***Proposed resolution of CID 26 in WG Recirc of P802-REVc/D1.1***

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**Source:**

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**Venue: *802.1 Maintenance TG,* related to P802-REVc/D1.1**

**Abstract:**

This document proposes that the resolution of Comment 26 in the WG Recirculation of P802-REVc/D1.1 should be:

*Implement changes specified in IEEE 802.1-23-0027-00-Mntg*

with the detailed changes shown below.

**Comment 26:**

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| --- | --- | --- | --- | --- |
| Page | Sub-clause | Line | Comment | Proposed Change |
| 38 | 5.2.2 | 16 | EPD and LPD as described in the draft are inconsistent with the usage of those terms in other standards within the IEEE 802 "family", such as 802.11 and 802.1AC. Without significantly redefining EPD and LPD, it will be vital to introduce terms to differentiate two encoding types ("Length/Type encoding" and "LSAP encoding") since the encoding type is more relevant to protocol descriptions and since other IEEE standards erroneously describe EPD and LPD with reference to encoding. | Introduce terms to differentiate two encoding types ("Length/Type encoding" and "LSAP encoding"). |

**Proposed changes to P802-REVc/D1.1**

*Modify page 38 lines 16-28 as follows:*

The higher layer protocol discrimination entity (HLPDE) is used by the LLC sublayer to determine the protocol identifier designating the higher layer protocol to which to deliver an LLC sublayer protocol data unit (PDU). Two methods may be used in the HLPDE. The two methods are:

1. EtherType protocol discrimination (EPD), which uses, as the protocol identifier, the EtherType value made available to the LLC sublayer through the MSAP; and

2) LLC protocol discrimination (LPD), which uses, as the protocol identifier, the LSAP address specified in ISO/IEC 8802-2 or, using a particular form (see 9.4) of the Subnetwork Access Protocol (SNAP) format, an EtherType.

New IEEE 802 standards shall support protocol discrimination in the LLC sublayer using EPD. IEEE 802 standards should support protocol discrimination in the LLC sublayer using LPD.

LSAP addresses and EtherTypes may be encoded as protocol identifiers using LSAP encoding, per ISO/IEC 8802-2. LSAP encoding supports LPD, allowing the decoding of LSAP addresses and, using the RFC 1042 form of SNAP per 9.4, EPD. The general form of SNAP also allows the decoding of private protocol identifiers (neither LSAP addresses nor EtherTypes) under an assigned OUI or CID, as described in 9.5.

LSAP addresses and EtherTypes may be encoded as protocol identifiers using Length/Type (L/T) encoding, as exemplified in IEEE Std 802.3, which uses the value of a Length/Type field to distinguish between EPD and LPD. L/T encoding also allows the decoding of protocol identifiers that are neither LSAP addresses nor EtherTypes, namely:

 • private protocol identifiers under the OUI Extended EtherType, as described in 9.2.4; and

 • experimental protocol identifiers under the Local Experimental EtherType, as described in 9.2.3.

LPD/SNAP should not be used with L/T encoding. L/T encoding, using the LLC encapsulation EtherType of IEEE Std 802.1AC, allows LSAP protocol identifiers to be encoded even when the value of the Length/Type field indicates EPD.

*Modify 9.4 as follows:*

**9.4 LSAP encoding of EtherType Protocol Identifier**

This subclause specifies the standard method for conveying EtherType protocol identifiers using LSAP encoding.

An EtherType Protocol Identifier conveyed on an IEEE 802 network using LSAP encoding shall be encapsulated in a SNAP data unit contained in an LPD PDU of type UI, as follows:

a) The Protocol Identification field of the SNAP data unit shall contain a SNAP identifier in which

1) The first three octets each take the value zero.

2) The two remaining octets take the values, in the same order, of the 2 octets of the EtherType.

b) The Protocol Data field of the SNAP data unit shall contain the user data octets, in order.

NOTE—This method was originally specified in IETF RFC 1042 [B1], which contains recommendations relating to its use. Further recommendations are contained in IETF RFC 1390 [B2].