

1 ***To the definitions and Abbreviations clauses, add:***  
2

3 **General Link (GLK):** (From IEEE Std 802.11ak) Communication between two stations (STAs) over the  
4 wireless medium suitable for use as a link in the middle of an IEEE Std. 802.1Q conformant network.  
5

6 ***These headers are here to provide targets for cross-references:***  
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8

9 **11.1 Service primitives and parameters**  
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11 **11.2 Status parameters**  
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13 **11.3 Point-to-point parameters**  
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16 ***I suggest adding a new Clause 12 before the existing Clause 12, renumbering the***  
17 ***existing Clause 12 and subsequent clauses as necessary:***  
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20

21 **12. PDU and protocol discrimination and media**  
22

23 As described in IEEE Std 802-2014 Clause 9, some media (e.g., IEEE 802.11) employ LLC Protocol  
24 Discrimination (LPD) and some media (e.g., IEEE 802.3) employ EtherType Protocol Discrimination  
25 (EPD) as the primary means for identifying the protocol that defines the format of the data parameter in their  
26 service definitions corresponding to the ISS's mac\_service\_data\_unit parameter. On LPD media, the first  
27 three or four octets of the data are the destination and source Logical Service Access Point identifiers  
28 (LSAPs) and one or two Control octets (hence, "LLC") that together identify the protocol. On EPD media,  
29 either the first two octets are the length of the user data in the frame, which is then followed by a three-  
30 four-octet LLC that identifies the protocol, or the first two octets are an EtherType that identifies the  
31 protocol.  
32

33 Since the ISS is Length/Type encoded, a Media Access Method Dependent Convergence Function (see  
34 Clause 13) for a medium employing EPD need not transform the mac\_service\_data\_unit parameter when  
35 mapping to or from the ISS. A Media Access Method Dependent Convergence Function for a medium  
36 employing LPD shall perform the transformations in the following sections.  
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38

39 **12.1 M\_UNITDATA.request data transformation for LPD media**  
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41 The following procedure shall be used to convert an ISS mac\_service\_data\_unit parameter, which is Length/  
42 Type encoded, to the data parameter of a medium employing LPD.  
43

- 44 a) If the value of the first two octets of the ISS mac\_service\_data\_unit, treated as a 16-bit binary  
45 number (with the first octet being the most significant), are in the range hexadecimal 0000–05DC  
46 (decimal 0-1500), inclusive, then they constitute a Length field. In that case:  
47 1) The Length field is removed from the mac\_service\_data\_unit, reducing its size by 2 octets.  
48 2) If the value in the (removed) Length field is less than the number of octets remaining in the  
49 mac\_service\_data\_unit, then the mac\_service\_data\_unit is further truncated, from its last  
50 octets, to the value in the Length field.  
51 b) Otherwise, if the first two octets of the ISS mac\_service\_data\_unit are equal to the value of the LLC  
52 encapsulation EtherType in Table 13-1), then that EtherType is removed from the  
53 mac\_service\_data\_unit, reducing its size by 2 octets.  
54

- 1           c) Otherwise, if the first two octets of the ISS `mac_service_data_unit` are in the range hexadecimal  
2           0600–FFFF (decimal 1536-4095), inclusive, and are not the value of the LLC encapsulation  
3           EtherType in Table 13-1, then the six octets hexadecimal AA-AA-03-00-00-00 are inserted before  
4           those first two octets (an EtherType), thus increasing the size of the `mac_service_data_unit` by 6  
5           octets.

6  
7 This standard does not specify the behavior of a Media Access Dependent Convergence Function when the  
8 Length/Type encoded ISS `mac_service_data_unit` with a Length/Type value in the range hexadecimal  
9 05DD-05FF, inclusive (decimal 1501-1535).

## 12.2 M\_UNITDATA.indication data transformation for LPD media

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

- 15  
16  
17           a) If the first six octets of the data parameter of the specific media access method are hexadecimal AA-  
18           AA-03-00-00-00, then those six octets are removed from the data parameter to form the ISS  
19           `mac_service_data_unit`, thus reducing its size by 6 octets.  
20           b) Otherwise, if the length of the data parameter of the specific media access method is 1500 decimal or  
21           less, then that length is prepended to the data as a two-octet binary integer, with the first octet being  
22           the most significant, to form the ISS `mac_service_data_unit`.  
23           c) Otherwise, the LLC encapsulation EtherType shown in Table 13-1 is prepended to the data to form  
24           the ISS `mac_service_data_unit`.

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26  
27 **Table 13-1—LLC encapsulation EtherType**

Assignment	Value <sup>a</sup>
LLC encapsulation EtherType	XX-XX

- 28  
29  
30  
31  
32  
33           a. The value 88-78 will be as-  
34           signed (and this footnote re-  
35           moved) at the completion of  
36           Working Group balloting.

37  
38 NOTE—Without the LLC encapsulation EtherType, the Length of an indication with more than 1500 octets of data  
39 could be, and of an indication with more than 1536 octets would be, mistaken for an EtherType

## 12.3 Tags in end stations

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43 The result of the conversion rules specified in 12.1 and 12.2, when applied consistently by IEEE Std 802.1Q  
44 bridges, is that the `mac_service_data_unit` parameters with one or more inserted tags are identical for the  
45 service interfaces for both LPD media and EPD media, except for the encoding of the very first tag (or the  
46 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  
47 Length/Type encoded on EPD media, and all subsequent tags (and the user data, if there is at least one tag) is  
48 Length/Type encoded

49  
50  
51 For this reason, end stations that transmit tagged frames on LPD media should encode only the outermost  
52 tag (or the user data, if no tag) using LPD, and use Length/Type for all remaining tags (or the user data, if any  
53 tags are present), and should expect the same format on receipt.

1 *Suggested changes for Clause 13 (was clause 12) follow in insert/~~strikeout~~.*  
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## 4 **13. Media Access Method Dependent Convergence Functions** 5

### 6 **13.2.4 IEEE 802.11 parameter mapping** 7

8 When an ISS M\_UNITDATA.request primitive is received, the IEEE 802.11 convergence function (13.2.1,  
9 13.2.2, or 13.2.3) generates a corresponding IEEE 802.11 MA-UNITDATA.request or IEEE 802.11  
10 DS-UNITDATA.request as follows:  
11

- 12 a) The destination\_address, source\_address, priority, and frame\_check\_sequence parameters are  
13 passed verbatim as the destination address, source address, priority, and frame check sequence  
14 parameters, respectively.
- 15 b) The M\_UNITDATA mac\_service\_data\_unit parameter is ~~passed verbatim as~~ mapped to the  
16 MA-UNITDATA or DS-UNITDATA data parameter according to 12.1.
- 17 c) The ISS M\_UNITDATA drop\_eligible, service\_access\_point\_identifier, and connection\_identifier  
18 parameters are ignored.  
19

20 NOTE—Drop eligibility is a capability defined in IEEE Std 802.11aa. However, it is not represented in the  
21 M\_UNITDATA service interfaces.  
22

- 23 d) The IEEE 802.11 MA-UNITDATA or DS-UNITDATA routing information parameter is null.
- 24 e) The value of the IEEE 802.11 MA-UNITDATA or DS-UNITDATA service class parameter is  
25 QoSAck.  
26

27 When an IEEE 802.11 MA-UNITDATA.indication or DS-UNITDATA.indication primitive is received, the  
28 IEEE 802.11 convergence function (13.2.1, 13.2.2, or 13.2.3) generates a corresponding ISS  
29 M\_UNITDATA.indication as follows:  
30

- 31 a) The destination address, source address, priority, and frame check sequence parameters are passed  
32 verbatim as the destination\_address, source\_address, priority, and frame\_check\_sequence  
33 parameters, respectively.
- 34 b) The MA-UNITDATA or DS-UNITDATA data parameter is ~~passed verbatim as~~ mapped to the  
35 M\_UNITDATA mac\_service\_data\_unit parameter according to 12.2.
- 36 c) The ISS M\_UNITDATA drop\_eligible parameter is False.
- 37 d) The ISS M\_UNITDATA service\_access\_point\_identifier and connection\_identifier parameters are  
38 null.
- 39 e) The IEEE 802.11 MA-UNITDATA or DS-UNITDATA routing information and service class  
40 parameters are ignored.  
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