
**IEEE P802.11
Wireless LANs**

**Ballot result and summary of major changes to IEEE 802.11/D4
Rev.**

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Ballot result

The LMSC ballot on IEEE P802.11 closed on May 13, 1998 with the following result:

90		Number of eligible people in Ballot Group
<hr/>		
68		Affirmative votes
0		Negative votes
4		Abstention votes
72		Votes = 80 % Returned (75 % required)
		5 % Abstention
68		Affirmative votes
0		Negative votes
68		Votes = 100 % Affirmative

5 voters submitted comment

These comments were addressed and the disposition of the comment is contained in doc.: 98/213.
The resolution resulted in changes, some of which can be considered to be technical. The full file is available in doc.: 802.11rev/D5.1.

The major changes are summarised in the remainder of this document.

List of major changes made in IEEE P802.11rev

Addition of new notification and other objects related to disassociation and authentication:

```

4 dot11Deauthenticate NOTIFICATION-TYPE
5     OBJECTS { ifIndex, dot11DeauthenticateReason,
6               dot11DeauthenticateStation }
7     STATUS current
8     DESCRIPTION
9
10    "The deauthenticate notification shall be sent when the STA
11    sends a Deauthentication frame. The value of the notification
12    shall include the MAC address of the MAC to which the Deauthentication
13    frame was sent and the reason for the deauthentication.
14
15    ifIndex - Each 802.11 interface is represented by an
16    ifEntry. Interface tables in this MIB module are indexed
17    by ifIndex."
18
19    ::= { dot11SMTnotification 0 2 }
20
21 dot11AuthenticateFail NOTIFICATION-TYPE
22     OBJECTS { ifIndex, dot11AuthenticateFailStatus,
23               dot11AuthenticateFailStation }
24     STATUS current
25     DESCRIPTION
26
27    "The authenticate failure notification shall be sent when the STA
28    sends an Authentication frame with a status code other than
29    "successful". The value of the notification
30    shall include the MAC address of the MAC to which the Authentication
31    frame was sent and the reason for the authentication failure.
32
33    ifIndex - Each 802.11 interface is represented by an
34    ifEntry. Interface tables in this MIB module are indexed
35    by ifIndex."
36
37    ::= { dot11SMTnotification 0 3 }
38
39 dot11DisassociateReason OBJECT-TYPE
40     SYNTAX INTEGER(0..65535)
41     MAX-ACCESS read-only
42     STATUS current
43     DESCRIPTION
44         "This attribute holds the most recently transmitted Reason
45         Code in a Disassociation frame. If no Disassociation frame
46         has been transmitted, the value of this attribute shall be
47         0."
48
49     REFERENCE "IEEE Std 802.11-1997, 7.3.1.7"
50     ::= { dot11StationConfigEntry 15 }
51
52 dot11DisassociateStation OBJECT-TYPE
53     SYNTAX MacAddress
54     MAX-ACCESS read-only
55     STATUS current
56     DESCRIPTION
57         "This attribute holds the MAC address from the Address 1
58         field of the most recently transmitted Disassociation frame.
59         If no Disassociation frame has been transmitted, the value
60         of this attribute shall be 0."
61     ::= { dot11StationConfigEntry 16 }
62
63 dot11DeauthenticateReason OBJECT-TYPE
64     SYNTAX INTEGER(0..65535)

```

```

1      MAX-ACCESS read-only
2      STATUS current
3      DESCRIPTION
4          "This attribute holds the most recently transmitted Reason
5          Code in a Deauthentication frame.  If no Deauthentication
6          frame has been transmitted, the value of this attribute
7          shall be 0."
8
9      REFERENCE "IEEE Std 802.11-1997, 7.3.1.7"
10     ::= { dot11StationConfigEntry 17 }
11
12 dot11DeauthenticateStation OBJECT-TYPE
13     SYNTAX MacAddress
14     MAX-ACCESS read-only
15     STATUS current
16     DESCRIPTION
17         "This attribute holds the MAC address from the Address 1
18         field of the most recently transmitted Deauthentication
19         frame.  If no Deauthentication frame has been transmitted,
20         the value of this attribute shall be 0."
21     ::= { dot11StationConfigEntry 18 }
22
23 dot11AuthenticateFailStatus OBJECT-TYPE
24     SYNTAX INTEGER(0..65535)
25     MAX-ACCESS read-only
26     STATUS current
27     DESCRIPTION
28         "This attribute holds the most recently transmitted Status
29         Code in a failed Authentication frame.  If no failed
30         Authentication frame has been transmitted, the value of this
31         attribute shall be 0."
32
33     REFERENCE "IEEE Std 802.11-1997, 7.3.1.9"
34     ::= { dot11StationConfigEntry 19 }
35
36 dot11AuthenticateFailStation OBJECT-TYPE
37     SYNTAX MacAddress
38     MAX-ACCESS read-only
39     STATUS current
40     DESCRIPTION
41         "This attribute holds the MAC address from the Address 1
42         field of the most recently transmitted failed Authentication
43         frame.  If no failed Authentication frame has been
44         transmitted, the value of this attribute shall be 0."
45     ::= { dot11StationConfigEntry 20 }

```

46 **Clarification of the WEP secret key and IV**

47

48 **102. In the ninth paragraph of 8.2.3, replace the sentence** “The 64-bit PRNG seed is formed
49 using the secret key as the most significant 40 bits and the initialization vector (IV) as the least
50 significant 24 bits.” **with** “The PRNG seed is 64 bits. Bits 0 through 23 of the IV correspond to
51 bits 0 through 23 of the PRNG seed, respectively. Bits 0 through 39 of the secret key correspond
52 to bits 24 through 63 of the PRNG seed, respectively. The bit and octet numbering conventions
53 in 7.1.1 apply to the PRNG seed, secret key, and the IV. The numbering of the octets of the
54 PRNG seed corresponds to that of the RC4 key.”

55 **Deprecation of dot11StationID**

```

56 Dot11StationConfigEntry ::=
57     SEQUENCE {
58         dot11StationID
59         dot11MediumOccupancyLimit
60         dot11CFPollable
61         MacAddress,
62         INTEGERInteger32,
63         TruthValueINTEGER,

```

1	dot11CFPPeriod	<u>INTEGERInteger32,</u>
2	dot11CFPMaxDuration	<u>INTEGERInteger32,</u>
3	dot11AuthenticationResponseTimeOut	<u>INTEGERInteger32,</u>
4	dot11PrivacyOptionImplemented	INTEGER,
5	dot11PowerManagementMode	INTEGER,
6	dot11DesiredSSID	OCTET STRING,
7	dot11DesiredBSSType	INTEGER,
8	dot11OperationalRateSet	OCTET STRING,
9	dot11BeaconPeriod	<u>INTEGERInteger32,</u>
10	dot11DTIMPeriod	<u>INTEGERInteger32,</u>
11	dot11AssociationResponseTimeOut	<u>INTEGERInteger32,</u>
12	dot11DisassociateReason	<u>INTEGER,</u>
13	dot11DisassociateStation	<u>MacAddress,</u>
14		
15	dot11DeauthenticateReason	INTEGER,
16	dot11DeauthenticateStation	MacAddress,
17	dot11AuthenticateFailStatus	INTEGER,
18	dot11AuthenticateFailStation	MacAddress }
19		
20	dot11StationID OBJECT-TYPE	
21	SYNTAX MacAddress	
22	MAX-ACCESS read-write	
23	STATUS deprecated current	
24	DESCRIPTION	
25		
26		"The purpose of dot11StationID is to allow a manager to identify
27		a station for its own purposes. This attribute provides
28		for that eventuality while keeping the true MAC address
29		independent. Its syntax is MAC address and default value
30		is the station's assigned, unique MAC address."
31		
32		::= { dot11StationConfigEntry 1 }
33		

34 **Setting ranges in the MIB on many attributes to minimize storage requirements**

35 **Change the Registration of notification objects in the MIB to comply with SMIv2**

36
37 The changes on the latter 2 items, and editorial changes, are provided on the next pages.

19. In 11.2.1.1 and 11.2.1.9, replace the first occurrence of “aListenInterval-MIB-attribute” with “the ListenInterval parameter of the MLME-Associate.request primitive”. Replace the second occurrence of “aListenInterval” in 11.2.1.9 with “ListenInterval”.

26. In 14.6.8, replace “72” in set 3 for North America/most of Europe with “71” and replace “f_x(I)” with “f_x(i)”.

34. In 15.3.2, Table 58, change:

- “dot11CCAModeSupport” into “dot11CCAModeSupported”
- “dot11SupportTxAntennas” into “dot11SupportedTxAntenna”
- “dot11SupportRxAntennas” into “dot11SupportedRxAntenna”
- “dot11DiversitySelectRx” into “dot11DiversitySelectionRx”
- “agPhyOperationGroup” into “dot11PhyOperationComplianceGroup”
- “agPhyRateGroup” into “dot11PhySupportedDataRatesGroup”
- “agPhyAntennaGroup” into “dot11PhyAntennaComplianceGroup”
- “agPhyTxPowerGroup” into “dot11PhyTxPowerComplianceGroup”
- “agPhyDSSSGroup” into “dot11PhyDSSSComplianceGroup”
- “agAntennasListGroup” into “dot11AntennasListGroup”

36. In 16.4, Table 74, delete the rows of the following attributes:

and add a row to Table 74

dot11PhyTempType	X'01'	Static	Identical for all conformant PHY
------------------	-------	--------	----------------------------------

```

-- *****
-- * IEEE 802.11 Management Information Base
-- *****
IEEE802dot11-MIB DEFINITIONS ::= BEGIN
  IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE,
    NOTIFICATION-TYPE, Integer32, Counter32 FROM SNMPv2-SMI
    DisplayString , MacAddress, RowStatus FROM SNMPv2-TC
    TruthValue FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF
    ifIndex FROM RFC1213-MIB;
-- *****
-- * MODULE IDENTITY
-- *****
ieee802dot11 MODULE-IDENTITY
  LAST-UPDATED "9805280000Z9801300000Z"
  ORGANIZATION "IEEE 802.11"
  CONTACT-INFO
    "WG E-mail: stds-802-11@ieee.org

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5              151A Charles Street
6              New York, NY 10014 USA
7      Tel: +1 212 463 7937
8      Fax: +1 212 645 6719
9      E-mail: bob@informed-technology.com"
10     DESCRIPTION
11         "The MIB module for IEEE 802.11 entities.
12         iso(1).member-body(2).us(840).ieee802dot11(10036)"
13         ::= { 1 2 840 10036 }
14
15     -- *****
16     -- * MIB attribute OBJECT-TYPE definitions follow
17     -- *****
18
19     -- *****
20     -- * SMT Station Config Table
21     -- *****
22     dot11StationConfigTable OBJECT-TYPE
23         SYNTAX SEQUENCE OF Dot11StationConfigEntry
24         MAX-ACCESS not-accessible
25         STATUS current
26         DESCRIPTION
27             "Station Configuration attributes. In tabular form to
28             allow for multiple instances on an agent."
29         ::= { dot11smt 1 }
30
31     dot11StationConfigEntry OBJECT-TYPE
32         SYNTAX Dot11StationConfigEntry
33         MAX-ACCESS not-accessible
34         STATUS current
35         DESCRIPTION
36
37             "An entry in the dot11StationConfigTable. It is
38             possible for there to be multiple IEEE 802.11 interfaces
39             on one agent, each with its unique MAC address. The
40             relationship between an IEEE 802.11 interface and an
41             interface in the context of the Internet-standard MIB is
42             one-to-one. As such, the value of an ifIndex object
43             instance can be directly used to identify corresponding
44             instances of the objects defined herein.
45
46             ifIndex - Each 802.11 interface is represented by an
47             ifEntry. Interface tables in this MIB module are indexed
48             by ifIndex."
49
50
51         INDEX {ifIndex}
52         ::= { dot11StationConfigTable 1 }
53
54
55     dot11MediumOccupancyLimit OBJECT-TYPE
56         SYNTAX INTEGERInteger32 (0..1000)
57         MAX-ACCESS read-write
58         STATUS current
59         DESCRIPTION
60
61             "This attribute shall indicate the maximum amount of time,
62             in TU, that a point coordinator may control the usage of
63             the wireless medium without relinquishing control for long
64             enough to allow at least one instance of DCF access to the
65             medium. The default value of this attribute shall be 100,
66             and the maximum value shall be 1000."
67

```

```

1      ::= { dot11StationConfigEntry 2 }
2
3  dot11CFPollable OBJECT-TYPE
4      SYNTAX TruthValueINTEGER { true(1), false(2) }
5      MAX-ACCESS read-only
6      STATUS current
7      DESCRIPTION
8
9      "When this attribute is true, it shall indicate that the STA
10     is able to respond to a CF-Poll with a data frame within a
11     SIFS time. This attribute shall be false if the STA is not
12     able to respond to a CF-Poll with a data frame within a SIFS
13     time."
14
15     ::= { dot11StationConfigEntry 3 }
16
17  dot11CFPPeriod OBJECT-TYPE
18      SYNTAX INTEGERInteger32 (0..255)
19      MAX-ACCESS read-write
20      STATUS current
21      DESCRIPTION
22
23      "The attribute shall describe the number of DTIM intervals
24      between the start of CFPs. It is modified by
25      MLME-START.request primitive."
26
27     ::= { dot11StationConfigEntry 4 }
28
29  dot11CFPMaxDuration OBJECT-TYPE
30      SYNTAX INTEGERInteger32 (0..65535)
31      MAX-ACCESS read-write
32      STATUS current
33      DESCRIPTION
34
35      "The attribute shall describe the maximum duration of the CFP
36      in TU that may be generated by the PCF. It is modified by
37      MLME-START.request primitive."
38
39     ::= { dot11StationConfigEntry 5 }
40
41  dot11AuthenticationResponseTimeOut OBJECT-TYPE
42      SYNTAX INTEGERInteger32 (1..4294967295)
43      MAX-ACCESS read-write
44      STATUS current
45      DESCRIPTION
46
47      "This attribute shall specify the number of TU that a
48      responding STA should wait for the next frame in the
49      authentication sequence."
50
51     ::= { dot11StationConfigEntry 6 }
52
53  dot11PrivacyOptionImplemented OBJECT-TYPE
54      SYNTAX INTEGER { true(1), false(2) }
55      MAX-ACCESS read-only
56      STATUS current
57      DESCRIPTION
58
59      "This attribute, when true, shall indicate that the IEEE
60      802.11 WEP option is implemented. The default value of
61      this attribute shall be false."
62
63     ::= { dot11StationConfigEntry 7 }
64
65  dot11PowerManagementMode OBJECT-TYPE
66      SYNTAX INTEGER { active(1), powersave(2) }
67      MAX-ACCESS read-write

```

```

1      STATUS current
2      DESCRIPTION
3          "This attribute shall specify the power management
4          mode of the STA. When set to active, it shall indicate
5          that the station is not in power-save mode. When set
6          to powersave, it shall indicate that the station is
7          in power-save mode. The power management mode is
8          transmitted in all frames according to the rules
9          in 7.1.3.1.7."
10     ::= { dot11StationConfigEntry 8 }
11
12 dot11DesiredSSID OBJECT-TYPE
13     SYNTAX OCTET STRING (SIZE(0..32))
14     MAX-ACCESS read-write
15     STATUS current
16     DESCRIPTION
17         "This attribute reflects the Service Set ID used
18         in the DesiredSSID parameter of the most recent
19         MLME_Scan.request. This value may be modified
20         by an external management entity and used by the
21         local SME to make decisions about the Scanning process."
22     ::= { dot11StationConfigEntry 9 }
23
24 dot11BeaconPeriod OBJECT-TYPE
25     SYNTAX INTEGERInteger32 (1..65535)
26     MAX-ACCESS read-write
27     STATUS current
28     DESCRIPTION
29         "This attribute shall specify the number of TU that a
30         station shall use for scheduling Beacon transmissions.
31         This value is transmitted in Beacon and Probe Response
32         frames."
33     ::= { dot11StationConfigEntry 12 }
34
35 dot11DTIMPeriod OBJECT-TYPE
36     SYNTAX INTEGERInteger32 (1..255)
37     MAX-ACCESS read-write
38     STATUS current
39     DESCRIPTION
40         "This attribute shall specify the number of beacon
41         intervals that shall elapse between transmission of
42         Beacons frames containing a TIM element whose DTIM
43         Count field is 0. This value is transmitted in
44         the DTIM Period field of Beacon frames."
45     ::= { dot11StationConfigEntry 13 }
46
47 dot11AssociationResponseTimeOut OBJECT-TYPE
48     SYNTAX INTEGERInteger32 (1..4294967295)
49     MAX-ACCESS read-write
50     STATUS current
51     DESCRIPTION
52         "This attribute shall specify the number of TU that a
53         requesting STA should wait for a response to a
54         transmitted association-request MMPDU."
55     ::= { dot11StationConfigEntry 14 }
56
57
58
59 Dot11AuthenticationAlgorithmsEntry ::= SEQUENCE {
60     dot11AuthenticationAlgorithmsIndex      Integer32,
61     dot11AuthenticationAlgorithm           INTEGER,
62     dot11AuthenticationAlgorithmsEnable    TruthValueINTEGER,
63     dot11AuthenticationAlgorithmsStatus   RowStatus }
64
65 dot11AuthenticationAlgorithmsEnable OBJECT-TYPE
66     SYNTAX TruthValueINTEGER { true(1), false(2) }
67     MAX-ACCESS read-create

```



```

1      STATUS current
2      DESCRIPTION
3
4      "This attribute, when true at a station, shall enable the acceptance
5      of the authentication algorithm described in the corresponding table
6      entry in authentication frames received by the station that have odd
7      authentication sequence numbers. The default value of this attribute
8      shall be 1 for the Open System table entry and 2 for all other table
9      entries."
10
11     ::= { dot11AuthenticationAlgorithmsEntry 3 }
12
13 dot11AuthenticationAlgorithmsStatus OBJECT-TYPE
14 SYNTAX RowStatus
15 MAX-ACCESS read-create
16 STATUS current
17 DESCRIPTION
18
19 "The status column used for creating, modifying, and
20 deleting instances of the columnar objects in the Authentication
21 Algorithms Table."
22
23 DEFVAL {active}
24 ::= { dot11AuthenticationAlgorithmsEntry 4 }
25
26 Dot11WEPDefaultKeysEntry ::= SEQUENCE {
27     dot11WEPDefaultKeyIndex      INTEGERInteger32,
28     dot11WEPDefaultKeyValue     WEPKeytype}
29
30 dot11WEPDefaultKeyIndex OBJECT-TYPE
31     SYNTAX INTEGERInteger32 (1..4)
32     MAX-ACCESS not-accessible
33     STATUS current
34     DESCRIPTION
35         "The auxiliaryauxillary variable used to identify instances
36         of the columnar objects in the WEP Default Keys Table.
37         The value of this variable is equal to the WEPDefaultKeyID + 1"
38     ::= { dot11WEPDefaultKeysEntry 1 }
39
40 dot11WEPDefaultKeyValue OBJECT-TYPE
41     SYNTAX WEPKeytype
42     MAX-ACCESS read-write
43     STATUS current
44     DESCRIPTION
45         "A WEP default secret key value OCTET STRING (SIZE(5))."
46     ::= { dot11WEPDefaultKeysEntry 2 }
47
48 Dot11WEPKeyMappingsEntry ::= SEQUENCE {
49     dot11WEPKeyMappingIndex      Integer32,
50     dot11WEPKeyMappingAddress    MacAddress,
51     dot11WEPKeyMappingWEPOn     TruthValueINTEGER,
52     dot11WEPKeyMappingValue     WEPkey WEPKeytype,
53     dot11WEPKeyMappingStatus     RowStatus }
54
55 dot11WEPKeyMappingWEPOn OBJECT-TYPE
56     SYNTAX TruthValueINTEGER { true(1), false(2) }
57     MAX-ACCESS read-create
58     STATUS current
59     DESCRIPTION
60         "Boolean as to whether WEP is to be used when communicating
61         with the dot11WEPKeyMappingAddress STA."
62     ::= { dot11WEPKeyMappingsEntry 3 }
63
64 dot11WEPKeyMappingValueWEPkey OBJECT-TYPE
65     SYNTAX WEPKeytype
66     MAX-ACCESS read-create
67     STATUS current

```

```

1      DESCRIPTION
2      "A WEP secret key value OCTET STRING (SIZE(5))."
3      ::= { dot11WEPKeyMappingsEntry 4 }
4
5
6  -- *****
7  -- * dot11PrivacyEntryTable TABLE
8  -- *****
9  dot11PrivacyTable OBJECT-TYPE
10     SYNTAX SEQUENCE OF Dot11PrivacyEntry
11     MAX-ACCESS not-accessible
12     STATUS current
13     DESCRIPTION
14
15         "Group containing attributes concerned with IEEE 802.11
16         Privacy. Created as a table to allow multiple
17         instantiations on an agent."
18
19     ::= { dot11smt 5 }
20
21  dot11PrivacyEntry OBJECT-TYPE
22     SYNTAX Dot11PrivacyEntry
23     MAX-ACCESS not-accessible
24     STATUS current
25     DESCRIPTION
26         "An entry in the dot11PrivacyTableEntry Table."
27
28         ifIndex - Each 802.11 interface is represented by an
29         ifEntry. Interface tables in this MIB module are indexed
30         by ifIndex."
31     INDEX {ifIndex}
32     ::= { dot11PrivacyTable 1 }
33
34  Dot11PrivacyEntry ::= SEQUENCE {
35     dot11PrivacyInvoked          INTEGER,
36     dot11WEPDefaultKeyID        INTEGERInteger32,
37     dot11WEPKeyMappingLength    Integer32,
38     dot11ExcludeUnencrypted     INTEGER,
39     dot11WEPICVErrorCount       Integer32,
40     dot11WEPExcludedCount       Integer32}
41
42
43  dot11WEPDefaultKeyID OBJECT-TYPE
44     SYNTAX INTEGERInteger32 (0..3)
45     MAX-ACCESS read-write
46     STATUS current
47     DESCRIPTION
48
49         "This attribute shall indicate the use of the first,
50         second, third, or fourth element of the WEPDefaultKeys
51         array when set to values of zero, one, two, or three. The
52         default value of this attribute shall be 0."
53     REFERENCE "IEEE Std 802.11-1997, 8.3.2"
54     ::= { dot11PrivacyEntry 2 }
55
56  dot11Disassociate NOTIFICATION-TYPE
57     OBJECTS { ifIndex, dot11DisassociateReason,
58             dot11DisassociateStationdot11StationID }
59     STATUS current
60     DESCRIPTION
61
62         "The disassociate notification shall be sent when the STA
63         sends/receives a Disassociationone frame. The value of the notification
64         shall includebe the MAC addressStationID of the MAC toon which the
65         Disassociatione
66         frame was sent and the reason for the disassociationreceived.
67

```

```

1         ifIndex - Each 802.11 interface is represented by an
2         ifEntry. Interface tables in this MIB module are indexed
3         by ifIndex."
4
5         REFERENCE "IEEE Std 802.11-1997, 11.4.5.1.1"
6         ::= { dot11SMTnotification 0 1 }
7
8         *****
9         * dot11OperationTable TABLE
10        *****
11
12        Dot11OperationEntry ::= SEQUENCE {
13                dot11MACAddress                MacAddress,
14                dot11RTSThreshold              INTEGERInteger32,
15                dot11ShortRetryLimit          INTEGERInteger32,
16                dot11LongRetryLimit           INTEGERInteger32,
17                dot11FragmentationThreshold   INTEGERInteger32,
18                dot11MaxTransmitMSDULifetime  INTEGERInteger32,
19                dot11MaxReceiveLifetime       INTEGERInteger32,
20                dot11ManufacturerID           DisplayString,
21                dot11ProductID               DisplayString}
22
23
24        dot11RTSThreshold OBJECT-TYPE
25                SYNTAX INTEGERInteger32 (0..2347)
26                MAX-ACCESS read-write
27                STATUS current
28                DESCRIPTION
29
30        dot11ShortRetryLimit OBJECT-TYPE
31                SYNTAX INTEGERInteger32 (1..255)
32                MAX-ACCESS read-write
33                STATUS current
34                DESCRIPTION
35
36        dot11LongRetryLimit OBJECT-TYPE
37                SYNTAX INTEGERInteger32 (1..255)
38                MAX-ACCESS read-write
39                STATUS current
40                DESCRIPTION
41
42        dot11FragmentationThreshold OBJECT-TYPE
43                SYNTAX INTEGERInteger32 (256..2346)
44                MAX-ACCESS read-write
45                STATUS current
46                DESCRIPTION
47
48                "This attribute shall specify the current maximum size, in
49                octets, of the MPDU that may be delivered to the PHY. An MSDU
50                shall be broken into fragments if its size exceeds the value
51                of this attribute after adding MAC headers and trailers. An MSDU or
52                MMPDU shall be fragmented when the resulting frame has an individual
53                address in the Address1 field, and the length of the frame is equal
54                to or larger than this threshold. The default value for this
55                attribute shall be the lesser of 2346 or the equal to AMPDUMaxLength
56                of the attached PHY and shall never exceed the lesser of 2346 or the
57                AMPDUMaxLength of the attached PHY. The value of this attribute shall
58                never be less than 256. The default value of this attribute is 2346."
59
60        ::= { dot11OperationEntry 5 }
61
62        dot11MaxReceiveLifetime OBJECT-TYPE
63                SYNTAX INTEGERInteger32 (1..4294967295)
64                MAX-ACCESS read-write
65                STATUS current
66                DESCRIPTION
67

```

```

1 dot11GroupAddressesIndex OBJECT-TYPE
2     SYNTAX Integer32
3     MAX-ACCESS not-accessible
4     STATUS current
5     DESCRIPTION
6         "The auxiliaryauxillary variable used to identifyindentify
7
8
9 dot11manufacturerOUI OBJECT-TYPE
10    SYNTAX OCTET STRING (SIZE(3))
11    MAX-ACCESS read-only
12    STATUS current
13    DESCRIPTION
14        "Takes the value of an organizationally unique identifier."
15    ::= { dot11ResourceInfoEntry 1 }
16
17 dot11manufacturerName OBJECT-TYPE
18    SYNTAX DisplayString (SIZE(0..128))
19    MAX-ACCESS read-only
20    STATUS current
21    DESCRIPTION
22        "A printable string used to identify the manufacturer of the
23         resource. Maximum string length is 128 octets."
24    ::= { dot11ResourceInfoEntry 2 }
25
26 dot11manufacturerProductName OBJECT-TYPE
27    SYNTAX DisplayString (SIZE(0..128))
28    MAX-ACCESS read-only
29    STATUS current
30    DESCRIPTION
31        "A printable string used to identify the manufacturer's product
32         name of the resource. Maximum string length is 128 octets."
33    ::= { dot11ResourceInfoEntry 3 }
34
35 dot11manufacturerProductVersion OBJECT-TYPE
36    SYNTAX DisplayString (SIZE(0..128))
37    MAX-ACCESS read-only
38    STATUS current
39    DESCRIPTION
40
41 dot11PhyOperationTable OBJECT-TYPE
42    SYNTAX SEQUENCE OF Dot11PhyOperationEntry
43    MAX-ACCESS not-accessible
44    STATUS current
45    DESCRIPTION
46
47        "PHY level attributes concerned with
48         operation. Implemented as a table indexed on
49         ifIndexStation ID to allow for multiple instantiations on an
50         Agent."
51
52    ::= { dot11phy 1 }
53
54 dot11TempType OBJECT-TYPE
55    SYNTAX INTEGER { TempType1(1), TempType2(2), TempType3(3) }
56    MAX-ACCESS read-only
57    STATUS current
58    DESCRIPTION
59
60        "There are different operating temperature requirements
61         dependent on the anticipated environmental conditions. This
62         attribute describes the current PHY's operating temperature
63         range capability. Currently defined values and their
64         corresponding temperature ranges are:
65
66         Type 1 = X'01'-Commercial range of 0 to 40 degrees C,
67

```

```

1      Type 2 = X'02'-Industrial range of -20 to 55 degrees C,
2
3      Type 3 = X'03'-Industrial range of -30 to 70 degrees C."
4
5      ::= { dot11PhyOperationEntry 3 }
6
7
8
9
10     dot11PhyAntennaTable OBJECT-TYPE
11         SYNTAX SEQUENCE OF Dot11PhyAntennaEntry
12         MAX-ACCESS not-accessible
13         STATUS current
14         DESCRIPTION
15
16             "Group of attributes for PhyAntenna. Implemented as a
17             table indexed on ifIndex to allow for multiplemultiple instances
18 on
19             an Dot11Agent."
20
21     ::= { dot11phy 2 }
22
23     dot11DiversitySupport OBJECT-TYPE
24         SYNTAX INTEGER {fixedlist(1), notsupported(2), dynamic(3)}
25         MAX-ACCESS read-only
26         STATUS current
27         DESCRIPTION
28
29             "This implementation's support for diversity, encoded as:
30
31             X'01'-diversity is available and is performed over the fixed
32             list of antennas defined in dot11DiversitySelectionRx.
33
34             X'02'-diversity is not supported.
35
36             X'03'-diversity is supported and control of diversity is also
37             available, in which case the attribute
38             adot11DiversitySelectionRx can be dynamically modified by the
39             LME."
40     ::= { dot11PhyAntennaEntry 2 }
41
42     Dot11PhyTxPowerEntry ::= SEQUENCE {
43         dot11NumberSupportedPowerLevels INTEGERInteger32,
44         dot11TxPowerLevel1 INTEGERInteger32,
45         dot11TxPowerLevel2 INTEGERInteger32,
46         dot11TxPowerLevel3 INTEGERInteger32,
47         dot11TxPowerLevel4 INTEGERInteger32,
48         dot11TxPowerLevel5 INTEGERInteger32,
49         dot11TxPowerLevel6 INTEGERInteger32,
50         dot11TxPowerLevel7 INTEGERInteger32,
51         dot11TxPowerLevel8 INTEGERInteger32,
52         dot11CurrentTxPowerLevel INTEGERInteger32}
53
54     dot11NumberSupportedPowerLevels OBJECT-TYPE
55         SYNTAX INTEGERInteger32 (1..8)
56         MAX-ACCESS read-only
57         STATUS current
58         DESCRIPTION
59             "The number of power levels supported by the PMD.
60             This attribute can have a value of 1 to 8."
61     ::= { dot11PhyTxPowerEntry 1 }
62
63     dot11TxPowerLevel1 OBJECT-TYPE
64         SYNTAX INTEGERInteger32 (0..10000)
65         MAX-ACCESS read-only
66         STATUS current
67         DESCRIPTION

```

```

1           "The transmit output power for LEVEL1 in mW.
2           This is also the default power level."
3       ::= { dot11PhyTxPowerEntry 2 }
4
5 dot11TxPowerLevel2 OBJECT-TYPE
6     SYNTAX INTEGERInteger32 (0..10000)
7     MAX-ACCESS read-only
8     STATUS current
9     DESCRIPTION
10      "The transmit output power for LEVEL2 in mW."
11     ::= { dot11PhyTxPowerEntry 3 }
12
13 dot11TxPowerLevel3 OBJECT-TYPE
14     SYNTAX INTEGERInteger32 (0..10000)
15     MAX-ACCESS read-only
16     STATUS current
17     DESCRIPTION
18      "The transmit output power for LEVEL3 in mW."
19     ::= { dot11PhyTxPowerEntry 4 }
20
21 dot11TxPowerLevel4 OBJECT-TYPE
22     SYNTAX INTEGERInteger32 (0..10000)
23     MAX-ACCESS read-only
24     STATUS current
25     DESCRIPTION
26      "The transmit output power for LEVEL4 in mW."
27     ::= { dot11PhyTxPowerEntry 5 }
28
29 dot11TxPowerLevel5 OBJECT-TYPE
30     SYNTAX INTEGERInteger32 (0..10000)
31     MAX-ACCESS read-only
32     STATUS current
33     DESCRIPTION
34      "The transmit output power for LEVEL5 in mW."
35     ::= { dot11PhyTxPowerEntry 6 }
36
37 dot11TxPowerLevel6 OBJECT-TYPE
38     SYNTAX INTEGERInteger32 (0..10000)
39     MAX-ACCESS read-only
40     STATUS current
41     DESCRIPTION
42      "The transmit output power for LEVEL6 in mW."
43     ::= { dot11PhyTxPowerEntry 7 }
44
45 dot11TxPowerLevel7 OBJECT-TYPE
46     SYNTAX INTEGERInteger32 (0..10000)
47     MAX-ACCESS read-only
48     STATUS current
49     DESCRIPTION
50      "The transmit output power for LEVEL7 in mW."
51     ::= { dot11PhyTxPowerEntry 8 }
52
53 dot11TxPowerLevel8 OBJECT-TYPE
54     SYNTAX INTEGERInteger32 (0..10000)
55     MAX-ACCESS read-only
56     STATUS current
57     DESCRIPTION
58      "The transmit output power for LEVEL8 in mW."
59     ::= { dot11PhyTxPowerEntry 9 }
60
61 dot11CurrentTxPowerLevel OBJECT-TYPE
62     SYNTAX INTEGERInteger32 (1..8)
63     MAX-ACCESS read-write
64     STATUS current
65     DESCRIPTION
66
67 Dot11PhyFHSSEntry ::= SEQUENCE {

```

```

1      dot11HopTime    INTEGERInteger32,
2      dot11CurrentChannelNumber INTEGERInteger32,
3      dot11MaxDwellTime INTEGERInteger32,
4      dot11CurrentDwellTime INTEGERInteger32,
5      dot11CurrentSet    INTEGERInteger32,
6      dot11CurrentPattern INTEGERInteger32,
7      dot11CurrentIndex INTEGERInteger32}
8
9  dot11HopTime OBJECT-TYPE
10     SYNTAX INTEGERInteger32 (224)
11     MAX-ACCESS read-only
12     STATUS current
13     DESCRIPTION
14         "The time in microseconds for the PMD to change from
15         channel 2 to channel 80"
16     ::= { dot11PhyFHSSEntry 1 }
17
18  dot11CurrentChannelNumber OBJECT-TYPE
19     SYNTAX INTEGERInteger32 (0..99)
20     MAX-ACCESS read-write
21     STATUS current
22     DESCRIPTION
23         "The current channel number of the frequency output by the RF
24         synthesizer"
25     ::= { dot11PhyFHSSEntry 2 }
26
27  dot11MaxDwellTime OBJECT-TYPE
28     SYNTAX INTEGERInteger32 (1..65535)
29     MAX-ACCESS read-only
30     STATUS current
31     DESCRIPTION
32         "The maximum time in TU that the transmitter
33         is permitted to operate on a single channel."
34     ::= { dot11PhyFHSSEntry 3 }
35
36  dot11CurrentDwellTime OBJECT-TYPE
37     SYNTAX INTEGERInteger32 (1..65535)
38     MAX-ACCESS read-write
39     STATUS current
40     DESCRIPTION
41         "The current time in TU that the transmitter shall operate
42         on a single channel, as set by the MAC. Default is 19 TU."
43     ::= { dot11PhyFHSSEntry 4 }
44
45  dot11CurrentSet OBJECT-TYPE
46     SYNTAX INTEGERInteger32 (1..255)
47     MAX-ACCESS read-write
48     STATUS current
49     DESCRIPTION
50         "The current set of patterns the PHY
51         LME is using to determine the hopping sequence. "
52     ::= { dot11PhyFHSSEntry 5 }
53
54  dot11CurrentPattern OBJECT-TYPE
55     SYNTAX INTEGERInteger32 (0..255)
56     MAX-ACCESS read-write
57     STATUS current
58     DESCRIPTION
59         "The current pattern the PHY LME is
60         using to determine the hop sequence."
61     ::= { dot11PhyFHSSEntry 6 }
62
63  dot11CurrentIndex OBJECT-TYPE
64     SYNTAX INTEGERInteger32 (1..255)
65     MAX-ACCESS read-write
66     STATUS current
67     DESCRIPTION

```

```

1
2 dot11PhyDSSSTable OBJECT-TYPE
3     SYNTAX SEQUENCE OF Dot11PhyDSSSEntry
4     MAX-ACCESS not-accessible
5     STATUS current
6     DESCRIPTION
7
8         "Entry of attributes for dot11PhyDSSSEntry. Implemented as a
9         table indexed on ifIndex allow for multiplemultiple instances on
10        an Agent."
11
12 ::= { dot11phy 5 }
13
14 Dot11PhyDSSSEntry ::= SEQUENCE {
15     dot11CurrentChannel INTEGERInteger32,
16     dot11CCAModeSupported INTEGERInteger32,
17     dot11CurrentCCAMode INTEGERInteger32,
18     dot11EDThreshold Integer32}
19
20 dot11CurrentChannel OBJECT-TYPE
21     SYNTAX INTEGERInteger32 (1..14)
22     MAX-ACCESS read-write
23     STATUS current
24     DESCRIPTION
25         "The current operating frequency channel of the DSSS
26         PHY. Valid channel numbers are as defined in 15.4.6.2"
27 ::= { dot11PhyDSSSEntry 1 }
28
29 dot11CCAModeSupported OBJECT-TYPE
30     SYNTAX INTEGERInteger32 (1..7)
31     MAX-ACCESS read-only
32     STATUS current
33     DESCRIPTION
34         "dot11CCAModeSupported is a bit-significant value, representing
35         all of the CCA modes supported by the PHY. Valid values are:
36
37         energy detect only (ED_ONLY) = 01,
38         carrier sense only (CS_ONLY) = 02,
39         carrier sense and energy detect (ED_and_CS)= 04
40
41         or the logical sum of any of these values."
42 ::= { dot11PhyDSSSEntry 2 }
43
44 dot11CurrentCCAMode OBJECT-TYPE
45     SYNTAX INTEGERInteger32 {ED_ONLY(1), CS_ONLY(2), ED_and_CS(4)}
46     MAX-ACCESS read-write
47     STATUS current
48     DESCRIPTION
49 dot11WEPKeyMappingWEPOn,
50     dot11WEPKeyMappingValueWEPkey , dot11WEPKeyMappingAddress,
51     dot11WEPKeyMappingStatus }
52
53     STATUS current
54     DESCRIPTION
55         "The SMTPrivacy package is a set of attributes that shall be
56         present if WEP is implemented in the STA."
57 ::= {dot11Groups 2 }
58
59 dot11PhyIRComplianceGroup OBJECT-GROUP
60     OBJECTS {dot11CCAWatchdogTimerMax, dot11CCAWatchdogCountMax,
61     dot11CCAWatchdogTimerMin, dot11CCAWatchdogCountMin}
62     STATUS current
63     DESCRIPTION
64         "Attributes that configure the baseband IRDSSS for IEEE 802.11."
65 ::= { dot11Groups 12 }
66

```


1 **103. In 9.3.3.3, add the following text before the last sentence of the third paragraph :**
2 “MaxMPDUTime is the time to transmit the maximum-sized MAC frame, expanded by WEP, plus the time to
3 transmit any PHY preamble, header, trailer, and expansion bits, if any.”

4 **104. In 10.3 and all of its subclauses, replace every occurrence of “1 through 127” with “2**
5 **through 127”.**

6
7