

Supplement 237

**HIGH-RESOLUTION ECG**  
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**PUBLIC COMMENT**  
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# Rational

- ECG data is acquired in context of neurophysiology studies
- This ECG is stored using an ECG waveform object
- PS3.17 Annex SSSS recommends to use General ECG Waveform object
- Neurophysiology devices use other physical parameters than ECG devices
  - Higher sampling frequencies:  
sampling frequency is not constrained for neurophysiology waveform objects
  - A/D conversion using up to 32 bits per sample  
Waveform Sample Interpretation for neurophysiology waveform objects can be SS (signed 16 bit linear) or SL (signed 32 bit linear)

## Existing ECG Waveform IODs

SOP Class UID	SOP Class Name	Sampling Frequency Constraint	Waveform Sample Interpretation Constraint
I.2.840.10008.5.1.4.1.1.9.1.1	12-lead ECG Waveform Storage	200 up to 1000 Hz	SS
I.2.840.10008.5.1.4.1.1.9.1.2	General ECG Waveform Storage	200 up to 1000 Hz	SS
I.2.840.10008.5.1.4.1.1.9.1.3	Ambulatory ECG Waveform Storage	50 up to 1000 Hz	SB or SS

## New IOD: High-Resolution ECG

- Shall satisfy the requirements for ECG data acquired in context of neurophysiology studies
- Shall also meet requirements for ECG data
  - Data acquisition with higher sampling frequencies
  - A/D conversion with 32 bits per sample