IEEE Std 1609.3-2016 Guidance Note 2: WME Management Information Base (MIB)

Kevin Smith, Rockwell Collins

1   Introduction

The ASN.1 encoding of the WME MIB found in Annex C of IEEE Std 1609.3-2016 has been found to have some errors or misleading content. This guidance note identifies those issues, and gives guidance on recommended changes to correct them. The issues addressed in this Guidance Note have been found by implementers of devices and testing facilities. The types of issues are summarized below.

The following types of issues are addressed in this guidance note:
- An incorrectly sized object (see 2.1.1)
- A skipped object-oid number in a sequence of objects (see 2.1.2)
- Incorrect MIB object comments (see 2.1.3)
- A MIB object that should have been removed (see 2.1.4)
- An incorrectly ranged object (see 2.1.5)
- Missing named-number enumerations in a list of error codes (see 2.1.6)
- Misleading label names in a named-number enumeration (see 2.1.7)

Additionally as this proposed MIB is revised from the version published in IEEE Std 1609.3-2016, it has been determined that the OID in the module identity section of the MIB does not provide for a good method to uniquely identify MIB versions. Therefore the proposed changes include updates to the MIB OID (see 2.2).

This guidance note is structured as follows. Section 2 provides a summary of each of the above issues and the potential replacement text that should be considered for incorporation into a revision to 1609.3. Section 3 provides the entire proposed updated replacement MIB, which may be copied wholesale and used in place of the MIB currently in 1609.3-2016.

2   Descriptions and recommended changes to correct each issue

2.1   MIB specific issues

The MIB issues and their suggested corrections follow.

2.1.1   An incorrectly sized object: *dot3AdvertiserIdentifier*

The optional *Advertiser Identifier* field described in 1609.3-2016 clause 8.2.2.6.4 specifies a length of from 1 to 32 octets. The MIB object *dot3AdvertiserIdentifier* was sized incorrectly at (1..31). It should be sized at (0..32) to allow for the maximum size of the Advertiser ID, and to allow for the case where no Advertiser ID is specified in the MIB, in which case the value entered should be 0.

```
dot3AdvertiserIdentifier OBJECT-TYPE
      SYNTAX OCTET STRING (SIZE(10..3132))
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
      "A text string optionally sent in the WSA identifying
      the service provider device."
::= { dot3LocalInfo 2 }
```

2.1.2   A skipped object-oid number in a sequence of objects: *Dot3StationConfigEntry*

The MIB object named *Dot3StationConfigEntry* contains 10 objects, and are listed by a sequence of object-oid numbers. The object-oid numbers used are 1,2,3,4,5,6,7,9,10, and 11 (i.e., object-oid #8 was skipped). The object-oid numbers should be in sequence: 1,2,3,4,5,6,7,8,9, and 10. Note: Several MIB validation tools were used to check the 1609.3-2016 MIB, however none flagged this as an error or even as a warning. Technically speaking it is not an error per se, however it is somewhat confusing and should be cleaned up.

```
Dot3StationConfigEntry ::=
SEQUENCE {
      dot3StationConfigIndex INTEGER,
      dot3CchAccessImplemented TruthValue,
      dot3SchAccessImplemented TruthValue,
      dot3IpV6Implemented TruthValue,
      dot3UdpImplemented TruthValue,
      dot3TcpImplemented TruthValue,
      dot3WsmpImplemented TruthValue,
      dot3UserRoleImplemented TruthValue,
      dot3ProviderRoleImplemented TruthValue,
      dot3TimingAdvertisementServiceImplemented TruthValue
      }

dot3StationConfigIndex OBJECT-TYPE
SYNTAX INTEGER (1..32)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Index to the Station Config Table."
::= { dot3StationConfigEntry 1 }

                  .
                  . [entries for object-oid 2 - 6 not shown]
                  .

dot3WsmpImplemented OBJECT-TYPE
```

```
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports the WAVE Short
      Message Protocol."
::= { dot3StationConfigEntry 7 }

dot3UserRoleImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device implements the User role."
::= { dot3StationConfigEntry 98 }

dot3ProviderRoleImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device implements the Provider role."
::= { dot3StationConfigEntry 109 }

dot3TimingAdvertisementServiceImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports the generation of
      Timing Advertisement frames at the request of higher layers."
::= { dot3StationConfigEntry 1110 }
```

2.1.3   Incorrect MIB object comments: *dot3ChannelServiceRequestTable*

Previous versions of 1609.3 (e.g., IEEE Std 1609.3-2010) described primitives and corresponding MIB objects which supported the concept of the "CCH Service Request". In IEEE Std 1609.3-2016 this was generalized to provide mechanisms to allow service requests for both channel types, i.e., the CCH and the SCH. The names of the primitives and MIB objects were changed to reflect this, however object descriptions and some of the comments in the MIB were not changed as they should have been.

Therefore MIB object descriptions and comments which indicate "CCH Service Request" should be changed to "Channel Service Request", to match current standard body text in 1609.3-2016, as follows.

```
-- ****************************************************************
-- * WAVE CCH Channel Service Request Table
-- ****************************************************************

-- WAVE CCH Channel Service Request Table
```

```
-- DEFINED AS "Parameters populated by a CCH channel service request";

dot3ChannelServiceRequestTable OBJECT-TYPE
     SYNTAX SEQUENCE OF Dot3ChannelServiceRequestTableEntry
     MAX-ACCESS not-accessible
     STATUS current
     DESCRIPTION
     " CCH Channel Service Request Table."
::= { dot3generalInfo 3}

dot3ChannelServiceRequestTableEntry OBJECT-TYPE
     SYNTAX Dot3ChannelServiceRequestTableEntry
     MAX-ACCESS not-accessible
     STATUS current
     DESCRIPTION
     "Requests for CCH channel service."
     INDEX {dot3ChannelServiceRequestTableIndex}
::= { dot3ChannelServiceRequestTable 1}

Dot3ChannelServiceRequestTableEntry ::= SEQUENCE {
     dot3ChannelServiceRequestTableIndex INTEGER,
     dot3ChannelServiceRequestChannelIdentifier INTEGER,
     dot3ChannelServiceRequestTimeSlot INTEGER,
     dot3ChannelServiceRequestStatus INTEGER}

dot3ChannelServiceRequestTableIndex OBJECT-TYPE
     SYNTAX INTEGER (0..127)
     MAX-ACCESS not-accessible
     STATUS current
     DESCRIPTION
     "Table index."
::= { dot3ChannelServiceRequestTableEntry 1 }

dot3ChannelServiceRequestChannelIdentifier OBJECT-TYPE
    SYNTAX INTEGER (0..200)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Requested channel identifier, as defined in IEEE 802.11."
::= { dot3ChannelServiceRequestTableEntry 2 }

dot3ChannelServiceRequestTimeSlot OBJECT-TYPE
    SYNTAX INTEGER {
           timeSlot0 (1),
           timeSlot1 (2),
           both (3)
        }
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Time slot(s) to which the request applies."
::= { dot3ChannelServiceRequestTableEntry 3 }

dot3ChannelServiceRequestStatus OBJECT-TYPE
    SYNTAX INTEGER {
           pending (0),
           satisfied (1),
```

```
              partiallySatisfied (2)
          }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Current status of the request."
::= { dot3ChannelServiceRequestTableEntry 4 }

-- ****************************************************************
-- * END WAVE CCH Channel Service Request Table
```

2.1.4   A MIB object that should have been removed: *dot3UserServiceRequestPriority*

Previous versions of 1609.3 (e.g., IEEE Std 1609.3-2010) describe primitives and corresponding MIB objects which support the concept of a "User Service Request Priority". In IEEE Std 1609.3-2016 this feature was removed, however the corresponding MIB objects were not removed as they should have been. Note the "User Priority" defined in IEEE Std 802.11 is separate from the "User Service Request Priority" previously defined in older versions of 1609.3. The former is still used in 1609.3, the latter is no longer supported.

The MIB should be modified as shown in the markup below:

```
Dot3UserServiceRequestTableEntry ::= SEQUENCE {
      dot3UserServiceRequestTableIndex INTEGER,
      dot3UserServiceRequestType INTEGER,
      dot3UserServiceRequestProviderServiceIdentifier OCTET STRING,
      dot3UserServiceRequestProviderServiceContext OCTET STRING ,
      dot3UserServiceRequestPriority INTEGER,
      dot3UserServiceRequestWsaTypes INTEGER,
      dot3UserServiceRequestSourceMacAddress MacAddress,
      dot3UserServiceRequestAdvertiserIdentifier OCTET STRING ,
      dot3UserServiceRequestOperatingClass INTEGER,
      dot3UserServiceRequestChannelNumber INTEGER,
      dot3UserServiceRequestLinkQuality INTEGER,
      dot3UserServiceRequestImmediateAccess INTEGER,
      dot3UserServiceStatus INTEGER
      }
```

The corresponding object definition should be deleted:

```
dot3UserServiceRequestPriority OBJECT-TYPE
      SYNTAX  INTEGER (0..63)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Request priority."
::= { dot3UserServiceRequestTableEntry 5 }
```

The corresponding object should be removed from the OBJECT-GROUP as shown in the following markup:

```
dot3UserGroup OBJECT-GROUP
     OBJECTS {
     dot3UserServiceRequestType,
     dot3UserServiceRequestProviderServiceIdentifier,
     dot3UserServiceRequestProviderServiceContext,
     dot3UserServiceRequestPriority,
     dot3UserServiceRequestWsaTypes,
     dot3UserServiceRequestSourceMacAddress,
                 .
                 . [additional objects not shown]
                 .
     dot3UserAvailableEdcaVoMandatory
     }
```

2.1.5   An incorrectly ranged object: *dot3UserAvailableTxLongitude*

The MIB object representing the lower range for longitude is incorrectly specified. Per SAE J2735 the lower range for longitude should be represented by the value -1799999999. However the lower range currently specified in IEEE Std 1609.3-2016 is -1800000000.

```
dot3UserAvailableTxLongitude OBJECT-TYPE
     SYNTAX  INTEGER (-18000000001799999999..1800000001)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Longitude of the advertising device
     LSB = 1/10 micro degree
     Providing a range of plus-minus 180 degrees,
     with 1800000001 indicating unavailable."
::= { dot3UserAvailableServiceTableEntry 24 }
```

2.1.6   Missing named-number enumerations in *dot3UserAvailableSecurityResultCode*

The MIB object *dot3UserAvailableServiceTableEntry* sequence includes an object *dot3UserAvailableSecurityResultCode* which is an enumerated integer representing result codes returned from the 1609.2 service primitive *Sec-SignedDataVerfication.confirm*. One of the result code values that is defined in IEEE Std 1609.2-2016 is not included in the 1609.3-2016 MIB as it should be. Additionally a new result code has been introduced in the proposed amendment P1609.2a, and that new result code is also added here. The missing result code label is *spduRelevanceCertificateExpired*. The new result code is *spduCertificateChainInconsistentValidityRegion*[1]. The proposed additions to the MIB are as follows:

---

[1] In the proposed MIB text, the new result code is added to the end of the list. However in P1609.2a it is listed along with other *SPDU-Certificate-Chain* related result codes, i.e., in a different position within the list.

```
dot3UserAvailableSecurityResultCode OBJECT-TYPE
      SYNTAX INTEGER    {
      success (1),
      inconsistentInputParameters (2),
      spduParsingInvalidInput (3),
                    .
                    . [values 4 – 33 not shown]
                    .
      spduRelevanceReplayedSpdu (34),
      spduRelevanceCertificateExpired (35),
      spduCertificateChainInconsistentValidityRegion (36)
            }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Security level of the received WSA."
::= { dot3UserAvailableServiceTableEntry 3 }
```

2.1.7   Misleading label names in *dot3ProviderChannelAccess* and *dot3UserAvailableChannelAccess*

Included in the revisions to IEEE Std 1609.3-2016 was a shift in channel access nomenclature, from "CCH interval" and "SCH interval" to "time slot 0" and "time slot 1", respectively. Corresponding to these changes, text within the standard (including numerous tables, figures, primitive parameters and MIB objects) were updated to reflect the new naming convention. However four labels used in *dot3ProviderChannelAccess* and *dot3UserAvailableChannelAccess* did not get updated as they should have been. This may lead to confusion when referring to the standard body text.

The updates proposed below affect both the provider side (*ProviderServiceRequestTable*) and the user side (*UserAvailableServiceTable*).

```
dot3ProviderChannelAccess OBJECT-TYPE
    SYNTAX INTEGER {
          continuous (0),
          alternatingSchTimeslot1Only (1),
          alternatingCchTimeslot0Only (2)
      }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Access type associated with the request."
::= { dot3ProviderServiceRequestTableEntry 5 }

dot3UserAvailableChannelAccess OBJECT-TYPE
      SYNTAX INTEGER {
          continuous (0),
          alternating SchTimeslot1Only (1),
          alternating CchTimeslot0Only (2)
      }
      MAX-ACCESS read-only
      STATUS current
```

```
      DESCRIPTION
      "Indicates the duty cycle of the advertised service."
::= { dot3UserAvailableServiceTableEntry 21 }
```

2.2   MIB OID update

As a result of the changes proposed above, the MIB OID should be updated to provide a method for devices to identify MIB revisions. The following is the module identity section of the MIB, and illustrates the proposed changes, including:

- LAST-UPDATED changed to reflect the current date.
- "v3mib" replaced by "wmemib", to make MIB ID more generic (as opposed to specifically referencing v3)
- wmemib identifier incremented by one to the value '4'
- major-version and minor-version identifiers have been added to the OID. major-version set to '2' to reflect there was a previous version, even though it was not numbered.
- DESCRIPTION updated to reflect the above changes
- Removed 'P' from ieee1609 OID (i.e., not a proposed standard)

```
-- ****************************************************************
-- * MODULE IDENTITY
-- ****************************************************************
ieee1609dot3v3mib MODULE-IDENTITY
LAST-UPDATED "201650492525200000Z"
ORGANIZATION "IEEE P1609"
CONTACT-INFO
"WG E-mail: stds-p1609@ieee.org
Chair: Thomas M Kurihara
Postal: 3800 Fairfax Drive, #207
Arlington, VA USA 22203-1759
Tel: +1 703-516-9650
Fax: +1 703-516-4688
E-mail: tkstds@mindspring.com
Editor: Kevin S. Smith"
DESCRIPTION
"The MIB module for IEEE 1609.3v3 full use entities.
iso(1) iso-identified-organization(3) ieee(111)
standards-association-numbered-series-standards(2) wave-stds(1609)
dot3(3) v3mibwmemib(34) major-version-2(2) minor-version-1 (1)"
REVISION "201650492525200000Z"
DESCRIPTION
"Consistent with 1609.3v3 standard."
::= { ieeeP1609 3 34 2 1}
ieeeP1609 OBJECT IDENTIFIER ::=
{1 iso-identified-organization (3) ieee (111)
standards-association-numbered-series-standards (2) 1609}
```

2.3 Impact

The WME MIB is typically used by implementers of devices and testing facilities as their interface to the 1609 protocol stack. The impact of the issues described in this guidance note has been that the MIB and the text of the standard have not been in complete alignment, resulting in some confusion among implementers. The potential for non-uniform implementations as a result is possible. The corrections presented here should provide a uniform solution for all implementers using the MIB.

3 Full 1609.3 MIB replacement text

The following is the complete text of the MIB which may be copied directly and used in place of the MIB provided in IEEE Std 1609.3-2016 Annex C. The following MIB includes all of the updates proposed above.

The following MIB has been verified to compile using the "smitools" package from the Institute of Operating Systems and Computer Networks at the Technical University of Braunschweig, Germany. These tools may be accessed online using the following URL: http://www.ibr.cs.tu-bs.de/bin/smitools.cgi. Using these tools, the MIB compiled without generating any warnings of severity level 1 to 4.

```
-- ******************************************************************
-- * IEEE P1609.3 Management Information Base
-- ******************************************************************
IEEE1609dot3-MIB DEFINITIONS ::= BEGIN
IMPORTS
 MODULE-IDENTITY, OBJECT-TYPE, Integer32, Unsigned32 FROM SNMPv2-SMI
 MacAddress, TruthValue FROM SNMPv2-TC
 Ipv6Address, Ipv6AddressPrefix FROM IPV6-TC
 MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF;

-- ******************************************************************
-- * MODULE IDENTITY
-- ******************************************************************
ieee1609dot3v3mib MODULE-IDENTITY
LAST-UPDATED "201604250000Z"
ORGANIZATION "IEEE P1609"
CONTACT-INFO
"WG E-mail: stds-p1609@ieee.org
Chair: Thomas M Kurihara
Postal: 3800 Fairfax Drive, #207
Arlington, VA USA 22203-1759
Tel: +1 703-516-9650
Fax: +1 703-516-4688
E-mail: tkstds@mindspring.com
Editor: Kevin S. Smith"
DESCRIPTION
"The MIB module for IEEE 1609.3v3 full use entities.
iso(1) iso-identified-organization(3) ieee(111)
standards-association-numbered-series-standards(2) wave-stds(1609)
```

```
dot3(3) wmemib(4) major-version-2(2) minor-version-1 (1)"
REVISION "201604250000Z"
DESCRIPTION
"Consistent with 1609.3v3 standard."
::= { ieee1609 3 4 2 1}
ieee1609 OBJECT IDENTIFIER ::=
{1 iso-identified-organization (3) ieee (111)
standards-association-numbered-series-standards (2) 1609}

-- ********************************************************************
-- This MIB includes general info, as well as info relevant to the
-- provider role and user role.
-- General info:
--   Implementation capabilities information
--   Local info
--   Channel service request info
--   WSM service request info
-- Provider info:
--   Provider service request info
--   Channel info
--   WAVE routing advertisement (IPv6 configuration) info
-- User info:
--   Available service info
--   User service request info
-- Conformance groups

dot3generalInfo OBJECT IDENTIFIER ::= { ieee1609dot3v3mib 1 }
dot3providerInfo OBJECT IDENTIFIER ::= { ieee1609dot3v3mib 2 }
dot3userInfo OBJECT IDENTIFIER ::= { ieee1609dot3v3mib 3 }
dot3conformance OBJECT IDENTIFIER ::= { ieee1609dot3v3mib 4 }


-- ********************************************************************
-- ********************************************************************
-- * General Device Information
-- ********************************************************************
-- ********************************************************************


-- ********************************************************************
-- * Device Capabilities Information
-- ********************************************************************

dot3StationConfigTable OBJECT-TYPE
SYNTAX SEQUENCE OF Dot3StationConfigEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Station Configuration attributes pertinent to Networking Services.
In tabular form to allow for multiple instances on an agent."
::= { dot3generalInfo 1 }

dot3StationConfigEntry OBJECT-TYPE
SYNTAX Dot3StationConfigEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
      "An entry in the dot3StationConfigTable. Each entry
```

```
      corresponds to one of multiple IEEE 802.11 interfaces
      (if present)."
INDEX { dot3StationConfigIndex }
::= { dot3StationConfigTable 1 }

Dot3StationConfigEntry ::=
SEQUENCE {
      dot3StationConfigIndex INTEGER,
      dot3CchAccessImplemented TruthValue,
      dot3SchAccessImplemented TruthValue,
      dot3IpV6Implemented TruthValue,
      dot3UdpImplemented TruthValue,
      dot3TcpImplemented TruthValue,
      dot3WsmpImplemented TruthValue,
      dot3UserRoleImplemented TruthValue,
      dot3ProviderRoleImplemented TruthValue,
      dot3TimingAdvertisementServiceImplemented TruthValue
      }

dot3StationConfigIndex OBJECT-TYPE
SYNTAX INTEGER (1..32)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Index to the Station Config Table."
::= { dot3StationConfigEntry 1 }

dot3CchAccessImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports operation on the
      control channel."
::= { dot3StationConfigEntry 2 }

dot3SchAccessImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports operation on any
      service channel."
::= { dot3StationConfigEntry 3 }

dot3IpV6Implemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports IPv6 data exchange."
::= { dot3StationConfigEntry 4 }

dot3UdpImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
```

```
DESCRIPTION
      "Indicates whether the device supports the User Datagram
      Protocol."
::= { dot3StationConfigEntry 5 }

dot3TcpImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports the Transmission
      Control Protocol."
::= { dot3StationConfigEntry 6 }

dot3WsmpImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports the WAVE Short
      Message Protocol."
::= { dot3StationConfigEntry 7 }

dot3UserRoleImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device implements the User role."
::= { dot3StationConfigEntry 8 }

dot3ProviderRoleImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device implements the Provider role."
::= { dot3StationConfigEntry 9 }

dot3TimingAdvertisementServiceImplemented OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
      "Indicates whether the device supports the generation of
      Timing Advertisement frames at the request of higher layers."
::= { dot3StationConfigEntry 10 }


-- ****************************************************************
-- * End Device Capabilities Information
-- ****************************************************************


-- ****************************************************************
-- * WAVE Local Device Information
-- ****************************************************************
```

```
-- WAVE Local Device Information
dot3LocalInfo OBJECT IDENTIFIER ::= { dot3generalInfo 2}
-- DEFINED AS "Parameters controlling local device operation";

dot3NumberOfChannelsSupported OBJECT-TYPE
      SYNTAX INTEGER (1..126)
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
      "The number of radio channels that may be simultaneously
      accessed by the device."
::= { dot3LocalInfo 1 }

dot3AdvertiserIdentifier OBJECT-TYPE
      SYNTAX OCTET STRING (SIZE(0..32))
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
      "A text string optionally sent in the WSA identifying
      the service provider device."
::= { dot3LocalInfo 2 }

dot3RegistrationPort OBJECT-TYPE
      SYNTAX INTEGER
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
      "UDP port number used for registration of external
      applications."
::= { dot3LocalInfo 3 }

dot3WsmMaxLength OBJECT-TYPE
      SYNTAX INTEGER (1..2302)
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
      "Maximum size in octets of the variable length portion
            of a WSM, including data.
      The default value is 1400. Max value is
      802.11 MAC MSDU size minus EtherType size (2304 minus       2 = 2302)."
::= { dot3LocalInfo 4 }

-- ****************************************************************
-- * END WAVE General Device Information
-- ****************************************************************

-- ****************************************************************
-- * WAVE Channel Service Request Table
-- ****************************************************************

-- WAVE Channel Service Request Table
-- DEFINED AS "Parameters populated by a channel service request";

dot3ChannelServiceRequestTable OBJECT-TYPE
      SYNTAX SEQUENCE OF Dot3ChannelServiceRequestTableEntry
      MAX-ACCESS not-accessible
      STATUS current
```

```
        DESCRIPTION
        "Channel Service Request Table."
::= { dot3generalInfo 3}

dot3ChannelServiceRequestTableEntry OBJECT-TYPE
        SYNTAX Dot3ChannelServiceRequestTableEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
        "Requests for channel service."
        INDEX {dot3ChannelServiceRequestTableIndex}
::= { dot3ChannelServiceRequestTable 1}

Dot3ChannelServiceRequestTableEntry ::= SEQUENCE {
        dot3ChannelServiceRequestTableIndex INTEGER,
        dot3ChannelServiceRequestChannelIdentifier INTEGER,
        dot3ChannelServiceRequestTimeSlot INTEGER,
        dot3ChannelServiceRequestStatus INTEGER}

dot3ChannelServiceRequestTableIndex OBJECT-TYPE
        SYNTAX INTEGER (0..127)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
        "Table index."
::= { dot3ChannelServiceRequestTableEntry 1 }

dot3ChannelServiceRequestChannelIdentifier OBJECT-TYPE
      SYNTAX INTEGER (0..200)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Requested channel identifier, as defined in IEEE 802.11."
::= { dot3ChannelServiceRequestTableEntry 2 }

dot3ChannelServiceRequestTimeSlot OBJECT-TYPE
      SYNTAX INTEGER {
              timeSlot0 (1),
              timeSlot1 (2),
              both (3)
          }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Time slot(s) to which the request applies."
::= { dot3ChannelServiceRequestTableEntry 3 }

dot3ChannelServiceRequestStatus OBJECT-TYPE
      SYNTAX INTEGER {
              pending (0),
              satisfied (1),
              partiallySatisfied (2)
          }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Current status of the request."
```

```
::= { dot3ChannelServiceRequestTableEntry 4 }

-- ******************************************************************
-- * END WAVE Channel Service Request Table
-- ******************************************************************


-- ******************************************************************
-- * WSM Service Request Table
-- ******************************************************************
-- WSM Service Request Table
-- DEFINED AS "Parameters populated by a WAVE Short Message service request";

dot3WsmServiceRequestTable OBJECT-TYPE
      SYNTAX SEQUENCE OF Dot3WsmServiceRequestTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "WSM Service Request Table."
::= { dot3generalInfo 4}

dot3WsmServiceRequestTableEntry OBJECT-TYPE
      SYNTAX Dot3WsmServiceRequestTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Requests for WSM service."
      INDEX {dot3WsmServiceRequestTableIndex}
::= { dot3WsmServiceRequestTable 1}

Dot3WsmServiceRequestTableEntry ::= SEQUENCE {
      dot3WsmServiceRequestTableIndex INTEGER,
      dot3WsmServiceRequestPsid OCTET STRING}

dot3WsmServiceRequestTableIndex OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Table index."
::= { dot3WsmServiceRequestTableEntry 1 }

dot3WsmServiceRequestPsid OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(1..8))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Provider Service Identifier to be internally routed
      on receipt."
::= { dot3WsmServiceRequestTableEntry 2 }

-- ******************************************************************
-- * END WSM Service Request Table
-- ******************************************************************


-- ******************************************************************
-- ******************************************************************
-- * END General Device Information
```

```
-- ********************************************************************
-- ********************************************************************

-- *********************************************************************
-- *********************************************************************
-- * Provider Information
--     - Provider Service Request Table
--     - Provider Channel Info Table
--     - Provider WAVE Routing Advertisement Table
-- *********************************************************************
-- ********************************************************************


-- ********************************************************************
-- * Provider Service Request Table
-- ********************************************************************
-- WAVE Provider Service Request Table
-- DEFINED AS "Parameters populated by a provider service request";

dot3ProviderServiceRequestTable OBJECT-TYPE
      SYNTAX SEQUENCE OF Dot3ProviderServiceRequestTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Provider Service Request Table."
::= { dot3providerInfo 1}

dot3ProviderServiceRequestTableEntry OBJECT-TYPE
      SYNTAX Dot3ProviderServiceRequestTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Requests for provider services."
      INDEX {dot3ProviderServiceRequestTableIndex}
::= { dot3ProviderServiceRequestTable 1}

Dot3ProviderServiceRequestTableEntry ::= SEQUENCE {
      dot3ProviderServiceRequestTableIndex INTEGER,
      dot3WsaType INTEGER,
      dot3ProviderServiceIdentifier OCTET STRING,
      dot3ProviderServiceContext OCTET STRING,
      dot3ProviderChannelAccess INTEGER,
      dot3ProviderBestAvailable TruthValue,
      dot3ProviderOperatingClass INTEGER,
      dot3ProviderServiceChannelNumber INTEGER,
      dot3ProviderWsaChannelNumber INTEGER,
      dot3ProviderRepeatRate INTEGER,
      dot3ProviderIpService TruthValue,
      dot3ProviderIpv6Address Ipv6Address,
      dot3ProviderMacAddress MacAddress,
      dot3ProviderServicePort INTEGER,
      dot3ProviderRcpiThreshold INTEGER,
      dot3ProviderWsaCountThreshold INTEGER,
      dot3ProviderWsaCountThresholdInterval INTEGER,
      dot3ProviderServiceStatus INTEGER
      }

dot3ProviderServiceRequestTableIndex OBJECT-TYPE
```

```
        SYNTAX INTEGER (0..127)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
        "Table index."
::= { dot3ProviderServiceRequestTableEntry 1 }


dot3WsaType OBJECT-TYPE
    SYNTAX INTEGER {
            securedWsa (1),
            unsecuredWsa (2)
         }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Security processing to be applied to the transmitted WSA."
::= { dot3ProviderServiceRequestTableEntry 2 }


dot3ProviderServiceIdentifier OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(1..8))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "PSID associated with the request."
::= { dot3ProviderServiceRequestTableEntry 3 }


dot3ProviderServiceContext OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(0..31))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "PSC info provided by the requester."
::= { dot3ProviderServiceRequestTableEntry 4 }


dot3ProviderChannelAccess OBJECT-TYPE
    SYNTAX INTEGER {
            continuous (0),
            alternatingTimeslot1Only (1),
            alternatingTimeslot0Only (2)
         }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Access type associated with the request."
::= { dot3ProviderServiceRequestTableEntry 5 }


dot3ProviderBestAvailable OBJECT-TYPE
    SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "When true, indicates the best available service channel
        should be used;
        when false indicates the dot3ProviderServiceChannelNumber
        should be used."
::= { dot3ProviderServiceRequestTableEntry 6 }
```

```
dot3ProviderOperatingClass OBJECT-TYPE
    SYNTAX INTEGER
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Operating class of the associated service channel,
      as defined in IEEE Std 802.11."
::= { dot3ProviderServiceRequestTableEntry 7 }

dot3ProviderServiceChannelNumber OBJECT-TYPE
    SYNTAX INTEGER (0..200)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Indicate a requested service channel number,
      as defined in IEEE 802.11. "
::= { dot3ProviderServiceRequestTableEntry 8 }

dot3ProviderWsaChannelNumber OBJECT-TYPE
    SYNTAX INTEGER (0..200)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Indicate a requested service or control channel number
      on which to transmit WSAs, as defined in IEEE 802.11. "
::= { dot3ProviderServiceRequestTableEntry 9 }

dot3ProviderRepeatRate OBJECT-TYPE
    SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Number of WSAs to be transmitted each 5 seconds."
::= { dot3ProviderServiceRequestTableEntry 10 }

dot3ProviderIpService OBJECT-TYPE
    SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Indicates whether or not the requested service supports
      IP traffic."
::= { dot3ProviderServiceRequestTableEntry 11 }

dot3ProviderIpv6Address OBJECT-TYPE
    SYNTAX Ipv6Address
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "IP address of the server associated with the requested
      service."
::= { dot3ProviderServiceRequestTableEntry 12 }

dot3ProviderMacAddress OBJECT-TYPE
    SYNTAX MacAddress
      MAX-ACCESS read-only
      STATUS current
```

```
         DESCRIPTION
          "MAC address of the server associated with the requested
          service if different from the transmitting device."
    ::= { dot3ProviderServiceRequestTableEntry 13 }

dot3ProviderServicePort OBJECT-TYPE
    SYNTAX INTEGER
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Transport layer port number associated with the requested
      service."
    ::= { dot3ProviderServiceRequestTableEntry 14 }

dot3ProviderRcpiThreshold OBJECT-TYPE
    SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "The recommended power of received WSAs for accepting the
      advertised service.
      Coded per IEEE Std 802.11-2012/18.3.10."
    ::= { dot3ProviderServiceRequestTableEntry 15 }

dot3ProviderWsaCountThreshold OBJECT-TYPE
    SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "The recommended number of received WSAs before
            accepting the advertised service."
    ::= { dot3ProviderServiceRequestTableEntry 16 }

dot3ProviderWsaCountThresholdInterval OBJECT-TYPE
    SYNTAX INTEGER (1..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
            "The number of 100ms intervals over which to count received WSAs
            before accepting the advertised service."
    ::= { dot3ProviderServiceRequestTableEntry 17 }

dot3ProviderServiceStatus OBJECT-TYPE
    SYNTAX INTEGER {
            pending (0),
            satisfied (1),
            partiallySatisfied (2)
          }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Current status of the requested provider service request."
    ::= { dot3ProviderServiceRequestTableEntry 18 }

-- ******************************************************************
-- * END Provider Service Request Table
-- ******************************************************************
```

```
-- ********************************************************************
-- * Provider Channel Info Table
-- ********************************************************************

-- WAVE Provider Channel Info Table
-- DEFINED AS "Parameters used to populate channel info in a WSA";

dot3ProviderChannelInfoTable OBJECT-TYPE
      SYNTAX SEQUENCE OF Dot3ProviderChannelInfoTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Provider Channel Info Table."
::= { dot3providerInfo 2}

dot3ProviderChannelInfoTableEntry OBJECT-TYPE
      SYNTAX Dot3ProviderChannelInfoTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Channel information."
      INDEX {dot3ProviderChannelInfoTableIndex}
::= { dot3ProviderChannelInfoTable 1}

Dot3ProviderChannelInfoTableEntry ::= SEQUENCE {
      dot3ProviderChannelInfoTableIndex INTEGER,
      dot3ProviderChannelInfoOperatingClass INTEGER,
      dot3ProviderChannelInfoChannelNumber INTEGER,
      dot3ProviderChannelInfoAdaptable TruthValue,
      dot3ProviderChannelInfoDataRate INTEGER,
      dot3ProviderChannelInfoTransmitPowerLevel INTEGER,
      dot3ProviderChannelInfoEdcaBkCWmin INTEGER,
      dot3ProviderChannelInfoEdcaBkCWmax INTEGER,
      dot3ProviderChannelInfoEdcaBkAifsn INTEGER,
      dot3ProviderChannelInfoEdcaBkTxopLimit INTEGER,
      dot3ProviderChannelInfoEdcaBkMandatory INTEGER,
      dot3ProviderChannelInfoEdcaBeCWmin INTEGER,
      dot3ProviderChannelInfoEdcaBeCWmax INTEGER,
      dot3ProviderChannelInfoEdcaBeAifsn INTEGER,
      dot3ProviderChannelInfoEdcaBeTxopLimit INTEGER,
      dot3ProviderChannelInfoEdcaBeMandatory INTEGER,
      dot3ProviderChannelInfoEdcaViCWmin INTEGER,
      dot3ProviderChannelInfoEdcaViCWmax INTEGER,
      dot3ProviderChannelInfoEdcaViAifsn INTEGER,
      dot3ProviderChannelInfoEdcaViTxopLimit INTEGER,
      dot3ProviderChannelInfoEdcaViMandatory INTEGER,
      dot3ProviderChannelInfoEdcaVoCWmin INTEGER,
      dot3ProviderChannelInfoEdcaVoCWmax INTEGER,
      dot3ProviderChannelInfoEdcaVoAifsn INTEGER,
      dot3ProviderChannelInfoEdcaVoTxopLimit INTEGER,
      dot3ProviderChannelInfoEdcaVoMandatory INTEGER
      }

dot3ProviderChannelInfoTableIndex OBJECT-TYPE
      SYNTAX INTEGER (0..127)
      MAX-ACCESS not-accessible
```

```
      STATUS current
      DESCRIPTION
      "Table index."
::= { dot3ProviderChannelInfoTableEntry 1 }


dot3ProviderChannelInfoOperatingClass OBJECT-TYPE
      SYNTAX INTEGER
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Operating Class."
::= { dot3ProviderChannelInfoTableEntry 2 }


dot3ProviderChannelInfoChannelNumber OBJECT-TYPE
      SYNTAX INTEGER (0..200)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Channel Number."
::= { dot3ProviderChannelInfoTableEntry 3 }


dot3ProviderChannelInfoAdaptable OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Indicates whether data rate is fixed or maximum value."
::= { dot3ProviderChannelInfoTableEntry 4 }


dot3ProviderChannelInfoDataRate OBJECT-TYPE
      SYNTAX INTEGER (2..127)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Channel data rate in increments of 500kbit/s, from
      1 Mb/s to 63.5 Mb/s."
::= { dot3ProviderChannelInfoTableEntry 5 }


dot3ProviderChannelInfoTransmitPowerLevel OBJECT-TYPE
      SYNTAX INTEGER (-128..127)
      UNITS "dBm"
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Channel EIRP transmit power."
::= { dot3ProviderChannelInfoTableEntry 6 }


dot3ProviderChannelInfoEdcaBkCWmin OBJECT-TYPE
      SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      minimum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
```

```
          form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 7 }


dot3ProviderChannelInfoEdcaBkCWmax OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      maximum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
      form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 8 }


dot3ProviderChannelInfoEdcaBkAifsn OBJECT-TYPE
      SYNTAX INTEGER (2..15)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the number of slots,
      after a SIFS duration, that the STA shall sense the
      medium idle either before transmitting or executing a
      backoff."
::= { dot3ProviderChannelInfoTableEntry 9 }


dot3ProviderChannelInfoEdcaBkTxopLimit OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the maximum number
      of microseconds of an EDCA TXOP."
::= { dot3ProviderChannelInfoTableEntry 10 }


dot3ProviderChannelInfoEdcaBkMandatory OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute, when TRUE, indicates that admission
      control is mandatory for the given AC. When False,
      this attribute indicates that the admission control
      is not mandatory for the given AC."
::= { dot3ProviderChannelInfoTableEntry 11 }


dot3ProviderChannelInfoEdcaBeCWmin OBJECT-TYPE
      SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      minimum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
```

```
            form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 12 }


dot3ProviderChannelInfoEdcaBeCWmax OBJECT-TYPE
       SYNTAX INTEGER (0..65535)
       MAX-ACCESS read-only
       STATUS current
       DESCRIPTION
       "This attribute shall specify the value of the
       maximum size of the window that shall be used by
       a STA for a particular AC for generating a random
       number for the backoff. The value of this attribute
       shall be such that it could always be expressed in the
       form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 13 }


dot3ProviderChannelInfoEdcaBeAifsn OBJECT-TYPE
       SYNTAX INTEGER (2..15)
       MAX-ACCESS read-only
       STATUS current
       DESCRIPTION
       "This attribute shall specify the number of slots,
       after a SIFS duration, that the STA shall sense the
       medium idle either before transmitting or executing a
       backoff."
::= { dot3ProviderChannelInfoTableEntry 14 }


dot3ProviderChannelInfoEdcaBeTxopLimit OBJECT-TYPE
       SYNTAX INTEGER (0..65535)
       MAX-ACCESS read-only
       STATUS current
       DESCRIPTION
       "This attribute shall specify the maximum number
       of microseconds of an EDCA TXOP."
::= { dot3ProviderChannelInfoTableEntry 15 }


dot3ProviderChannelInfoEdcaBeMandatory OBJECT-TYPE
       SYNTAX TruthValue
       MAX-ACCESS read-only
       STATUS current
       DESCRIPTION
       "This attribute, when TRUE, indicates that admission
       control is mandatory for the given AC. When False,
       this attribute indicates that the admission control
       is not mandatory for the given AC."
::= { dot3ProviderChannelInfoTableEntry 16 }


dot3ProviderChannelInfoEdcaViCWmin OBJECT-TYPE
       SYNTAX INTEGER (0..255)
       MAX-ACCESS read-only
       STATUS current
       DESCRIPTION
       "This attribute shall specify the value of the
       minimum size of the window that shall be used by
       a STA for a particular AC for generating a random
       number for the backoff. The value of this attribute
       shall be such that it could always be expressed in the
```

```
        form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 17 }


dot3ProviderChannelInfoEdcaViCWmax OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      maximum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
      form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 18 }


dot3ProviderChannelInfoEdcaViAifsn OBJECT-TYPE
      SYNTAX INTEGER (2..15)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the number of slots,
      after a SIFS duration, that the STA shall sense the
      medium idle either before transmitting or executing a
      backoff."
::= { dot3ProviderChannelInfoTableEntry 19 }


dot3ProviderChannelInfoEdcaViTxopLimit OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the maximum number
      of microseconds of an EDCA TXOP."
::= { dot3ProviderChannelInfoTableEntry 20 }


dot3ProviderChannelInfoEdcaViMandatory OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute, when TRUE, indicates that admission
      control is mandatory for the given AC. When False,
      this attribute indicates that the admission control
      is not mandatory for the given AC."
::= { dot3ProviderChannelInfoTableEntry 21 }


dot3ProviderChannelInfoEdcaVoCWmin OBJECT-TYPE
      SYNTAX INTEGER (0..255)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      minimum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
```

```
      form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 22 }


dot3ProviderChannelInfoEdcaVoCWmax OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the value of the
      maximum size of the window that shall be used by
      a STA for a particular AC for generating a random
      number for the backoff. The value of this attribute
      shall be such that it could always be expressed in the
      form of 2X - 1, where X is an integer."
::= { dot3ProviderChannelInfoTableEntry 23 }


dot3ProviderChannelInfoEdcaVoAifsn OBJECT-TYPE
      SYNTAX INTEGER (2..15)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the number of slots,
      after a SIFS duration, that the STA shall sense the
      medium idle either before transmitting or executing a
            backoff."
::= { dot3ProviderChannelInfoTableEntry 24 }


dot3ProviderChannelInfoEdcaVoTxopLimit OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute shall specify the maximum number
      of microseconds of an EDCA TXOP."
::= { dot3ProviderChannelInfoTableEntry 25 }


dot3ProviderChannelInfoEdcaVoMandatory OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "This attribute, when TRUE, indicates that admission
      control is mandatory for the given AC. When False,
      this attribute indicates that the admission control
      is not mandatory for the given AC."
::= { dot3ProviderChannelInfoTableEntry 26 }

-- *******************************************************************
-- * END Provider Channel Info Table
-- *******************************************************************


-- *******************************************************************
-- * Provider WAVE Routing Advertisement
-- *******************************************************************


-- WAVE Routing Advertisement
-- DEFINED AS "Parameters used to populate WRA in a WSA";
```

```
dot3ProviderWaveRoutingAdvertisement OBJECT IDENTIFIER ::= { dot3providerInfo
3}
-- DEFINED AS "Parameters controlling operation in the WAVE IP network";

dot3ProviderWaveRoutingAdvertisementRouterLifetime OBJECT-TYPE
      SYNTAX INTEGER (0..65535)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Router lifetime."
::= { dot3ProviderWaveRoutingAdvertisement 1 }

dot3ProviderWaveRoutingAdvertisementIpPrefix OBJECT-TYPE
      SYNTAX Ipv6AddressPrefix
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "IP prefix."
::= { dot3ProviderWaveRoutingAdvertisement 2 }

dot3ProviderWaveRoutingAdvertisementPrefixLength OBJECT-TYPE
      SYNTAX INTEGER (1..128)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "IP prefix length."
::= { dot3ProviderWaveRoutingAdvertisement 3 }

dot3ProviderWaveRoutingAdvertisementDefaultGateway OBJECT-TYPE
      SYNTAX Ipv6Address
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Default gateway IP address."
::= { dot3ProviderWaveRoutingAdvertisement 4 }

dot3ProviderWaveRoutingAdvertisementGatewayMACAddress OBJECT-TYPE
      SYNTAX MacAddress
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Default gateway MAC address."
::= { dot3ProviderWaveRoutingAdvertisement 5 }

dot3ProviderWaveRoutingAdvertisementPrimaryDns OBJECT-TYPE
      SYNTAX Ipv6Address
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
      "Primary DNS server IP address."
::= { dot3ProviderWaveRoutingAdvertisement 6 }

dot3ProviderWaveRoutingAdvertisementSecondaryDns OBJECT-TYPE
      SYNTAX Ipv6Address
      MAX-ACCESS read-only
      STATUS current
```

```
       DESCRIPTION
       "Secondary DNS server IP address."
::= { dot3ProviderWaveRoutingAdvertisement 7 }


-- ******************************************************************
-- * END Provider WAVE Routing Advertisement Table
-- ******************************************************************

-- ******************************************************************
-- ******************************************************************
-- * END Provider Information
-- ******************************************************************
-- ******************************************************************


-- ******************************************************************
-- ******************************************************************
-- * User Information
--     - User Service Request Table
--     - User Available Service Table
-- ******************************************************************
-- ******************************************************************


-- ******************************************************************
-- * User Service Request Table
-- ******************************************************************

-- WAVE User Service Request Table
-- DEFINED AS "Parameters populated by a user service request";

dot3UserServiceRequestTable OBJECT-TYPE
       SYNTAX SEQUENCE OF Dot3UserServiceRequestTableEntry
       MAX-ACCESS not-accessible
       STATUS current
       DESCRIPTION
       "User Service Request Table."
::= { dot3userInfo 1}

dot3UserServiceRequestTableEntry OBJECT-TYPE
       SYNTAX Dot3UserServiceRequestTableEntry
       MAX-ACCESS not-accessible
       STATUS current
       DESCRIPTION
       "Requests for user services."
       INDEX {dot3UserServiceRequestTableIndex}
::= { dot3UserServiceRequestTable 1}

Dot3UserServiceRequestTableEntry ::= SEQUENCE {
       dot3UserServiceRequestTableIndex INTEGER,
       dot3UserServiceRequestType INTEGER,
       dot3UserServiceRequestProviderServiceIdentifier OCTET STRING,
       dot3UserServiceRequestProviderServiceContext OCTET STRING ,
       dot3UserServiceRequestWsaTypes INTEGER,
       dot3UserServiceRequestSourceMacAddress MacAddress,
       dot3UserServiceRequestAdvertiserIdentifier OCTET STRING ,
       dot3UserServiceRequestOperatingClass INTEGER,
```

```
        dot3UserServiceRequestChannelNumber INTEGER,
        dot3UserServiceRequestLinkQuality INTEGER,
        dot3UserServiceRequestImmediateAccess INTEGER,
        dot3UserServiceStatus INTEGER
        }

dot3UserServiceRequestTableIndex OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
        "Table index."
::= { dot3UserServiceRequestTableEntry 1 }

dot3UserServiceRequestType OBJECT-TYPE
        SYNTAX INTEGER {
                autoAccessOnMatch (0),
                noSchAccess (1)
                }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Request type."
::= { dot3UserServiceRequestTableEntry 2 }

dot3UserServiceRequestProviderServiceIdentifier OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(1..8))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Requested PSID for matching."
::= { dot3UserServiceRequestTableEntry 3 }

dot3UserServiceRequestProviderServiceContext OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(0..31))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Requested PSC for matching."
::= { dot3UserServiceRequestTableEntry 4 }

dot3UserServiceRequestWsaTypes OBJECT-TYPE
        SYNTAX INTEGER {
                securedWsa (1),
                unsecuredWsa (2),
                securedOrUnsecured (3),
                any (4)
                }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Requested WSA type(s) for matching."
::= { dot3UserServiceRequestTableEntry 6 }

dot3UserServiceRequestSourceMacAddress OBJECT-TYPE
        SYNTAX MacAddress
        MAX-ACCESS read-only
```

```
         STATUS current
         DESCRIPTION
         "Requested provider for matching."
   ::= { dot3UserServiceRequestTableEntry 7 }


   dot3UserServiceRequestAdvertiserIdentifier OBJECT-TYPE
         SYNTAX OCTET STRING (SIZE(0..32))
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
         "Requested Advertiser Identifier for matching."
   ::= { dot3UserServiceRequestTableEntry 8 }


   dot3UserServiceRequestOperatingClass OBJECT-TYPE
         SYNTAX INTEGER
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
         "Requested Operating Class for matching."
   ::= { dot3UserServiceRequestTableEntry 9 }


   dot3UserServiceRequestChannelNumber OBJECT-TYPE
         SYNTAX INTEGER (0..200)
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
         "Requested Channel Number for matching."
   ::= { dot3UserServiceRequestTableEntry 10 }


   dot3UserServiceRequestLinkQuality OBJECT-TYPE
         SYNTAX INTEGER
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
         "Requested Link Quality for matching."
   ::= { dot3UserServiceRequestTableEntry 11 }


   dot3UserServiceRequestImmediateAccess OBJECT-TYPE
         SYNTAX INTEGER (0..255)
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
         "Indicates the duration of the immediate channel access
         (during both time slot 0 and time slot 1) in sync
         intervals. 255 indicates indefinite access. 0 indicates
         immediate access not requested."
   ::= { dot3UserServiceRequestTableEntry 12 }


   dot3UserServiceStatus OBJECT-TYPE
         SYNTAX INTEGER {
               pending (0),
               satisfied (1),
               partiallySatisfied (2)
            }
         MAX-ACCESS read-only
         STATUS current
         DESCRIPTION
```

```
        "Indicates the current status of the request."
::= { dot3UserServiceRequestTableEntry 13 }

-- ********************************************************************
-- * END User Service Request Table
-- ********************************************************************


-- ********************************************************************
-- * User Available Service Table
-- ********************************************************************

-- WAVE User Available Service Table
-- DEFINED AS "Available services detected";

dot3UserAvailableServiceTable OBJECT-TYPE
      SYNTAX SEQUENCE OF Dot3UserAvailableServiceTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "User Available Service Table."
::= { dot3userInfo 2}

dot3UserAvailableServiceTableEntry OBJECT-TYPE
      SYNTAX Dot3UserAvailableServiceTableEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
      "Available services."
      INDEX {dot3UserAvailableServiceTableIndex}
::= { dot3UserAvailableServiceTable 1}

Dot3UserAvailableServiceTableEntry ::= SEQUENCE {
      dot3UserAvailableServiceTableIndex INTEGER,
      dot3UserAvailableWsaType INTEGER,
      dot3UserAvailableSecurityResultCode INTEGER,
      dot3UserAvailableGenerationTime OCTET STRING,
      dot3UserAvailableLifetime OCTET STRING,
      dot3UserAvailableEarliestNextCrlTime OCTET STRING,
      dot3UserAvailableSourceMacAddress MacAddress,
      dot3UserAvailableProviderServiceIdentifier OCTET STRING,
      dot3UserAvailableProviderServiceContext OCTET STRING,
      dot3UserAvailableIpv6Address Ipv6Address,
      dot3UserAvailableServicePort INTEGER,
      dot3UserAvailableProviderMacAddress MacAddress,
      dot3UserAvailableRcpiThreshold INTEGER,
      dot3UserAvailableRcpi INTEGER,
      dot3UserAvailableWsaCountThreshold INTEGER,
      dot3UserAvailableOperatingClass INTEGER,
      dot3UserAvailableChannelNumber INTEGER,
      dot3UserAvailableAdaptable TruthValue,
      dot3UserAvailableDataRate INTEGER,
      dot3UserAvailableTransmitPowerLevel INTEGER,
      dot3UserAvailableChannelAccess INTEGER,
      dot3UserAvailableAdvertiserIdentifier OCTET STRING,
      dot3UserAvailableTxLatitude INTEGER,
      dot3UserAvailableTxLongitude INTEGER,
      dot3UserAvailableTxElevation OCTET STRING,
```

```
        dot3UserAvailableLinkQuality INTEGER,
        dot3UserAvailableServiceStatus INTEGER,
        dot3UserAvailableEdcaBkCWmin INTEGER,
        dot3UserAvailableEdcaBkCWmax INTEGER,
        dot3UserAvailableEdcaBkAifsn INTEGER,
        dot3UserAvailableEdcaBkTxopLimit INTEGER,
        dot3UserAvailableEdcaBkMandatory INTEGER,
        dot3UserAvailableEdcaBeCWmin INTEGER,
        dot3UserAvailableEdcaBeCWmax INTEGER,
        dot3UserAvailableEdcaBeAifsn INTEGER,
        dot3UserAvailableEdcaBeTxopLimit INTEGER,
        dot3UserAvailableEdcaBeMandatory INTEGER,
        dot3UserAvailableEdcaViCWmin INTEGER,
        dot3UserAvailableEdcaViCWmax INTEGER,
        dot3UserAvailableEdcaViAifsn INTEGER,
        dot3UserAvailableEdcaViTxopLimit INTEGER,
        dot3UserAvailableEdcaViMandatory INTEGER,
        dot3UserAvailableEdcaVoCWmin INTEGER,
        dot3UserAvailableEdcaVoCWmax INTEGER,
        dot3UserAvailableEdcaVoAifsn INTEGER,
        dot3UserAvailableEdcaVoTxopLimit INTEGER,
        dot3UserAvailableEdcaVoMandatory INTEGER
        }

dot3UserAvailableServiceTableIndex OBJECT-TYPE
        SYNTAX INTEGER (0..4095)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
        "Table index."
::= { dot3UserAvailableServiceTableEntry 1 }

dot3UserAvailableWsaType OBJECT-TYPE
        SYNTAX INTEGER {
              securedWsa (1),
              unsecuredWsa (2)
           }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Security level of the received WSA."
::= { dot3UserAvailableServiceTableEntry 2 }

dot3UserAvailableSecurityResultCode OBJECT-TYPE
        SYNTAX INTEGER     {
        success (1),
        inconsistentInputParameters (2),
        spduParsingInvalidInput (3),
        spduParsingUnsupportedCriticalInformationField (4),
        spduParsingCertificateNotFound (5),
        spduParsingGenerationTimeNotAvailable (6),
        spduParsingGenerationLocationNotAvailable (7),
        spduCertificateChainNotEnoughInformationToConstructChain (8),
        spduCertificateChainChainEndedAtUntrustedRoot (9),
        spduCertificateChainChainWasTooLongForImplementation (10),
        spduCertificateChainCertificateRevoked (11),
        spduCertificateChainOverdueCRL (12),
```

```
        spduCertificateChainInconsistentExpiryTimes (13),
        spduCertificateChainInconsistentStartTimes (14),
        spduCertificateChainInconsistentChainPermissions (15),
        spduCryptoVerificationFailure (16),
        spduConsistencyFutureCertificateAtGenerationTime (17),
        spduConsistencyExpiredCertificateAtGenerationTime (18),
        spduConsistencyExpiryDateTooEarly (19),
        spduConsistencyExpiryDateTooLate (20),
        spduConsistencyGenerationLocationOutsideValidityRegion (21),
        spduConsistencyNoGenerationLocation (22),
        spduConsistencyUnauthorizedPSID (23),
        spduInternalConsistencyExpiryTimeBeforeGenerationTime (24),
        spduInternalConsistencyextDataHashDoesntMatch (25),
        spduInternalConsistencynoExtDataHashProvided (26),
        spduInternalConsistencynoExtDataHashPresent (27),
        spduLocalConsistencyPSIDsDontMatch (28),
        spduLocalConsistencyChainWasTooLongForSDEE (29),
        spduRelevanceGenerationTimeTooFarInPast (30),
        spduRelevanceGenerationTimeTooFarInFuture (31),
        spduRelevanceExpiryTimeInPast (32),
        spduRelevanceGenerationLocationTooDistant (33),
        spduRelevanceReplayedSpdu (34),
        spduRelevanceCertificateExpired (35),
        spduCertificateChainInconsistentValidityRegion (36)
              }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Security level of the received WSA."
  ::= { dot3UserAvailableServiceTableEntry 3 }

  dot3UserAvailableGenerationTime OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(8))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Generation time of the WSA security information per
        IEEE Std 1609.2."
  ::= { dot3UserAvailableServiceTableEntry 4 }

  dot3UserAvailableLifetime OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(8))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Lifetime of the WSA security information per
        IEEE Std 1609.2."
  ::= { dot3UserAvailableServiceTableEntry 5 }

  dot3UserAvailableEarliestNextCrlTime OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(8))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Expected certificate revocation list time
        of the WSA security information per IEEE Std 1609.2."
  ::= { dot3UserAvailableServiceTableEntry 6 }
```

```
dot3UserAvailableSourceMacAddress OBJECT-TYPE
     SYNTAX MacAddress
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Transmitter of the WSA."
::= { dot3UserAvailableServiceTableEntry 7 }

dot3UserAvailableProviderServiceIdentifier OBJECT-TYPE
     SYNTAX OCTET STRING (SIZE(1..8))
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "PSID of the available service."
::= { dot3UserAvailableServiceTableEntry 8 }

dot3UserAvailableProviderServiceContext OBJECT-TYPE
     SYNTAX OCTET STRING (SIZE(0..31))
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "PSC of the available service."
::= { dot3UserAvailableServiceTableEntry 9 }

dot3UserAvailableIpv6Address OBJECT-TYPE
     SYNTAX Ipv6Address
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "IP address of the service provider."
::= { dot3UserAvailableServiceTableEntry 10 }

dot3UserAvailableServicePort OBJECT-TYPE
     SYNTAX INTEGER
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Transport protocol port number of the available service."
::= { dot3UserAvailableServiceTableEntry 11 }

dot3UserAvailableProviderMacAddress OBJECT-TYPE
     SYNTAX MacAddress
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "MAC address of the service provider, if different from
     the provider."
::= { dot3UserAvailableServiceTableEntry 12 }

dot3UserAvailableRcpiThreshold OBJECT-TYPE
     SYNTAX INTEGER (0..255)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Suggested reception level of the received WSA.
     Coded per IEEE Std 802.11-2012/18.3.10.7."
```

```
    ::= { dot3UserAvailableServiceTableEntry 13 }

dot3UserAvailableRcpi OBJECT-TYPE
     SYNTAX INTEGER (0..255)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Actual level of the received WSA.
     Coded per IEEE Std 802.11-2012/18.3.10.7."
    ::= { dot3UserAvailableServiceTableEntry 14 }

dot3UserAvailableWsaCountThreshold OBJECT-TYPE
     SYNTAX INTEGER (0..255)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Suggested number of received WSA
     for service acceptance."
    ::= { dot3UserAvailableServiceTableEntry 15 }

dot3UserAvailableOperatingClass OBJECT-TYPE
     SYNTAX INTEGER
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Operating Class of the channel."
    ::= { dot3UserAvailableServiceTableEntry 16 }

dot3UserAvailableChannelNumber OBJECT-TYPE
     SYNTAX INTEGER (0..200)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Number of the SCH associated with the service."
    ::= { dot3UserAvailableServiceTableEntry 17 }

dot3UserAvailableAdaptable OBJECT-TYPE
     SYNTAX TruthValue
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
          "Indicates  whether  data  rate  is  interpreted  as  maximum  allowed
          value."
    ::= { dot3UserAvailableServiceTableEntry 18 }

dot3UserAvailableDataRate OBJECT-TYPE
     SYNTAX INTEGER (2..127)
     MAX-ACCESS read-only
     STATUS current
     DESCRIPTION
     "Data rate on the indicated channel, in increments
     of 500kbit/s from 1 Mb/s to 63.5 Mb/s."
    ::= { dot3UserAvailableServiceTableEntry 19 }

dot3UserAvailableTransmitPowerLevel OBJECT-TYPE
     SYNTAX INTEGER (-128..127)
     UNITS "dBm"
```

```
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Power level on the indicated channel."
::= { dot3UserAvailableServiceTableEntry 20 }


dot3UserAvailableChannelAccess OBJECT-TYPE
        SYNTAX INTEGER {
               continuous (0),
               alternatingTimeslot1Only (1),
               alternatingTimeslot0Only (2)
           }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Indicates the duty cycle of the advertised service."
::= { dot3UserAvailableServiceTableEntry 21 }


dot3UserAvailableAdvertiserIdentifier OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(0..32))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Advertiser Identifier of the advertising device."
::= { dot3UserAvailableServiceTableEntry 22 }


dot3UserAvailableTxLatitude OBJECT-TYPE
        SYNTAX INTEGER (-900000000..900000001)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Latitude of the advertising device
        LSB = 1/10 micro degree
        Providing a range of plus-minus 90 degrees,
        with 900000001 indicating unavailable."
::= { dot3UserAvailableServiceTableEntry 23 }


dot3UserAvailableTxLongitude OBJECT-TYPE
        SYNTAX INTEGER (-1799999999..1800000001)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Longitude of the advertising device
        LSB = 1/10 micro degree
        Providing a range of plus-minus 180 degrees,
        with 1800000001 indicating unavailable."
::= { dot3UserAvailableServiceTableEntry 24 }


dot3UserAvailableTxElevation OBJECT-TYPE
        SYNTAX OCTET STRING (SIZE(2))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Elevation of the advertising device.
        1 decimeter LSB (10 cm)
        Encode elevations from 0 to 6143.9 meters
        above the reference ellipsoid as 0x0000 to 0xEFFF.
```

```
        Encode elevations from -409.5 to -0.1 meters,
        i.e. below the reference ellipsoid, as 0xF001 to 0xFFFF
        unknown as 0xF000."
::= { dot3UserAvailableServiceTableEntry 25 }


dot3UserAvailableLinkQuality OBJECT-TYPE
        SYNTAX INTEGER
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Estimated link quality associated with the
        advertised service."
::= { dot3UserAvailableServiceTableEntry 26 }


dot3UserAvailableServiceStatus OBJECT-TYPE
        SYNTAX INTEGER {
               available (0),
               active (1)
           }
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "Indicates whether device resources have been allocated
        in support of the service."
::= { dot3UserAvailableServiceTableEntry 27 }


dot3UserAvailableEdcaBkCWmin OBJECT-TYPE
        SYNTAX INTEGER (0..255)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        minimum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 28 }


dot3UserAvailableEdcaBkCWmax OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        maximum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 29 }


dot3UserAvailableEdcaBkAifsn OBJECT-TYPE
        SYNTAX INTEGER (2..15)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
```

```
        "This attribute shall specify the number of slots,
        after a SIFS duration, that the STA shall sense the
        medium idle either before transmitting or executing a
        backoff."
::= { dot3UserAvailableServiceTableEntry 30 }

dot3UserAvailableEdcaBkTxopLimit OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the maximum number
        of microseconds of an EDCA TXOP."
::= { dot3UserAvailableServiceTableEntry 31 }

dot3UserAvailableEdcaBkMandatory OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute, when TRUE, indicates that admission
        control is mandatory for the given AC. When False,
        this attribute indicates that the admission control
        is not mandatory for the given AC."
::= { dot3UserAvailableServiceTableEntry 32 }

dot3UserAvailableEdcaBeCWmin OBJECT-TYPE
        SYNTAX INTEGER (0..255)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        minimum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 33 }

dot3UserAvailableEdcaBeCWmax OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        maximum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 34 }

dot3UserAvailableEdcaBeAifsn OBJECT-TYPE
        SYNTAX INTEGER (2..15)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
```

```
        "This attribute shall specify the number of slots,
        after a SIFS duration, that the STA shall sense the
medium idle either before transmitting or executing a backoff."
::= { dot3UserAvailableServiceTableEntry 35 }

dot3UserAvailableEdcaBeTxopLimit OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the maximum number
        of microseconds of an EDCA TXOP."
::= { dot3UserAvailableServiceTableEntry 36 }

dot3UserAvailableEdcaBeMandatory OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute, when TRUE, indicates that admission
        control is mandatory for the given AC. When False,
        this attribute indicates that the admission control
        is not mandatory for the given AC."
::= { dot3UserAvailableServiceTableEntry 37 }

dot3UserAvailableEdcaViCWmin OBJECT-TYPE
        SYNTAX INTEGER (0..255)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        minimum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 38 }

dot3UserAvailableEdcaViCWmax OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the value of the
        maximum size of the window that shall be used by
        a STA for a particular AC for generating a random
        number for the backoff. The value of this attribute
        shall be such that it could always be expressed in the
        form of 2X - 1, where X is an integer."
::= { dot3UserAvailableServiceTableEntry 39 }

dot3UserAvailableEdcaViAifsn OBJECT-TYPE
        SYNTAX INTEGER (2..15)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the number of slots,
```

```
            after a SIFS duration, that the STA shall sense the
            medium idle either before transmitting or executing a
            backoff."
     ::= { dot3UserAvailableServiceTableEntry 40 }

     dot3UserAvailableEdcaViTxopLimit OBJECT-TYPE
            SYNTAX INTEGER (0..65535)
            MAX-ACCESS read-only
            STATUS current
            DESCRIPTION
            "This attribute shall specify the maximum number
            of microseconds of an EDCA TXOP."
     ::= { dot3UserAvailableServiceTableEntry 41 }

     dot3UserAvailableEdcaViMandatory OBJECT-TYPE
            SYNTAX TruthValue
            MAX-ACCESS read-only
            STATUS current
            DESCRIPTION
            "This attribute, when TRUE, indicates that admission
            control is mandatory for the given AC. When False,
            this attribute indicates that the admission control
            is not mandatory for the given AC."
     ::= { dot3UserAvailableServiceTableEntry 42 }

     dot3UserAvailableEdcaVoCWmin OBJECT-TYPE
            SYNTAX INTEGER (0..255)
            MAX-ACCESS read-only
            STATUS current
            DESCRIPTION
            "This attribute shall specify the value of the
            minimum size of the window that shall be used by
            a STA for a particular AC for generating a random
            number for the backoff. The value of this attribute
            shall be such that it could always be expressed in the
            form of 2X - 1, where X is an integer."
     ::= { dot3UserAvailableServiceTableEntry 43 }

     dot3UserAvailableEdcaVoCWmax OBJECT-TYPE
            SYNTAX INTEGER (0..65535)
            MAX-ACCESS read-only
            STATUS current
            DESCRIPTION
            "This attribute shall specify the value of the
            maximum size of the window that shall be used by
            a STA for a particular AC for generating a random
            number for the backoff. The value of this attribute
            shall be such that it could always be expressed in the
            form of 2X - 1, where X is an integer."
     ::= { dot3UserAvailableServiceTableEntry 44 }

     dot3UserAvailableEdcaVoAifsn OBJECT-TYPE
            SYNTAX INTEGER (2..15)
            MAX-ACCESS read-only
            STATUS current
            DESCRIPTION
            "This attribute shall specify the number of slots,
```

```
        after a SIFS duration, that the STA shall sense the
medium idle either before transmitting or executing a backoff."
::= { dot3UserAvailableServiceTableEntry 45 }

dot3UserAvailableEdcaVoTxopLimit OBJECT-TYPE
        SYNTAX INTEGER (0..65535)
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute shall specify the maximum number
        of microseconds of an EDCA TXOP."
::= { dot3UserAvailableServiceTableEntry 46 }

dot3UserAvailableEdcaVoMandatory OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
        "This attribute, when TRUE, indicates that admission
        control is mandatory for the given AC. When False,
        this attribute indicates that the admission control
        is not mandatory for the given AC."
::= { dot3UserAvailableServiceTableEntry 47 }

-- *******************************************************************
-- * END User Available Service Table
-- *******************************************************************


-- *******************************************************************
-- *******************************************************************
-- * END User Information
-- *******************************************************************
-- *******************************************************************


-- *******************************************************************
-- * Conformance Segment
-- *******************************************************************
dot3Compliances OBJECT IDENTIFIER ::= { dot3conformance 1 }
dot3Groups OBJECT IDENTIFIER ::= { dot3conformance 2 }

dot3Compliance MODULE-COMPLIANCE
        STATUS current
        DESCRIPTION
        "Describes the requirements for conformance to the IEEE
        1609.3 MIB."
        MODULE -- this module
        MANDATORY-GROUPS {
        dot3CapabilitiesGroup
        }

GROUP dot3IpV6Group
DESCRIPTION
"This group is mandatory for WAVE devices capable of IPv6 operation."

GROUP dot3WsmpGroup
DESCRIPTION
"This group is mandatory for WAVE devices capable of WSMP operation."
```

```
GROUP dot3RegistrationPortGroup
DESCRIPTION
"This   group   is   mandatory   for   implementations   supporting   remote   service
request over an IP network."

GROUP dot3WavRoutingAdvertisement
DESCRIPTION
"This group is mandatory for Providers sending WRAs."

GROUP dot3ChannelInfo
DESCRIPTION
"This group is mandatory for Providers sending WSA Channel Info."

GROUP dot3ProviderGroup
DESCRIPTION
"This group is optional for implementations supporting Provider operation."

GROUP dot3ProviderIpGroup
DESCRIPTION
"This group is optional for Providers of IPv6 services."

GROUP dot3SecuredUserGroup
DESCRIPTION
"This group is optional for User operation with secured WSAs."

GROUP dot3UserGroup
DESCRIPTION
"This group is optional for implementations supporting User operation."

GROUP dot3ChannelRequestGroup
DESCRIPTION
"This   group   is   optional   for   implementations   supporting   channel   service
requests."

::= { dot3Compliances 1 }

-- ****************************************************************
-- * Conformance Groups
-- ****************************************************************
dot3CapabilitiesGroup OBJECT-GROUP
      OBJECTS {
      dot3NumberOfChannelsSupported,
      dot3CchAccessImplemented,
      dot3SchAccessImplemented,
      dot3IpV6Implemented,
      dot3WsmpImplemented,
      dot3UserRoleImplemented,
      dot3ProviderRoleImplemented,
      dot3TimingAdvertisementServiceImplemented }
      STATUS current
      DESCRIPTION
      "Capabilities objects"
      ::= { dot3Groups 1 }

dot3IpV6Group OBJECT-GROUP
      OBJECTS {
```

```
       dot3UdpImplemented,
       dot3TcpImplemented
       }
       STATUS current
       DESCRIPTION
       "IP protocol objects"
       ::= { dot3Groups 2 }

dot3WsmpGroup OBJECT-GROUP
       OBJECTS {
       dot3WsmMaxLength,
       dot3WsmServiceRequestPsid
       }
       STATUS current
       DESCRIPTION
       "WSMP protocol objects"
       ::= { dot3Groups 3 }

dot3ProviderGroup OBJECT-GROUP
       OBJECTS {
       dot3AdvertiserIdentifier,
       dot3WsaType,
       dot3ProviderServiceIdentifier,
       dot3ProviderServiceContext,
       dot3ProviderChannelAccess,
       dot3ProviderBestAvailable,
       dot3ProviderOperatingClass,
       dot3ProviderServiceChannelNumber,
       dot3ProviderWsaChannelNumber,
       dot3ProviderRepeatRate,
       dot3ProviderMacAddress,
       dot3ProviderRcpiThreshold,
       dot3ProviderWsaCountThreshold,
            dot3ProviderWsaCountThresholdInterval,
       dot3ProviderServiceStatus
       }
       STATUS current
       DESCRIPTION
       "Provider request and channel objects."
       ::= { dot3Groups 4 }

dot3ProviderIpGroup OBJECT-GROUP
       OBJECTS {
       dot3ProviderIpService,
       dot3ProviderIpv6Address,
       dot3ProviderServicePort
       }
       STATUS current
       DESCRIPTION
       "Provider IPv6-related objects"
       ::= { dot3Groups 5 }

dot3UserGroup OBJECT-GROUP
       OBJECTS {
       dot3UserServiceRequestType,
       dot3UserServiceRequestProviderServiceIdentifier,
       dot3UserServiceRequestProviderServiceContext,
```

```
        dot3UserServiceRequestWsaTypes,
        dot3UserServiceRequestSourceMacAddress,
        dot3UserServiceRequestAdvertiserIdentifier,
        dot3UserServiceRequestOperatingClass,
        dot3UserServiceRequestChannelNumber,
        dot3UserServiceRequestLinkQuality,
        dot3UserServiceRequestImmediateAccess,
        dot3UserServiceStatus,
        dot3UserAvailableWsaType,
        dot3UserAvailableSourceMacAddress,
        dot3UserAvailableProviderServiceIdentifier,
        dot3UserAvailableProviderServiceContext,
        dot3UserAvailableIpv6Address,
        dot3UserAvailableServicePort,
        dot3UserAvailableProviderMacAddress,
        dot3UserAvailableRcpiThreshold,
        dot3UserAvailableRcpi,
        dot3UserAvailableWsaCountThreshold,
        dot3UserAvailableOperatingClass,
        dot3UserAvailableChannelNumber,
        dot3UserAvailableAdaptable,
        dot3UserAvailableDataRate,
        dot3UserAvailableTransmitPowerLevel,
        dot3UserAvailableChannelAccess,
        dot3UserAvailableAdvertiserIdentifier,
        dot3UserAvailableTxLatitude,
        dot3UserAvailableTxLongitude,
        dot3UserAvailableTxElevation,
        dot3UserAvailableLinkQuality,
        dot3UserAvailableServiceStatus,
        dot3UserAvailableEdcaBkCWmin,
        dot3UserAvailableEdcaBkCWmax,
        dot3UserAvailableEdcaBkAifsn,
        dot3UserAvailableEdcaBkTxopLimit,
        dot3UserAvailableEdcaBkMandatory,
        dot3UserAvailableEdcaBeCWmin,
        dot3UserAvailableEdcaBeCWmax,
        dot3UserAvailableEdcaBeAifsn,
        dot3UserAvailableEdcaBeTxopLimit,
        dot3UserAvailableEdcaBeMandatory,
        dot3UserAvailableEdcaViCWmin,
        dot3UserAvailableEdcaViCWmax,
        dot3UserAvailableEdcaViAifsn,
        dot3UserAvailableEdcaViTxopLimit,
        dot3UserAvailableEdcaViMandatory,
        dot3UserAvailableEdcaVoCWmin,
        dot3UserAvailableEdcaVoCWmax,
        dot3UserAvailableEdcaVoAifsn,
        dot3UserAvailableEdcaVoTxopLimit,
        dot3UserAvailableEdcaVoMandatory
        }
        STATUS current
        DESCRIPTION
        "User service request and available service objects"
        ::= { dot3Groups 6 }

dot3SecuredUserGroup OBJECT-GROUP
```

```
       OBJECTS {
       dot3UserAvailableSecurityResultCode,
       dot3UserAvailableGenerationTime,
       dot3UserAvailableLifetime,
       dot3UserAvailableEarliestNextCrlTime
       }
       STATUS current
       DESCRIPTION
       "User available service objects related to secured WSAs"
       ::= { dot3Groups 7 }

dot3ChannelRequestGroup OBJECT-GROUP
       OBJECTS {
       dot3ChannelServiceRequestChannelIdentifier,
            dot3ChannelServiceRequestTimeSlot,
       dot3ChannelServiceRequestStatus
       }
       STATUS current
       DESCRIPTION
       "Channel service request objects"
       ::= { dot3Groups 8 }

dot3RegistrationPortGroup OBJECT-GROUP
       OBJECTS {
       dot3RegistrationPort
       }
       STATUS current
       DESCRIPTION
       "Service registration port objects"
       ::= { dot3Groups 9 }

dot3WavRoutingAdvertisement OBJECT-GROUP
       OBJECTS {
       dot3ProviderWaveRoutingAdvertisementRouterLifetime,
       dot3ProviderWaveRoutingAdvertisementIpPrefix,
       dot3ProviderWaveRoutingAdvertisementPrefixLength,
       dot3ProviderWaveRoutingAdvertisementDefaultGateway,
       dot3ProviderWaveRoutingAdvertisementGatewayMACAddress,
       dot3ProviderWaveRoutingAdvertisementPrimaryDns,
       dot3ProviderWaveRoutingAdvertisementSecondaryDns
       }
       STATUS current
       DESCRIPTION
       "WAVE Routing Advertisement objects"
       ::= { dot3Groups 10 }

dot3ChannelInfo OBJECT-GROUP
       OBJECTS {
       dot3ProviderChannelInfoOperatingClass,
       dot3ProviderChannelInfoChannelNumber,
       dot3ProviderChannelInfoAdaptable,
       dot3ProviderChannelInfoDataRate,
       dot3ProviderChannelInfoTransmitPowerLevel,
       dot3ProviderChannelInfoEdcaBkCWmin,
       dot3ProviderChannelInfoEdcaBkCWmax,
       dot3ProviderChannelInfoEdcaBkAifsn,
       dot3ProviderChannelInfoEdcaBkTxopLimit,
```

```
        dot3ProviderChannelInfoEdcaBkMandatory,
        dot3ProviderChannelInfoEdcaBeCWmin,
        dot3ProviderChannelInfoEdcaBeCWmax,
        dot3ProviderChannelInfoEdcaBeAifsn,
        dot3ProviderChannelInfoEdcaBeTxopLimit,
        dot3ProviderChannelInfoEdcaBeMandatory,
        dot3ProviderChannelInfoEdcaViCWmin,
        dot3ProviderChannelInfoEdcaViCWmax,
        dot3ProviderChannelInfoEdcaViAifsn,
        dot3ProviderChannelInfoEdcaViTxopLimit,
        dot3ProviderChannelInfoEdcaViMandatory,
        dot3ProviderChannelInfoEdcaVoCWmin,
        dot3ProviderChannelInfoEdcaVoCWmax,
        dot3ProviderChannelInfoEdcaVoAifsn,
        dot3ProviderChannelInfoEdcaVoTxopLimit,
        dot3ProviderChannelInfoEdcaVoMandatory
        }
        STATUS current
        DESCRIPTION
        "WAVE Routing Advertisement objects"
        ::= { dot3Groups 11 }

-- ****************************************************************
-- * End of 1609.3 MIB
-- ****************************************************************
END
```