

MINUTES

MEETING NAME WG-32

MEETING PLACE/DIAL IN Via Zoom

DATE & TIME Thursday 18 July 2024
 10:00– 11:00 AM Eastern Daylight Time (EDT)

PRESIDING OFFICERS Jonathan J. Halford, Medical University of South Carolina,
 User Co-Chair
 Andrew Ehrenberg, Nihon Kohden Corporation,
 Vendor Co-Chair

IFCN SECRETARIAT Kim Zaiss

DICOM SECRETARIAT Shayna Knazik

Present	First Name	Last Name	Organization	Voting Status
	Emmanuel	Cordonnier	b<>com	Voting
	Kevin	O'Donnell	Canon Medical Research USA, Inc.	Voting
	Felix	Rosenow M.D.	DGKN (German Society of Clinical Neurophysiology and Functional Imaging)	Voting
	Jan	Remi	Ludwig-Maximilians-University of Munich	Voting
Present	Ben	Brinkmann	Mayo Clinic	Voting
Present	Jonathan	Halford	Medical University of South Carolina	Voting
	Andrew	Ehrenberg	Nihon Kohden Corporation	Voting
	Alan	Huang	Philips	Voting
	Wim	Corbijn van Willenswaard	Philips	Alt. Voting
	Justin	Dauwels	TU Delft	Voting
	Jeroen	Medema	Philips	Alt. Voting
	David	Clunie	PixelMed Publishing	Voting
Present	Silvia	Winkler	Sigma Software Solutions	Voting
	Ana	Alves	CortexXus Inc.	Observer
Present	Guiseppe	Campobello	University of Messina	Observer
	David	Alves	CortexXus Inc.	Observer
	Babak	Razavi	CortexXus Inc.	Observer
	Matt	Stead	Dark Horse Neuro, Inc.	Observer
	Andrea	Bigazzi	EB Neuro	Observer
	Gritsch	Gerhard	AIT Austrian Institute of Technology GmbH	Observer
	Mateo	Pratesi	EB Neuro	Observer
	Ignacio Ramírez	Paulino	Facultad de Ingeniería - Universidad de la República	Observer
	Sandor	Benizcky	Filadelfia	Observer

	Steve	Nichols	GE Healthcare	Observer
	Gardar	Thorvardsson	Kvikna / Stratus EEG	Observer
	Richard	Moberg	Moberg Research, Inc.	Observer
	Desire	Jean		Observer
	Casey	Stengel	Neuralynx	Observer
	Bill	Antilla	Nihon Kohden Corporation	Observer
	Ryuzo	Mase	Nihon Kohden Corporation	Observer
	Koichiro	Matsumoto	Nihon Kohden Corporation	Observer
	Pedro Fernando	Arizpe Gomez	OFFIS e. V.	Observer
	Daniel	Crepeau	Dark Horse Neuro	Observer
	Andrey	Pirozhenko	Persyst	Observer
	Shane	Ponzikoff	Persyst	Observer
	Wouter	Potters	Amsterdam UMC, Netherlands	Observer
Present	Stefan	Rampp	University Klinikum Erlangen	Observer
	Dagmar	Krefting	University Medical Center Göttingen	Observer
	Marco	Rossi	University of Milan, Italy	Observer
	Gloria	Menegaz	University of Verona, Italy	Observer
	Matan	Oppenheim	Zebra Medical Vision	Observer
	Jonathan	Pfaff	Fraunhofer Heinrich Hertz Institute HHI	Observer
Present	Gary	Sullivan	ITU-Rapporteur	Observer
	Kristian	Bernard Nilsen	Oslo University Hospital	Observer
Present	NS	Nagarajan	GE Healthcare	Observer
	Bruno	Monnerat		Observer

1. CALL TO ORDER AND REVIEW OF ANTI-TRUST RULES AND DICOM PATENT POLICY

The meeting was called to order at 10:03 AM. Participants were reminded that the Guidelines for Conducting NEMA Meetings and Patent Disclosure Policy are in effect and they may be found here: <https://www.dicomstandard.org/patent>.

2. WELCOME/ATTENDANCE/INTRODUCTION

Attendance was taken.

3. REVIEW AND APPROVE AGENDA

The agenda was reviewed, motion to approve by JH and seconded by BB.

4. REVIEW MINUTES

The minutes of the 20 June 2024 meeting were reviewed, motion to approve by JH and seconded by BB.

responded via email that he would do this. JH stated the funds to support the engineering and computer science work of this subcommittee would be included in an upcoming round of fundraising for IFCN to support the work of WG-32.

- It was discussed that the reference software submitted to ITU-T for the CfP would need to be submitted with a Berkeley Software Distribution (BSD) license, which is a permissive open-source license.
 - Giuseppe Campobello brought up how digital bandpass filtering of clinical EEG data could affect compression performance.
- A planning document for a new IOD for LTM EEG and Sleep Monitoring was circulated several days before this WG-32 telecon. Silvia Winkler stated that encapsulation of data in the DICOM Standard is a complex topic and requested a separate Ad-Hoc telecon during which she could make a PPT presentation on encapsulation of pixel data using image and video codecs in the current DICOM Standard, which could help guide WG-32 development of this new IOD for LTM EEG and Sleep Monitoring. Jon Halford stated that he would create a Doodle Poll within the next week to find a time for this ad-hoc telecon, to be held within the next month and before the next WG-32 monthly telecon. GS requested that ITU-T participants in WG-32 be included in invitation to attend this ad hoc telecon.

5. NEW BUSINESS

- Stefan Rampp reported on his Sensor Name and Location Encoding Subcommittee (SNALES) and presented a document on the topic, which was emailed to WG-32 participants several days before the telecon. He requested that feedback on his document be emailed to him and/or JH.
- It was discussed that, of the potential future WG-32 IOD development projects in the purvey of this subcommittee (objects for encoding intracranial EEG [iEEG], high definition EEG (HDEEG), and magnetoencephalography [MEG]), developing standard encoding for the sensor names and locations of iEEG data is probably the most challenging, because there is greater variability in sensor locations, names of depth and subdural electrode/strips/grids, and different coordinate systems between epilepsy care centers.
 - A question is whether DICOM requires description of sensor locations using a specific coordinate system. Multiple different types of coordinate systems are used in clinical practice and research. It was agreed that this required inquiry.
 - Participants discussed how many of the 81 HDEEG 10-10 Montage electrode locations are already specified as standard sensor locations in the Context Group of the current Standard. SW stated that she thought many of them were. Please see: <https://www.dicomstandard.org/News-dir/ftsup/docs/sups/sup217.pdf> page 33-36.

- It was discussed whether DICOM requires a specific encoding for fiducial types and locations. DICOM does include a Spatial Fiducials Module:
https://dicom.nema.org/dicom/2013/output/chtml/part03/sect_C.21.html

6. UPCOMING WG-32 FACE-TO-FACE MEETINGS

- It was discussed that a FTF WG-32 meeting is being planned on Saturday morning 07 December 2024 at the American Epilepsy Society Annual Conference in Los Angeles CA. (<https://aesnet.org/AES-annual-meeting>). JH will be placing an ICW request to the AES Conference in August 2024 for the telecon.
- DICOM WG-32 will also plan to meet in person at ICCN 2026 in Cartagena, Columbia.

7. DATE AND TIME OF NEXT MEETINGS

Thursday 15 August 2024	10:00- 11:00 am UD ET
Thursday 19 September 2024	10:00- 11:00 am UD ET