

# MINUTES

**MEETING NAME** WG-32

**MEETING PLACE/DIAL IN** Via Zoom

**DATE & TIME** Thursday 20 June 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
	Ben	Brinkmann	Mayo Clinic	Voting
Present	Jonathan	Halford	Medical University of South Carolina	Voting
Present	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	Guisepppe	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
Present	Koichiro	Matsumoto	Nihon Kohden Corporation	Observer
	Pedro Fernando	Arizpe Gomez	OFFIS e. V.	Observer
	Daniel	Crepeau	Dark Horse Neuro	Observer
	Andrey	Pirozhenko	Persyst	Observer
Present	Shane	Ponzikoff	Persyst	Observer
	Wouter	Potters	Amsterdam UMC, Netherlands	Observer
	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
Present	Jonathan	Pfaff	Fraunhofer Heinrich Hertz Institute HHI	Observer
	Gary	Sullivan	ITU-Rapporteur	Observer
Present	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 SP.

#### 4. REVIEW MINUTES

The minutes of the 16 May 2024 meeting were reviewed, motion to approve by JH and seconded by AE.

#### 5. OLD BUSINESS

Silvia Winkler reviewed the following:

- Silvia Winkler discussed Supplement 239 (SR for Waveform Annotations): Final status is text May 2024.  
<https://www.dicomstandard.org/news-dir/current/docs/sups/sup239.pdf>
- Silvia Winkler discussed Supplement 236 (PR for montage and visualization filters): It is currently ready for public comment and will be sent out for public comment phase soon.
- A planning document for a new IOD for LTM EEG and Sleep Monitoring was presented by Jon Halford. This new IOD will incorporate a codec bitstream with blocking and indexing for rapid access. WG-32 reviewed the planning document during the meeting and made edits.
  - It was agreed that there should be one new IOD for both LTM EEG monitoring in the Epilepsy Monitoring Unit (EMU) and Intensive Care Units (ICUs)
  - It was agreed that development of this new IOD by WG-32 should run in parallel with WG-32 working with ITU-T Q6/SG-16 (VCEG) to develop the novel codec for biomedical waveforms.
  - There was discussion of how recording discontinuities should be encoded.
    - It has been mentioned that sometimes recording hardware fails to encode a sample or two. Participants inquired about precisely how this happened. It was decided to try to collect more information about this.
    - In cases of abrupt loss of power, different DICOM objects would be created, but these objects will sum to a single study. It was discussed that this is a similar scenario to if a study is paused
  - Hierarchy for waveform encoding was discussed, in comparison to imaging.
    - Discussion of data structure
    - Discussion how neurophysiology data in the future may have bit depth greater than 16 (such as bit depth 24). Jonathan Pfaff requested access to neurophysiology data with bit depth 24.
- The ITU-T Call for Proposals (CfP) was discussed. A revised CfP was released by ITU-T Q6/SG-16 (VCEG) on 26 Apr 2024 which delayed the deadline for submission of reference software to early Nov 2024.
  - JH stated he planned to submit a summary of the CfP for publication in *Clinical Neurophysiology*. It was discussed that a brief summary of the CfP also needed to be added to the IFCN website.
  - It was discussed that additional vectors of intracranial EEG and EMG data were being collected by JH and will be provided to Q6/SG-16 for public release as part of the CfP.



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

#### 7. DATE AND TIME OF NEXT MEETINGS

Thursday 18 July 2024	10:00- 11:00 am US ET
Thursday 15 August 2024	10:00- 11:00 am UD ET