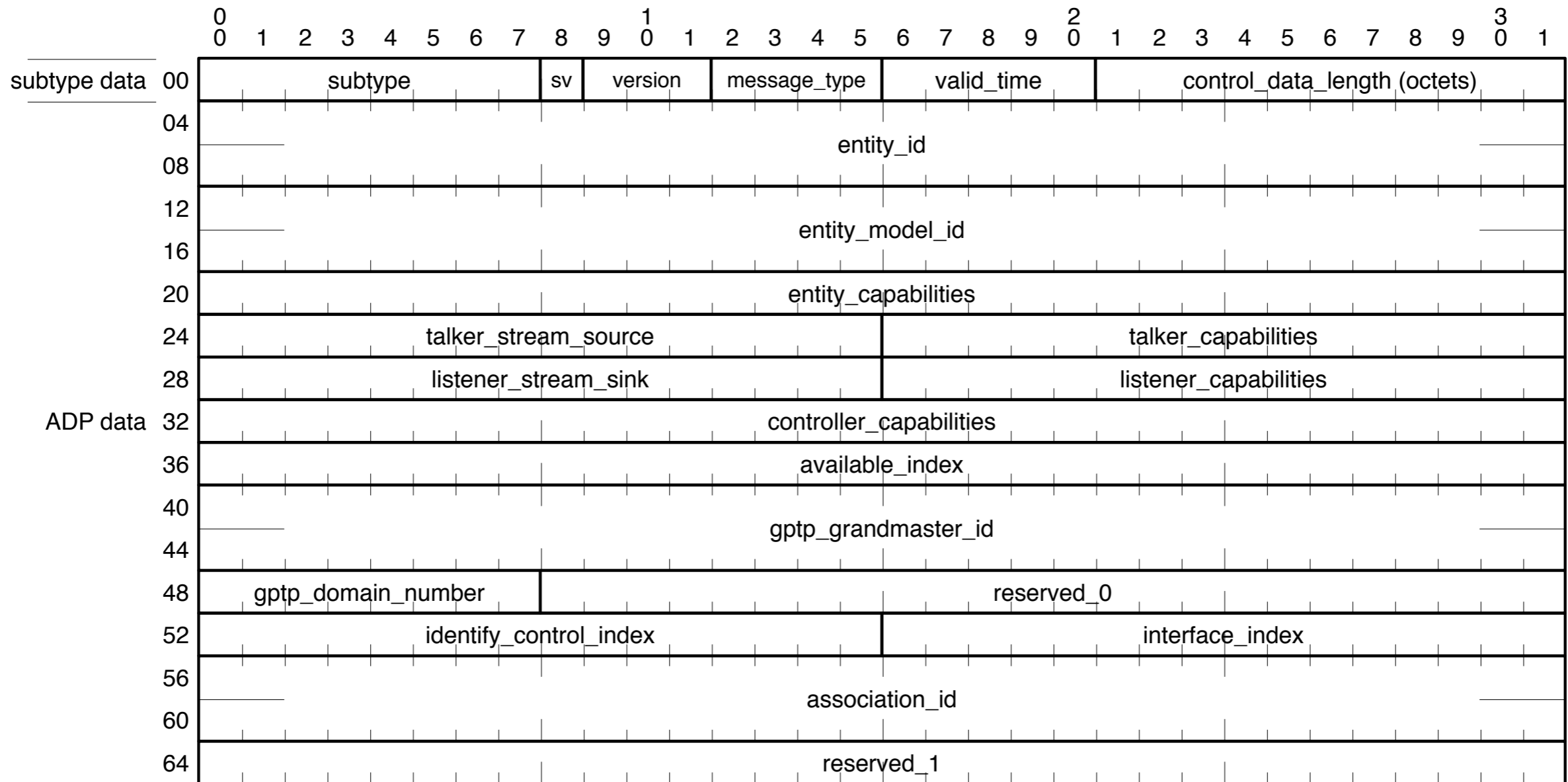




IEEE 1722.1REV - ADP Changes

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New PDU Diagram



Dynamic Entity IDs

- Allows a device to dynamically create multiple Entities each with their own entity_id
 - e.g. based on other I/O being attached, etc.
- Within a session (e.g. between device boots) the dynamic entity_id must be unique but across boots the same entity_id may correspond to different Entities.
- Uses the I/G or M bit of the EUI to specify that it is dynamic.

Additional text for entity_id

An AVDECC Entity is able to use a dynamically assigned Entity ID by setting the I/G (or M) bit of the EUI-64 being used as the Entity ID to one (1).

NOTE—The I/G or M bit is often referred to as the multicast bit when discussing an EUI-48 being used as a MAC address. See <https://standards.ieee.org/develop/regauth/tut/eui.pdf> for details on the I/G or M bit.

Using a dynamic Entity ID does not bypass the requirement for unique Entity ID's on the network. The allocator of dynamic Entity IDs shall ensure that at any time only one AVDECC Entity is assigned a specific Entity ID however the allocator does not have to assign the same Entity ID to a specific AVDECC Entity on each allocation.

Dynamic Entity Models

- Allows a device to dynamically create an AVDECC Entity Model based on environment
 - e.g. Construct an entity model that matches an attached HDMI display or USB audio device.
- Within a session (e.g. between device boots) the dynamic entity_model_id must be unique but across boots the same entity_model_id may correspond to different Entity Models. So cached or pre-read versions must be ignored.
- Uses the I/G or M bit of the EUI to specify that it is dynamic.

Additional text for entity_model_id

An AVDECC Entity is able to use a dynamically assigned Entity Model ID by setting the I/G (or M) bit of the EUI-64 being used as the Entity Model ID to one (1).

When using a dynamic Entity Model ID the AVDECC Controller cannot rely on a cached or pre-read version of the AVDECC Entity Model. Two or more AVDECC Entities with the same dynamic Entity Model ID may have different AVDECC Entity Models.

The allocator of dynamic Entity Model IDs shall ensure that at any time only one AVDECC Entity Model is assigned a specific Entity Model ID however the allocator does not have to assign the same Entity Model ID to a specific AVDECC Entity Model on each allocation.

entity_capabilities additions

- ACMP_ACQUIRE_WITH_AEM
 - Bit: 13
 - Field: 0x00040000
 - ACMP respects any acquisition made with the ACQUIRE_ENTITY AEM Command.
- ACMP_AUTHENTICATE_WITH_AEM
 - Bit: 12
 - Field: 0x00080000
 - ACMP requires that the AVDECC Controller authenticate using the AEM AUTHENTICATE command.

entity_capabilities additions

- SUPPORTS_UDPV4_AVDECC
 - Bit: 11
 - Field: 0x00100000
 - The Entity supports AVDECC via AVTP over UDP using IPv4.

- SUPPORTS_UDPV4_STREAMING
 - Bit: 10
 - Field: 0x00200000
 - The Entity supports streaming via AVTP over UDP using IPv4.

entity_capabilities additions

- SUPPORTS_UDPV6_AVDECC
 - Bit: 9
 - Field: 0x00400000
 - The Entity supports AVDECC via AVTP over UDP using IPv6.
- SUPPORTS_UDPV6_STREAMING
 - Bit: 8
 - Field: 0x00800000
 - The Entity supports streaming via AVTP over UDP using IPv6.

entity_capabilities additions

- AEM_INTERFACE_INDEX_IS_TSN
 - Bit: 7
 - Field: 0x01000000
 - The interface_index field contains the index of a TSN_INTERFACE descriptor rather than an AVB_INTERFACE descriptor.

entity_capabilities additions

- MULTIPLE_GPTP_DOMAINS
 - Bit: 6
 - Field: 0x02000000
 - The interface has multiple gPTP domains and the gPTP fields are not valid (Controller needs to look into GPTP_DOMAIN to determine the gPTP GrandMaster ID).

listener_capabilities additions

- SUPPORTS_FAST_CONNECT
 - Bit: 14
 - Field: 0x0002
 - The AVDECC Listener supports using ACMP Fast Connect mode.
- SUPPORTS_AUTO_RECONNECT
 - Bit: 13
 - Field: 0x0004
 - The AVDECC Listener supports using automatically reconnecting to the AVDECC Talker if it reboots or disappears and reappears.