To the definitions and Abbreviations clauses, add:

General Link (GLK): (From IEEE Std 802.11ak) Communication between two stations (STAs) over the wireless medium suitable for use as a link in the middle of an IEEE Std. 802.1Q conformant network.

These headers are here to provide targets for cross-references:

11.1 Service primitives and parameters

11.2 Status parameters

11.3 Point-to-point parameters

I suggest adding a new Clause 12 before the existing Clause 12, renumbering the existing Clause 12 and subsequent clauses as necessary:

12. PDU and protocol discrimination and media

As described in IEEE Std 802-2014 Clause 9, some media (e.g., IEEE 802.11) employ LLC Protocol Discrimination (LPD) and some media (e.g., IEEE 802.3) employ EtherType Protocol Discrimination (EPD) as the primary means for identifying the protocol that defines the format of the data parameter in their service definitions corresponding to the ISS’s mac_service_data_unit parameter. On LPD media, the first three or four octets of the data are the destination and source Logical Service Access Point identifiers (LSAPs) and one or two Control octets (hence, “LLC”) that together identify the protocol. On EPD media, either the first two octets are the length of the user data in the frame, which is then followed by a three- or four-octet LLC that identifies the protocol, or the first two octets are an EtherType that identifies the protocol.

Since the ISS is Length/Type encoded, a Media Access Method Dependent Convergence Function (see Clause 13) for an medium employing EPD need not transform the mac_service_data_unit parameter when mapping to or from the ISS. A Media Access Method Dependent Convergence Function for a medium employing LPD shall perform the transformations in the following sections.

12.1 M_UNITDATA.request data transformation for LPD media

The following procedure shall be used to convert an ISS mac_service_data_unit parameter, which is Length/Type encoded, to the data parameter of a medium employing LPD.

- a) If the value of the first two octets of the ISS mac_service_data_unit, treated as a 16-bit binary number (with the first octet being the most significant), are in the range hexadecimal 0000–05DC (decimal 0-1500), inclusive, then they constitute a Length field. In that case:
  1) The Length field is removed from the mac_service_data_unit, reducing its size by 2 octets.
  2) If the value in the (removed) Length field is less than the number of octets remaining in the mac_service_data_unit, then the mac_service_data_unit is further truncated, from its last octets, to the value in the Length field.

- b) Otherwise, if the first two octets of the ISS mac_service_data_unit are equal to the value of the LLC encapsulation EtherType in Table 13-1), then that EtherType is removed from the mac_service_data_unit, reducing its size by 2 octets.
c) Otherwise, if the first two octets of the ISS mac_service_data_unit are in the range hexadecimal 0600–FFFF (decimal 1536-4095), inclusive, and are not the value of the LLC encapsulation EtherType in Table 13-1, then the six octets hexadecimal AA-AA-03-00-00-00 are inserted before those first two octets (an EtherType), thus increasing the size of the mac_service_data_unit by 6 octets.

This standard does not specify the behavior of a Media Access Dependent Convergence Function when the Length/Type encoded ISS mac_service_data_unit with a Length/Type value in the range hexadecimal 05DD-05FF, inclusive (decimal 1501-1535).

12.2 M_UNITDATA.indication data transformation for LPD media

The following procedure shall be used to convert the data parameter of a medium employing LPD to an ISS mac_service_data_unit parameter, which is Length/Type encoded:

a) If the first six octets of the data parameter of the specific media access method are hexadecimal AA-AA-03-00-00-00, then those six octets are removed from the data parameter to form the ISS mac_service_data_unit, thus reducing its size by 6 octets.

b) Otherwise, if the length of the data parameter of the specific media access method is 1500 decimal or less, then that length is prepended to the data as a two-octet binary integer, with the first octet being the most significant, to form the ISS mac_service_data_unit.

c) Otherwise, the LLC encapsulation EtherType shown in Table 13-1 is prepended to the data to form the ISS mac_service_data_unit.

<table>
<thead>
<tr>
<th>Table 13-1—LLC encapsulation EtherType</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment</td>
</tr>
<tr>
<td>LLC encapsulation EtherType</td>
</tr>
</tbody>
</table>

a. The value 88-78 will be assigned (and this footnote removed) at the completion of Working Group balloting.

NOTE—Without the LLC encapsulation EtherType, the Length of an indication with more than 1500 octets of data could be, and of an indication with more than 1536 octets would be, mistaken for an EtherType

12.3 Tags in end stations

The result of the conversion rules specified in 12.1 and 12.2, when applied consistently by IEEE Std 802.1Q bridges, is that the mac_service_data_unit parameters with one or more inserted tags are identical for the service interfaces for both LPD media and EPD media, except for the encoding of the very first tag (or the data, if no tag is present). That is, the first tag (or the user data, if no tag) is LPD encoded on LPD media, and Length/Type encoded on EPD media, and all subsequent tags (and the user data, if there is at least one tag) is Length/Type encoded.

For this reason, end stations that transmit tagged frames on LPD media should encode only the outermost tag (or the user data, if no tag) using LPD, and use Length/Type for all remaining tags (or the user data, if any tags are present), and should expect the same format on receipt.
Suggested changes to Clause 12 IEEE P802.1AC-REV Draft 0.2+
September 10, 2014

Copyright © 2013 IEEE. All rights reserved.
This is an unapproved IEEE Standards Draft, subject to change.

Suggested changes for Clause 13 (was clause 12) follow in insert/strikeout.

13. Media Access Method Dependent Convergence Functions

13.2.4 IEEE 802.11 parameter mapping

When an ISS M_UNITDATA.request primitive is received, the IEEE 802.11 convergence function (13.2.1, 13.2.2, or 13.2.3) generates a corresponding IEEE 802.11 MA-UNITDATA.request or IEEE 802.11 DS-UNITDATA.request as follows:

a) The destination_address, source_address, priority, and frame_check_sequence parameters are passed verbatim as the destination address, source address, priority, and frame check sequence parameters, respectively.

b) The M_UNITDATA mac_service_data_unit parameter is passed verbatim as mapped to the MA-UNITDATA or DS-UNITDATA data parameter according to 12.1.

c) The ISS M_UNITDATA drop_eligible, service_access_point_identifier, and connection_identifier parameters are ignored.

NOTE—Drop eligibility is a capability defined in IEEE Std 802.11aa. However, it is not represented in the M_UNITDATA service interfaces.

d) The IEEE 802.11 MA-UNITDATA or DS-UNITDATA routing information parameter is null.

e) The value of the IEEE 802.11 MA-UNITDATA or DS-UNITDATA service class parameter is QoSACK.

When an IEEE 802.11 MA-UNITDATA.indication or DS-UNITDATA.indication primitive is received, the IEEE 802.11 convergence function (13.2.1, 13.2.2, or 13.2.3) generates a corresponding ISS M_UNITDATA.indication as follows:

a) The destination address, source address, priority, and frame check sequence parameters are passed verbatim as the destination_address, source_address, priority, and frame_check_sequence parameters, respectively.

b) The MA-UNITDATA or DS-UNITDATA data parameter is passed verbatim as mapped to the M_UNITDATA mac_service_data_unit parameter according to 12.2.

c) The ISS M_UNITDATA drop_eligible parameter is False.

d) The ISS M_UNITDATA service_access_point_identifier and connection_identifier parameters are null.

e) The IEEE 802.11 MA-UNITDATA or DS-UNITDATA routing information and service class parameters are ignored.