# Neurophysiology Waveform Presentation

## SUBMITTED BY \_\_\_\_\_\_\_\_\_\_Dr. Jonathan Halford\_\_\_\_\_\_\_\_\_\_

Presenter’s Name

## On Behalf of Working Group \_32\_\_\_\_

(NEUROPHYSIOLOGY DATA)

## Introduction/Scope

This work item proposes to include waveform display information in the DICOM standard. In clinical neurophysiology it is important to be able to recreate the display of the recorded data as it was displayed during the recording or during review and reporting. This is important for example when activity is noted by the operator during recording and that view needs to be recreated post hoc for specialist review.

## Limitations of Current Standard

Currently, the DICOM standard supports only limited display information, which has to be provided within the recorded waveform objects. It is not possible to store many of the display settings used during study recording that are specific to neurophysiology data. The existing attributes only cover color and scaling of waveform channels. There are no mechanisms to store the display montages, i.e. calculative combinations of recorded channels, and display filter settings.

## Description of Proposal

The objective of the proposal is to define a new Information Object which can be used to store and to exchange waveform display information. This Information Object would mainly cover waveform display montages and related display filter settings. The object would be stored together with the recording study (e.g. a Routine Scalp EEG recording).

## Parts of Standard Affected

This work item will affect Parts 2, 3, 4, 6, 15, 16, and 17.

## Resources & Time Line

About 10-15 people are active in Working Group 32. Silvia Winkler, the editor of the last supplement of WG 32 extending the DICOM Waveforms for neurophysiology data, has volunteered to work on writing this supplement. Other active participants in Working Group 32 will assist. It is estimated that the work will take about 12 month. A first draft will be available by June 2022.

It is expected that two hours of Working Group 6 meeting time will be required on each of four occasions during 2022 and 2023 to discuss, review and approve the early draft as well as the public comment, letter ballot, and final text version of the supplement.