		Karl-Heinz	Fleischer	GE Healthcare	
	Y		Steven	Nichols	GE Healthcare	
	Y		Gopi	Pattaswamy	GE Healthcare	
	Y		Brian	Lenz	GE Healthcare, Ultrasound	
Y			Gary	Tearney	Harvard Medical School	Voting
	Y		Bernard	Stumpf	Heartlab	
Y			Ravi	Managuli	Hitachi Healthcare Americas	Voting
	Y		Ravi	Managuli	Hitachi Healthcare Americas	
Y			Yoshikazu	Igeta	Hitachi Medical Corporation	Observer
	Y		Dai	Shinohara	Hitachi, Ltd. Healthcare Business Unit	
	Y		Michel	Claudon	Hôpital d'Enfants - Hôpital Jeanne d'Arc	
	Y		Jean-Yves	Meuwly	Hospices Cantonaux Centre hospitalier universitaire vaudois	
Y			Nitesh	Sawner	IGATE	Observer
Y			Bonnie	WEienr	Imaging Core Lab Services	Observer
	Y		Karla	Patten	Independent Consultant	
	Y		Leodan Vega	Izaguirre	Informatics Science University	

Y			Jörg	Riesmeier	IT Consultant	Observer
	Y		William	Shepherd	iVu Imaging Corporation	
	Y		Varsha	Garg	Jaypee Institute of Information Technology	
	Y		Karan	Grover	Jaypee Institute of Information Technology	
	Y		Jaspreet	Singh	Jaypee Institute of Information Technology	
	Y		Aditya	Jain	JIIT	
	Y		Akshay	Sharma	JIIT	
Y			Jon	Elion	Jon Elion	Voting
Y			Douglas	Sluis	Laitek Inc.	Observer
Y			Harry	Solomon	Laitek Inc.	Alt. Voting
	Y		Douglas	Sluis	Laitek Inc.	
	Y	Present	Harry	Solomon	Laitek Inc.	
Y			Joel	Friedman	LightLab Imaging, Inc.	Voting
Y			Robert	Steinbrecher	LightLab Imaging, Inc.	Alt. Voting
Y			Monica	Mojica	Mark Twain Medical Center Dignity Health	Observer
	Y		Monica	Mojica	Mark Twain Medical Center Dignity Health	
Y			Arvind	Thiagarajan	Matrixview USA Inc.	Observer
	Y		Arvind	Thiagarajan	Matrixview USA Inc.	
Y			Fred	Kusumoto	Mayo Clinic	Observer
Y			Charles	Thomas	Medical Imaging & Informatics Consultant	Observer
	Y		Rebecca	Trunnell Hyman	Merge Healthcare an IBM Company	
Y			Luiza	Kowalczyk	MITA	Observer
Y			Lisa	Spellman	MITA	Observer
	Y		Luiza	Kowalczyk	MITA	
	Y		Lisa	Spellman	MITA	
Y			Mariza	Foster	MRI + Radiology Centre	Observer
Y			Brian	Lunt	MyXrayDose Ltd	Observer
Y		Present	James	Thomas	Northwestern Memorial Hospital	
	Y		James	Thomas	Northwestern Memorial Hospital	
Y		Present	Chris	Melo	Philips	Observer
Y			Ruud	van Silfhout	Philips	Voting
	Y		Earl	Canfield	Philips	
	Y		Haiyuan	Lu	Philips	
	Y		Joe	Luszcz	Philips	
	Y		Easwara	Moorthy	Philips	
	Y	Present	Verena	Rödiger	Philips	
Y			Miranda	Jacobson	Philips Volcano	Observer
	Y		Miranda	Jacobson	Philips Volcano	
Y			Folkert	Tijdens	Pie Medical Imaging BV	Observer
Y		Present	David	Clunie	PixelMed Publishing	Voting
	Y		David	Clunie	PixelMed Publishing	
	Y		Robert	Muratore	Quantum Now LLC	
Y			Rex	Kerr	rk-logix, inc	Observer
	Y		Rex	Kerr	rk-logix, inc	

	Y		Angeline	Cosca	Sdmi	
	Y		Allison	Bertrand	Seno Medical Instruments, Inc.	
	Y		Bryan	Clingman	Seno Medical Instruments, Inc.	
Y			Tat-Jin	Teo	SensorCath Inc.	Observer
	Y		Dezheng (Bruce)	Li (Lee)	Shanghai United Imaging Healthcare	
Y			Shigeru	Saito	ShonanKamakura General Hospital	Observer
Y			Heinz	Blendinger	Siemens Healthcare GmbH	Observer
Y		Present	Antje	Schroeder	Siemens Healthcare GmbH	Observer
	Y		Antje	Schroeder	Siemens Healthcare GmbH	
	Y		Neerja	Baru	Siemens Healthineers	
	Y		Bryan	Brook	Siemens Healthineers	
	Y		Jim	Chapman	Siemens Healthineers	
	Y		Helene	Houle	Siemens Healthineers	
	Y		Jan-Ulco	Kluiwstra	Siemens Healthineers	
	Y		George	Ku	Siemens Healthineers	
	Y		Ernest	Liu	Siemens Healthineers	
	Y		Linda	Perez	Siemens Healthineers	
	Y		Merv	Smith-Casem	Siemens Healthineers	
	Y		Joel	Chabraais	Société Française de Radiologie	
Y			Byrd	Bryan	St. Jude Medical Inc.	Observer
Y			Stephen	Vastagh	Standards Management Company	Voting
	Y		Stephen	Vastagh	Standards Management Company	
	Y		Damien	Lerat	SuperSonic Imagine	
	Y		Jacques	Souquet	SuperSonic Imagine	
Y			Isao	Mori	Terumo Corporation	Observer
Y		Present	Paul	Sovellius	Advanced Surgical Visualization Consortium	Observer
	Y		Paul	Sovellius	Advanced Surgical Visualization Consortium	
	Y		Jens	Stockhausen	TOMTEC IMAGING SYSTEMS	
	Y		Achim	Mayer	TomTec Imaging Systems, GmbH	
	Y		Bernhard	Mumm	TomTec Imaging Systems, GmbH	
	Y		Michael	Douglas	Toshiba America Medical Systems	
	Y		Clare	Anderson	Trillium Technology, Inc.	
	Y		Bill	ZHANG	Ultrasonix Medical Corp	
	Y		Andrew	Pokropek	University College London	
	Y	Present	Zheng Feng	Lu	University of Chicago	
	Y		Paul	Carson	University of Michigan Health System	
	Y		Gregory	Ensing	University of Michigan Medical Center	
Y			John	Hirshfeld	University of Pennsylvania	Observer
Y			Raymond	Bond	University of Ulster	Observer
	Y		David	Linker	University of Washington	
	Y		Craig	Walker	VidiStar, LLC	
	Y		Cristina	Suarez Mejias	Virgen del Rocio University Hospital	
	Y		Jonathan	Whitby	Vital Images, Inc.	
			Bas	Revet		Observer

1. Opening

- 1.1. Open and roll call.
- 1.2. Antitrust and DICOM patent policy review.
- 1.3. Agenda review and approval.
- 1.4. Minutes from 17 June 2019 were approved with no changes.

2. AAPM Quality Assurance Elements status update: (Sander, Harry)

A. Display LUT:

- **Lead:** Dr. Lu and Harry Solomon.
- Review draft survey.

<Action item 1 from 17 June> Create a survey asking user perspective on use cases to include:

- i. Ask what vendors are doing, what they need, how do they support and how do they encode.
 - ii. Translate tech requirements back into originating use cases.
- **Survey Lead:** Harry Solomon
 - Harry reviewed the survey drafts with David and Kevin and a few others prior to this draft which he reviewed on today's tcon. There was general discussion on the survey elements, Harry took notes into the draft.

Next steps:

Action 1: Harry will make the requested updates, place in today's meeting folder and send to WGs-01 & WG-12 as well as to the MITA Ultrasound Section for a final review.

Action 2: <Requested member action>: Once the document is posted in today's meeting folder, members are asked to please review and send to Harry Solomon at hsolomon@laitek.com

- **Survey completion deadline:** 31 September 2019

B. Display LUT

- Not discussed today.

C. **Pixel Map analysis:** Use case – have a physicist describe what they are unable to do today, then group, clarify, review existing tools and do a fit / gap analysis see how current tools able to handle. Ask MITA for feedback and support on the subject.

- **Lead:** Sander Dekker
- Harry has made edits to the CP as requested and submitted to WG-06 which will review in September. A CP number has not yet been issued. Harry will report on progress in September after the WG-06 meeting.
- As reported in June, Sander attended the June MITA Ultrasound Committee call. He felt that most people on the call did not fully understand the Pixel Map Use Case, so he worked with his graphic designers to create a more visual use case presentation to hopefully make easier to understand and especially easy to understand how it is clinically relevant. Sander showed the draft infographics on the call.
- **Next steps:** Sander will show the infographics on the July MITA Ultrasound Committee call and report back to this group on the 26 August call.

D. **CP for Transducer Serial Number:** CP1951

- **Lead:** Kevin O'Donnell
 - Kevin submitted the CP to WG-6 which assigned it number CP1951.
 - No other update was given today.

E. **Other tags on the AAPM proposed attributes list**

- **Lead:** Sander Dekker, Dr. Lu and others from AAPM
- **Status update:** This project is on hold until the Display LUT, PixelMap and Transducer S/N projects have been completed.

3. Report from AAPM Annual Meeting

- Sander reviewed the list of proposed tags with the AAPM Ultrasound subcommittee.
- Feedback included a suggestion to split the remaining list into three separate topics as listed below which are also listed in order of priority as stated by AAPM
- **1st. Protocol Storage:** 1st priority
- **2nd. LUTs for every imaging mode:**
 - There are many tags that correspond to LUT. Goal to get more real-world value for the pixels.
 - QIBA RSNA effort: He will ask them how they use LUTs and are these useful for their purposes
- **3rd. Doppler quality assurance**
- Discussion points included:
- What argument to get engineers to list this in their efforts to sell more scanners?
- It was noted that QUIBA has not gotten as much traction as desired. Focus is creating profiles for clinical research tasks.
- It was also noted that is difficult to get engineers and product managers to pay attention to long lists
- Need to be clear on why quantitative measurements are useful and X is what is needed for the implementations
- Reference links from Bruce Bray:
 - https://qibawiki.rsna.org/index.php/Main_Page
 - <https://www.ahajournals.org/doi/10.1161/HCI.000000000000027>

4. ACC/ASE Key Data Elements for Echo and IAC Accreditation Standards spreadsheet (Antje, Bruce)

- This item continues to be on hold.
- Bruce has been appointed to the ACC/AHA Data Standards Committee and provided a brief update.
- More feedback is needed as to how this harmonizes with current SR tables – might be less than 10% or 20% change overall.
- He anticipates another call with ACC/AHA Data Standards Committee soon.
- David noted would be good to look at coordinated LOINC Codes harmonized thus far
- Work should be done to reflect latest clinical data standards. Harmonization needs to happen with LOINC, DICOM, ACC/AHA and others
- This work appears larger than a CP, so update would probably be a new supplement.

5. Cardiac Strain Structured Reporting status update

- Bruce reviewed the document at ASE with EACVI/ASE/Industry Strain Task Force and indicated that it was a productive meeting, with most of the main vendors and some clinicians in attendance. He presented the draft and there was interest to see this work move forward. They indicated general support for the work we are doing, but need to wait to see what happens to that committee
- The Task Force has been an ad hoc limited term and will probably be switch to an on-going committing joining together US and Europe, it would be good to have this larger outreach including regular collaboration with DICOM as needed. There is interest to continue the effort, and a recognition that the work done in the Strain standardization Group,
- Jim Thomas joined the discussion and noted that one of the challenges includes finding funding for ongoing work.
- There was a discussion of cross-vendor comparison for Strain. The plan is to get these changes into a CP, Bruce & Kevin will work on this.
- It was proposed to next do RV Free Wall Strain and Left Atrial as next priorities.

<Action 3> Create a draft for RV Free Wall Strain and discuss to see if ready to submit as a CP.

- **Leads:** Kevin, Bruce

<Action 4> <Requested member action>: Bruce encouraged people to review the spreadsheet, the 4th Measures tab in particular

https://docs.google.com/spreadsheets/d/16Ndb_dKIVzYDfEwWHWuAqJr-yvcl2sFYLx65XshJERc/edit?usp=sharing

6. MITA Ultrasound Committee

- There were no updates other than what Sander mentioned.

7. Old or New Business

- No old or new business was presented.

8. Next meetings (Tcons – Usually 4th Monday of each month, joint with WG-01)

Monday 26 August 2019, 10:00-11:30am US ET, WG1 & WG12, 2019-08-26, 10:00-11:30am US ET

<https://global.gotomeeting.com/join/509788677>

Monday 23 September 2019, 10:00-11:30am US ET, WG1 & WG12, 2019-09-23, 10:00-11:30am US ET

<https://global.gotomeeting.com/join/708135109>

Monday 28 October 2019, 10:00-11:30am US ET, WG1 & WG12, 2019-10-28, 10:00-11:30am US ET

<https://global.gotomeeting.com/join/299660493>

F2F: No F2F meetings scheduled at this time.

9. Adjourn

The call adjourned at 11:15am US ET. Minutes prepared by Lisa Spellman, DICOM General Secretary.

Report reviewed by MITA/NEMA legal counsel, Clark Silcox September 10, 2019.