

**AMWA IS-07  
NMOS Event & TALLY**



# Why do we need IS-07?

- IP-based systems need to be able to exchange a number of different types of data over an open specification protocol
- These must support GPs, sensor readings, UMD data and many other custom communications
- Must work with a range of devices plus physical or virtual control panels

# What is IS-07?

- A protocol that allows a source to publish its state and communicate its state changes to subscribed receivers
- AMWA Interface Specification
- Based on the JT-NM architecture
- Published on GitHub

# Basic Principles

- Source state is exposed over a REST API
- A JSON message is sent to subscribed receivers on state changes
- The message contains:
  - Identity information
  - PTP based timing information
  - Payload (state change)

# State Data Types

- Logical (Boolean)
- String
- Number
- Additional metadata
  - Value lists
  - Range
  - Unit of measure

# Transport Protocols

- WebSocket
  - Standard web protocol, already used by NMOS
  - One-to-one connections
  - Optimal Speed
- MQTT
  - Broker based IoT protocol
  - One-to-many connections
  - Very scalable

# Interaction with the rest of NMOS

- NMOS IS-04
  - IS-07 resources are registered in the registry
  - v1.3 introduces support for the new types
- NMOS IS-05
  - Used for IS-07 connection management
  - v1.1 introduce the extensions to support the new transport protocols
- BCP-002-01 Natural grouping
  - Grouping of senders with the RTP senders

# Use Cases

- An open specification protocol for:
  - GPI replacement
  - Sensor readings
  - Communication between physical or virtual control panels and other devices
  - Annotation of the media streams (e.g. channel name) and metadata transfer (e.g. counters)
  - Custom communication between devices in a system



# IS-07 Demo Participants



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