

## Annex 30A

(normative)

### GDMO specification for 802.3 managed object classes

This annex formally defines the protocol encodings for CMIP and ISO/IEC 15802-2: 1995 [IEEE 802.1B] for the IEEE 802.3 Managed Objects using the templates specified in ISO/IEC 10165-4: 1992, Guidelines for the definition of managed objects (GDMO). The application of a GDMO template compiler against 30A.1 to 30A.8 will produce the proper protocol encodings.

NOTE—The arcs (that is, object identifier values) defined in annex 30A deprecate the arcs previously defined in Annexes D1 (Layer Management), D2 (Repeater Management), and D3 (MAU Management). See IEEE Std 802.1F-1993, annex C.4.

Each attribute definition in this clause references directly by means of the WITH ATTRIBUTE SYNTAX construct or indirectly by means of the DERIVED FROM construct an ASN.1 type or subtype that defines the attribute's type and range. Those ASN.1 types and subtypes defined exclusively for CSMA/CD Management appear in a single ASN.1 module at the end of this annex.

Counters for these protocol encodings are specified as either 32 or 64 bits wide. Thirty-two bit counters are used for the protocol encoding of counter attributes, providing the minimum rollover time is 58 min or more. Sixty-four bit counters are used for the protocol encoding of counter attributes that could roll over in less than 58 min with a 32-bit counter. Approximate counter rollover times are provided as notes below each counter BEHAVIOUR definition. Approximate rollover time for 100 Mb/s operation is one tenth the value of the approximate rollover time for 10 Mb/s operation except where indicated, or where one tenth the value for 10 Mb/s operation is less than 58 min. For formal definition of the counter, refer to the BEHAVIOUR bCMCounter in 30B.1.

#### 30A.1 DTE MAC entity managed object class

##### 30A.1.1 DTE MAC entity formal definition

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oMACEntity                                MANAGED OBJECT CLASS

    DERIVED FROM                            "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 :
                                            1992":top;

    CHARACTERIZED BY
        pBasic
            ATTRIBUTES                       PACKAGE
            ACTIONS                           aMACID                                GET;
            ;                                  acInitializeMAC;
        ;
    CONDITIONAL PACKAGES
        pMandatory
            ATTRIBUTES                       PACKAGE
            ;                                  aFramesTransmittedOK                GET,
            ;                                  aSingleCollisionFrames              GET,
            ;                                  aMultipleCollisionFrames            GET,
            ;                                  aFramesReceivedOK                   GET,
            ;                                  aFrameCheckSequenceErrors           GET,
            ;                                  aAlignmentErrors                    GET;
        REGISTERED AS                        {iso(1) member-body(2) us(840) 802dot3(10006)

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		csmacdmgmt(30) package(4) macMandatoryPkg(1));
	PRESENT IF	Conformance to DTE Management is desired.;
pRecommended		PACKAGE
	ATTRIBUTES	aOctetsTransmittedOK GET, aFramesWithDeferredXmissions GET, aLateCollisions GET, aFramesAbortedDueToXSColls GET, aFramesLostDueToIntMACXmitError GET, aCarrierSenseErrors GET, aOctetsReceivedOK GET, aFramesLostDueToIntMACRcvError GET, aPromiscuousStatus GET-SET, aReadMulticastAddressList GET;
	ACTIONS	acAddGroupAddress, acDeleteGroupAddress;
	REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgmt(30) package(4) macRecommendedPkg(2)};
	PRESENT IF	The Recommended Package is implemented.;
pOptional		PACKAGE
	ATTRIBUTES	aMulticastFramesXmittedOK GET, aBroadcastFramesXmittedOK GET, aMulticastFramesReceivedOK GET, aBroadcastFramesReceivedOK GET, aInRangeLengthErrors GET, aOutOfRangeLengthField GET, aFrameTooLongErrors GET, aMACEnableStatus GET-SET, aTransmitEnableStatus GET-SET, aMulticastReceiveStatus GET-SET, aReadWriteMACAddress GET-SET;
	ACTIONS	acExecuteSelfTest;
	REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgmt(30) package(4) optionalPkg(3)};
	PRESENT IF	The Optional Package and the Recommended Package are implemented.;
pArray		PACKAGE
	ATTRIBUTES	aCollisionFrames GET;
	REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgmt(30) package(4) arrayPkg(4)};
	PRESENT IF	The Array Package and the Recommended Package are implemented.;
pExcessiveDeferral		PACKAGE
	ATTRIBUTES	aFramesWithExcessiveDeferral GET;
	REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgmt(30) package(4) excessiveDeferralPkg(5)};
	PRESENT IF	The ExcessiveDeferral Package and the Recommended Package are implemented.;
REGISTERED AS		{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgmt(30) managedObjectClass(3) macObjectClass(1)};

nbMACName

NAME BINDING

SUBORDINATE OBJECT CLASS      oMACEntity;  
NAMED BY SUPERIOR OBJECT CLASS      “ISO/IEC 10165-2”:system;  
WITH ATTRIBUTE      aMACID;  
REGISTERED AS      {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
nameBinding(6) macName(1)};

**nbMACMonitor**

**NAME BINDING**

SUBORDINATE OBJECT CLASS      “IEEE802.1F”:ewmaMetricMonitor;  
NAMED BY SUPERIOR OBJECT CLASS      “ISO/IEC 10165-2”:system;  
WITH ATTRIBUTE      aScannerId;  
CREATE      WITH-AUTOMATIC-INSTANCE-NAMING;  
DELETE      ONLY-IF-NO-CONTAINED-OBJECTS;  
REGISTERED AS      {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
nameBinding(6) macMonitor(2)};

**30A.1.2 DTE MAC entity attributes**

**aMACID    ATTRIBUTE**

WITH ATTRIBUTE SYNTAX      IEEE802Dot3-MgmtAttributeModule.OneOfName;  
MATCHES FOR      EQUALITY;  
BEHAVIOUR      bMACID;  
REGISTERED AS      {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) macID(3)};

**bMACID    BEHAVIOUR**

DEFINED AS      See “BEHAVIOUR DEFINED AS” in 30.3.1.1.1;

**aFramesTransmittedOK    ATTRIBUTE**

DERIVED FROM      aCMCounter;  
BEHAVIOUR      bFramesTransmittedOK;  
REGISTERED AS      {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) framesTransmittedOK(2)};

**bFramesTransmittedOK    BEHAVIOUR**

DEFINED AS      See “BEHAVIOUR DEFINED AS” in 30.3.1.1.2;

NOTES

1—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

2—This maps to framesSent (of the mandatory macPackage) in ISO/IEC 10742: 1994.;

**aSingleCollisionFrames ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bSingleCollisionFrames;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) singleCollisionFrames(3)};

**bSingleCollisionFrames BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.3;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 103 h.;

**aMultipleCollisionFrames ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bMultipleCollisionFrames;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) multipleCollisionFrames(4)};

**bMultipleCollisionFrames BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.4;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 125 h.;

**aFramesReceivedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bFramesReceivedOK;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) framesReceivedOK(5)};

**bFramesReceivedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.5;

## NOTES

1—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

2—This maps to framesReceived (of the mandatory macPackage) in ISO/IEC 10742: 1994.;

**aFrameCheckSequenceErrors ATTRIBUTE**

DERIVED FROM	aCMCounter;
BEHAVIOUR	bFrameCheckSequenceErrors;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) frameCheckSequenceErrors(6)};

**bFrameCheckSequenceErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.6;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aAlignmentErrors ATTRIBUTE**

DERIVED FROM	aCMCounter;
BEHAVIOUR	bAlignmentErrors;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) alignmentErrors(7)};

**bAlignmentErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.7;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aOctetsTransmittedOK ATTRIBUTE**

DERIVED FROM	aCMCounter;
BEHAVIOUR	bOctetsTransmittedOK;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) octetsTransmittedOK(8)};

**bOctetsTransmittedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.8;

NOTES

1—The approximate minimum time between counter rollovers for 10 Mb/s operation is 58 min.

2—This maps to octetsSent (of the mandatory macPackage) in ISO/IEC 10742: 1994.;

**aFramesWithDeferredXmissions ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bFramesWithDeferredXmissions;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) framesWithDeferredXmissions(9)};

**bFramesWithDeferredXmissions BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.9;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 103 h.;

**aLateCollisions ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bLateCollisions;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) lateCollisions(10)};

**bLateCollisions BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.10;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aFramesAbortedDueToXSColls ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bFramesAbortedDueToXSColls;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) framesAbortedDueToXSColls(11)};

**bFramesAbortedDueToXSColls BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.11;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 53 days.;

**aFramesLostDueToIntMACXmitError ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bFramesLostDueToIntMACXmitError;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) framesLostDueToIntMACXmitError(12)};

**bFramesLostDueToIntMACXmitError BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.12;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 16 h.;

**aCarrierSenseErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bCarrierSenseErrors;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) carrierSenseErrors(13)};

**bCarrierSenseErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.13;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aOctetsReceivedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bOctetsReceivedOK;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) octetsReceivedOK(14)};

**bOctetsReceivedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.14;

NOTES

1—The approximate minimum time between counter rollovers for 10 Mb/s operation is 58 min.

2—This maps to octetsReceived (of the mandatory macPackage) in ISO/IEC 10742: 1994.;

**aFramesLostDueToIntMACRcvError ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bFramesLostDueToIntMACRcvError;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) framesLostDueToIntMACRcvError(15)};

**bFramesLostDueToIntMACRcvError BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.15;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aPromiscuousStatus ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.TrueFalse;  
BEHAVIOUR bPromiscuousStatus;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) promiscuousStatus(16)};

**bPromiscuousStatus BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.16;

**aReadMulticastAddressList ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.  
MulticastAddressList  
BEHAVIOUR bReadMulticastAddressList;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) readMulticastAddressList(17)};

**bReadMulticastAddressList BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.17;

**aMulticastFramesXmittedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bMulticastFramesXmittedOK;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) multicastFramesXmittedOK(18)};

**bMulticastFramesXmittedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.18;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;



**aBroadcastFramesXmittedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bBroadcastFramesXmittedOK;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) broadcastFramesXmittedOK(19)};

**bBroadcastFramesXmittedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.19;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aFramesWithExcessiveDeferral ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bFramesWithExcessiveDeferral;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) framesWithExcessiveDeferral(20)};

**bFramesWithExcessiveDeferral BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.20;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 58 days.;

**aMulticastFramesReceivedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bMulticastFramesReceivedOK;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) multicastFramesReceivedOK(21)};

**bMulticastFramesReceivedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.21;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aBroadcastFramesReceivedOK ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bBroadcastFramesReceivedOK;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) broadcastFramesReceivedOK(22)};

**bBroadcastFramesReceivedOK BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.22;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aInRangeLengthErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bInRangeLengthErrors;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) inRangeLengthErrors(23)};

**bInRangeLengthErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.23;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aOutOfRangeLengthField ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bOutOfRangeLengthField;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) outOutOfRangeLengthField(24)};

**bOutOfRangeLengthField BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.24;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aFrameTooLongErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bFrameTooLongErrors;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) frameTooLongErrors(25)};

**bFrameTooLongErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.25;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 61 days.;

**aMACEnableStatus ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.TrueFalse;  
BEHAVIOUR bMACEnableStatus;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) mACEnableStatus(26)};

**bMACEnableStatus BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.26;

**aTransmitEnableStatus ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.TrueFalse;  
BEHAVIOUR bTransmitEnableStatus;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) transmitEnableStatus(27)};

**bTransmitEnableStatus BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.27;

**aMulticastReceiveStatus ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.TrueFalse;  
BEHAVIOUR bMulticastReceiveStatus;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) multicastReceiveStatus(28)};

**bMulticastReceiveStatus BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.28;

**aReadWriteMACAddress ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802CommonDefinitions.MACAddress;  
BEHAVIOUR bReadWriteMACAddress;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) modifyMACAddress(29)};

**bReadWriteMACAddress BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.29;

NOTE—This maps to localMACAddress (of the mandatory macPackage) in  
ISO/IEC 10742: 1994.;

**aCollisionFrames ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.AttemptArray;  
 BEHAVIOUR bCollisionFrames;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) collisionFrames(30)};

**bCollisionFrames BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.1.30;

NOTE—The approximate minimum time for any single counter rollover for 10 Mb/s operation is 103 h.;

**30A.1.3 DTE MAC entity actions****acInitializeMAC ACTION**

BEHAVIOUR bInitializeMAC;  
 MODE CONFIRMED;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 action(9) initializeMAC(1)};

**bInitializeMAC BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.2.1;

**acAddGroupAddress ACTION**

BEHAVIOUR bAddGroupAddress;  
 MODE CONFIRMED;  
 WITH INFORMATION SYNTAX IEEE802CommonDefinitions.MACAddress;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 action(9) addGroupAddress(2)};

**bAddGroupAddress BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.2.2;

**acDeleteGroupAddress ACTION**

BEHAVIOUR bDeleteGroupAddress;  
 MODE CONFIRMED;  
 WITH INFORMATION SYNTAX IEEE802CommonDefinitions.MACAddress;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 action(9) deleteGroupAddress(3)};

**bDeleteGroupAddress BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.2.3;

**acExecuteSelfTest ACTION**

BEHAVIOUR bExecuteSelfTestMAC;  
 MODE CONFIRMED;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 action(9) executeSelfTestMAC(4)};

**bExecuteSelfTestMAC BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.1.2.4;

**30A.2 DTE physical entity managed object class**

**30A.2.1 DTE physical entity formal definition**

oPHYEntity MANAGED OBJECT CLASS

DERIVED FROM “CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 :  
 1992”:top;

CHARACTERIZED BY

    pBasic PACKAGE

        ATTRIBUTES aPHYID GET,  
                   aPHYType GET,  
                   aPHYTypeList GET,  
                   aMIIDetect GET,  
                   aPHYAdminState GET;

    ;

    ;

CONDITIONAL PACKAGES

    pRecommended PACKAGE

        ATTRIBUTES aSQETestErrors GET;

        REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)  
                   csmacdmgt(30) package(4)  
                   phyRecommendedPkg(6)};

        PRESENT IF The Recommended Package is implemented.;

    pMultiplePhy PACKAGE

        ACTIONS acPHYAdminControl;

        REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)  
                   csmacdmgt(30) package(4)  
                   phyMultiplePhyPkg(7)};

        PRESENT IF There is more than one PHY per MAC.;

    ;

    p100MbpsMonitor PACKAGE

        ATTRIBUTES aSymbolErrorDuringCarrier GET;

        REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)  
                   csmacdmgt(30) package(4)

	phy100 MbpsMonitor(8));
PRESENT IF	The 100 Mb/s Monitor capability is implemented.;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) managedObjectClass(3) phyObjectClass(2)};
<b>nbPHYName</b>	<b>NAME BINDING</b>
SUBORDINATE OBJECT CLASS	oPHYEntity;
NAMED BY SUPERIOR OBJECT CLASS	
WITH ATTRIBUTE	aMACEntity;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) nameBinding(6) phyName(3)};
<b>nbPHYMonitor</b>	<b>NAME BINDING</b>
SUBORDINATE OBJECT CLASS	“IEEE802.1F”:ewmaMetricMonitor;
NAMED BY SUPERIOR OBJECT CLASS	
WITH ATTRIBUTE	“ISO/IEC 10165-2”:system;
CREATE	aScannerId;
DELETE	WITH-AUTOMATIC-INSTANCE-NAMING;
REGISTERED AS	ONLY-IF-NO-CONTAINED-OBJECTS;
	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) nameBinding(6) phyMonitor(4)};

### 30A.2.2 DTE physical entity attributes

#### **aPHYID ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bPHYID;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) phyID(31)};

#### **bPHYID BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.3.2.1.1;
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#### **aPHYType ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3- MgmtAttributeModule.PhyTypeValue;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bPHYType;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) pPHYType(32)};

**bPHYType BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.2;

**aPHYTypeList ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PhyTypeList;  
MATCHES FOR EQUALITY, ORDERING;  
BEHAVIOUR bPHYTypeList;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) pHYTypeList(33)};

**bPHYTypeList BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.3;

**aSQETestErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bSQETestErrors;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) sqeTestErrors(34)};

**bSQETestErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.4;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aSymbolErrorDuringCarrier ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bSymbolErrorDuringCarrier;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) symbolErrorDuringCarrier(35)};

**bSymbolErrorDuringCarrier BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.5;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aMIIDetect ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.MIIDetect;  
MATCHES FOR EQUALITY;  
BEHAVIOUR bMIIDetect;

REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) mIIDetect(36)};

**bMIIDetect BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.6;

**aPHYAdminState ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.  
PortAdminState;  
MATCHES FOR EQUALITY, ORDERING;  
BEHAVIOUR bPHYAdminState;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) pPHYAdminState(37)};

**bPHYAdminState BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.1.7;

**30A.2.3 DTE physical entity actions**

**acPHYAdminControl ACTION**

BEHAVIOUR bPHYAdminControl;  
MODE CONFIRMED;  
WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.  
PortAdminState;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
action(9) pPHYAdminControl(5)};

**bPHYAdminControl BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.3.2.2.1;

**30A.3 Repeater managed object class**

**30A.3.1 Repeater, formal definition**



```

oRepeater                                MANAGED OBJECT CLASS

    DERIVED FROM                          "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2
                                          1992":top;

    CHARACTERIZED BY
        pRepeaterBasicControl            PACKAGE
            ATTRIBUTES                    aRepeaterID                GET,
                                          aRepeaterType              GET,
                                          aRepeaterGroupCapacity     GET,
                                          aGroupMap                   GET,
                                          aRepeaterHealthState       GET,
                                          aRepeaterHealthText        GET,
                                          aRepeaterHealthData       GET;

            ACTIONS                    acResetRepeater,
                                          acExecuteNonDisruptiveSelfTest;

            NOTIFICATIONS                nRepeaterHealth,
                                          nRepeaterReset,
                                          nGroupMapChange;

    ;
;
    CONDITIONAL PACKAGES
        pRepeaterPerfMonitor            PACKAGE
            ATTRIBUTES                    aTransmitCollisions        GET;
            REGISTERED AS                  {iso(1) member-body(2) us(840) 802dot3(10006)
                                          csmacdmgt(30) package(4)
                                          repeaterPerfMonitorPkg(9)};

            PRESENT IF                    The Performance Monitor Capability is implemented.;
    REGISTERED AS                          {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)
                                          managedObjectClass(3) repeaterObjectClass(3)};

nbRepeaterName                            NAME BINDING

    SUBORDINATE OBJECT CLASS              repeater;
    NAMED BY SUPERIOR OBJECT CLASS

    WITH ATTRIBUTE                          "ISO/IEC 10165-2":system AND SUBCLASSES;
    REGISTERED AS                          aRepeaterID;
                                          {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)
                                          nameBinding(6) repeaterName(5)};

nbRepeaterMonitor                          NAME BINDING

    SUBORDINATE OBJECT CLASS              "IEEE802.1F":oEWMAMetricMonitor;
    NAMED BY SUPERIOR OBJECT CLASS

    WITH ATTRIBUTE                          "ISO/IEC 10165-2":system AND SUBCLASSES;
        CREATE                            aScannerId;
        DELETE                            WITH-AUTOMATIC-INSTANCE-NAMING;
    REGISTERED AS                          ONLY-IF-NO-CONTAINED-OBJECTS;
                                          {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)
                                          nameBinding(6) repeaterMonitor(6)};

```

### 30A.3.2 Repeater attributes

**aRepeaterID ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bRepeaterID;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterID(38)};

**bRepeaterID BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.1;
------------	---

**aRepeaterType ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.RepeaterType;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bRepeaterType;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterType (39)};

**bRepeaterType BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.2;
------------	---

**aRepeaterGroupCapacity ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR	EQUALITY, ORDERING;
BEHAVIOUR	bRepeaterGroupCapacity;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterGroupCapacity(40)};

**bRepeaterGroupCapacity BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.3;
------------	---

**aGroupMap ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.BitString;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bGroupMap;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) groupMap(41)};

**bGroupMap BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.4;
------------	---

**aRepeaterHealthState ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule. RepeaterHealthState;
MATCHES FOR BEHAVIOUR	EQUALITY; bRepeaterHealthState;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterHealthState(42)};

**bRepeaterHealthState BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.5;
------------	---

**aRepeaterHealthText ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule. RepeaterHealthText;
MATCHES FOR BEHAVIOUR	EQUALITY; bRepeaterHealthText;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterHealthText(43)};

**bRepeaterHealthText BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.6;
------------	---

**aRepeaterHealthData ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule. RepeaterHealthData;
MATCHES FOR BEHAVIOUR	EQUALITY; bRepeaterHealthData;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) repeaterHealthData(44)};

**bRepeaterHealthData BEHAVIOUR**

DEFINED AS	See “BEHAVIOUR DEFINED AS” in 30.4.1.1.7;
------------	---

**aTransmitCollisions ATTRIBUTE**

DERIVED FROM BEHAVIOUR	aCMCounter; bTransmitCollisions;
REGISTERED AS	{iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) attribute(7) transmitCollisions (45)};

**bTransmitCollisions** BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.1.8;

NOTE—The approximate minimum time for counter rollover for 10 Mb/s operation is 16 h.;

**30A.3.3 Repeater actions****acResetRepeater** ACTION

BEHAVIOUR bResetRepeater;  
MODE CONFIRMED;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
action(9) resetRepeater(6)};

**bResetRepeater** BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.2.1;

**acExecuteNonDisruptiveSelfTest** ACTION

BEHAVIOUR bExecuteNonDisruptiveSelfTest;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
action(9) executeNonDisruptiveSelfTestAction(7)};

**bExecuteNonDisruptiveSelfTest** BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.2.2;

**30A.3.4 Repeater notifications****nRepeaterHealth** NOTIFICATION

BEHAVIOUR bRepeaterHealth;  
WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.  
RepeaterHealthInfo  
AND ATTRIBUTE IDS repeaterHealthState aRepeaterHealthState,  
repeaterHealthText aRepeaterHealthText,  
repeaterHealthData aRepeaterHealthData  
;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
notification(10) repeaterHealth(1)};

**bRepeaterHealth** BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.3.1;

### nRepeaterReset NOTIFICATION

BEHAVIOUR bRepeaterReset;  
 WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.  
 RepeaterHealthInfo  
 AND ATTRIBUTE IDS repeaterHealthState aRepeaterHealthState,  
 repeaterHealthText aRepeaterHealthText,  
 repeaterHealthData aRepeaterHealthData  
 ;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 notification(10) repeaterReset(2)};

### bRepeaterReset BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.3.2;

### nGroupMapChange NOTIFICATION

BEHAVIOUR bGroupMapChange;  
 WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.BitString;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 notification(10) groupMapChange(3)};

### bGroupMapChange BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.1.3.3;

## 30A.4 Group managed object class

### 30A.4.1 Group, formal definition

oGroup MANAGED OBJECT CLASS  
 DERIVED FROM “CCITT Rec. X.721 (1992) | ISO/IEC 10165-2  
 1992”:top;  
 CHARACTERIZED BY  
     pGroupBasicControl PACKAGE  
     ATTRIBUTES aGroupID GET,  
                   aGroupPortCapacity GET,  
                   aPortMap GET;  
     NOTIFICATIONS nPortMapChange;  
 ;  
 ;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 managedObjectClass(3) groupObjectClass(4)};

nbGroupName NAME BINDING  
 SUBORDINATE OBJECT CLASS oGroup;  
 NAMED BY SUPERIOR OBJECT CLASS

oRepeater AND SUBCLASSES;  
 WITH ATTRIBUTE aGroupID;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 nameBinding(6) groupName(7)};

### 30A.4.2 Group attributes

#### aGroupID ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.OneOfName;  
 MATCHES FOR EQUALITY;  
 BEHAVIOUR bGroupID;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) groupID(46)};

#### bGroupID BEHAVIOUR

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.2.1.1;

#### aGroupPortCapacity ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.OneOfName;  
 MATCHES FOR EQUALITY, ORDERING;  
 BEHAVIOUR bGroupPortCapacity;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) groupPortCapacity(47)};

#### bGroupPortCapacity BEHAVIOUR

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.2.1.2;

#### aPortMap ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.BitString;  
 MATCHES FOR EQUALITY;  
 BEHAVIOUR bPortMap;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) portMap(48)};

#### bPortMap BEHAVIOUR

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.2.1.3;

### 30A.4.3 Group notifications

#### nPortMapChange NOTIFICATION

BEHAVIOUR bPortMapChange;  
 WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.BitString;

REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30) notification(10) portMapChange(4)};

**bPortMapChange BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.2.2.1;

**30A.5 Repeater port managed object class**

**30A.5.1 Port, formal definition**

```

oRepeaterPort
    MANAGED OBJECT CLASS
    DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2
    1992":top;
    CHARACTERIZED BY
        pPortBasicControl
            ATTRIBUTES
                aPortID GET;
                aPortAdminState GET;
                aAutoPartitionState GET;
            ACTIONS
                acPortAdminControl;
        ;
    ;
    CONDITIONAL PACKAGES
        pPortPerfMonitor
            ATTRIBUTES
                aReadableFrames GET;
                aReadableOctets GET;
                aFrameCheckSequenceErrors GET;
                aAlignmentErrors GET;
                aFramesTooLong GET;
                aShortEvents GET;
                aRunts GET;
                aCollisions GET;
                aLateEvents GET;
                aVeryLongEvents GET;
                aDataRateMismatches GET;
                aAutoPartitions GET;
            REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)
            csmacdmgt(30) package(4)
            portPerfMonitorPkg(10)};
            PRESENT IF The Performance Monitor Capability is implemented.;
        pPortAddrTracking
            ATTRIBUTES
                aLastSourceAddress GET;
                aSourceAddressChanges GET;
            REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)
            csmacdmgt(30) package(4) portAddrTrackPkg(11)};
            PRESENT IF The Address Tracking and Performance Monitor
            capabilities are implemented.;
        p100MbpsMonitor
            ATTRIBUTES
                aIsolates GET;
                aSymbolErrorDuringPacket GET;
            REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006)

```

csmacdmgt(30) package(4)  
 port100 MbpsMonitor(12));  
 PRESENT IF The 100 Mb/s Monitor capability is implemented;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 managedObjectClass(3) repeaterPortObjectClass(5)};

**nbPortName** NAME BINDING

SUBORDINATE OBJECT CLASS oRepeaterPort;  
 NAMED BY SUPERIOR OBJECT CLASS  
 WITH ATTRIBUTE oGroup AND SUBCLASSES;  
 REGISTERED AS aPortID;  
 {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 nameBinding(6) portName(8)};

### 30A.5.2 Port attributes

#### **aPortID** ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.OneOfName;  
 BEHAVIOUR bPortID;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) portID(49)};

#### **bPortID** BEHAVIOUR

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.1;

#### **aPortAdminState** ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.  
 PortAdminState;  
 MATCHES FOR EQUALITY;  
 BEHAVIOUR bPortAdminState;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) portAdminState(50)};

#### **bPortAdminState** BEHAVIOUR

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.2;

#### **aAutoPartitionState** ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.  
 AutoPartitionState;  
 MATCHES FOR EQUALITY;  
 BEHAVIOUR bAutoPartition;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) autoPartitionState(51)};



**bAutoPartition BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.3;

**aReadableFrames ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bReadableFrames;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) readableFrames(52)};

**bReadableFrames BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.4;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aReadableOctets ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bReadableOctets;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) readableOctets(53)};

**bReadableOctets BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.5;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 58 min.;

**aFrameCheckSequenceErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bFCSErrors;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) frameCheckSequenceErrors(54)};

**bFCSErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.6;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aAlignmentErrors ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bAlignmentErrors;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) alignmentErrors(55)};

**bAlignmentErrors BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.7;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 80 h.;

**aFramesTooLong ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bFramesTooLong;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) framesTooLong(56)};

**bFramesTooLong BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.8;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 61 days.;

**aShortEvents ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bShortEvents;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) shortEvents(57)};

**bShortEvents BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.9;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 16 hours;

**aRunts ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bRunts;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) runts(58)};

**bRunts BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.10;

NOTE—The approximate minimum time for counter rollover for 10 Mb/s operation is 16 h.;

**aCollisions ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bCollisions;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) collisions(59)};

**bCollisions BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.11;

NOTE—The approximate minimum time for counter rollover for 10 Mb/s operation is 16 h.;

**aLateEvents ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bLateEvents;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) lateEvents(60)};

**bLateEvents BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.12;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 81 h.;

**aVeryLongEvents ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bVeryLongEvents;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) veryLongEvents(61)};

**bVeryLongEvents BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.13;

NOTE—The approximate minimum time between counter rollovers for 10 Mb/s operation is 198 days.;

**aDataRateMismatches ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bDataRateMismatches;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) dataRateMismatches(62)};

**bDataRateMismatches BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.14;

**aAutoPartitions ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bAutoPartitions;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) autoPartitions(63)};

**bAutoPartitions BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.15;

**alsolates ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bIsolates;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) isolates(64)};

**blsolates BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.16;

**aSymbolErrorDuringPacket ATTRIBUTE**

DERIVED FROM aCMCounter;  
 BEHAVIOUR bSymbolErrorDuringPacket;  
 REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
 attribute(7) symbolErrorDuringPacket(65)};

**bSymbolErrorDuringPacket BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.4.3.1.17;

**aLastSourceAddress ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802CommonDefinitions.MACAddress;  
 MATCHES FOR EQUALITY;

BEHAVIOUR bLastSourceAddress;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) lastSourceAddress(66)};

**bLastSourceAddress BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.18;

**aSourceAddressChanges ATTRIBUTE**

DERIVED FROM aCMCounter;  
BEHAVIOUR bSourceAddressChanges;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
attribute(7) sourceAddressChanges(67)};

**bSourceAddressChanges BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.1.19;

NOTE—The approximate minimum time for counter rollover for 10 Mb/s operation is 81 h.

**30A.5.3 Port actions**

**acPortAdminControl ACTION**

BEHAVIOUR bPortAdminControl;  
WITH INFORMATION SYNTAX IEEE802Dot3-MgmtAttributeModule.  
PortAdminState;  
REGISTERED AS {iso(1) member-body(2) us(840) 802dot3(10006) csmacdmgt(30)  
action(9) portAdminControl(8)};

**bPortAdminControl BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.4.3.2.1;

**30A.6 MAU managed object class**

**30A.6.1 MAU, formal definition**

oMAU MANAGED OBJECT CLASS  
DERIVED FROM “CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 :  
1992”:top;  
CHARACTERIZED BY  
pMAUBasic PACKAGE  
ATTRIBUTES aMAUID GET,  
aMAUType GET-SET,

```

aMAUTypeList          GET,
aMediaAvailable        GET,
aJabber                GET,
aMAUAdminState        GET;
NOTIFICATIONS
;
;
CONDITIONAL PACKAGES
  pMAUControl          PACKAGE
    ACTIONS            acResetMAU,
                      acMAUAdminControl;
    REGISTERED AS      {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30)
                      package(4) mauControlPkg(13)};
    PRESENT IF         The pMAUControl package is implemented.;

  pMediaLossTracking   PACKAGE
    ATTRIBUTES         aLoseMediaCounter          GET;
    REGISTERED AS      {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30)
                      package(4) mediaLossTrackingPkg(14)};
    PRESENT IF         MAU TypeValue = AUI or if the
                      pMediaLossTracking package is implemented.;

  pBroadbandDTEMAU    PACKAGE
    ATTRIBUTES         aBbMAUXmitRcvSplitType    GET,
                      aBroadbandFrequencies      GET;
    REGISTERED AS      {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30)
                      package(4) broadbandMAUPkg(15)};
    PRESENT IF         The MAU is of type 10BROAD36.;

  p100MbpsMonitor      PACKAGE
    ATTRIBUTES         aFalseCarriers            GET;
    REGISTERED AS      {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30)
                      package(4) mau100MbpsMonitor(16)};
    PRESENT IF         The MAU is capable of 100 Mb/s operation.;
REGISTERED AS         {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30)
                      managedObjectClass(3) mauObjectClass(6)};
nbMAU-repeaterName    NAME BINDING

  SUBORDINATE OBJECT CLASS  oMAU;
  NAMED BY SUPERIOR OBJECT CLASS  --(of oRepeaterPort)
                                oRepeaterPort AND SUBCLASSES;
                                --{1.2.840.10006.30.3.5}

  WITH ATTRIBUTE            aMAUID;
  REGISTERED AS             {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) nameBinding(6)
                            mau-repeaterName(9)};

nbMAU-dteName          NAME BINDING

  SUBORDINATE OBJECT CLASS  oMAU;
  NAMED BY SUPERIOR OBJECT CLASS  --(of oPHYEntity)
                                oPHYEntity AND SUBCLASSES
                                --{1.2.840.10006.30.3.2};

  WITH ATTRIBUTE            aMAUID;
  REGISTERED AS             {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) nameBinding(6)

```

mau-dteName(10));

### 30A.6.2 MAU attributes

#### **aMAUID ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR	EQUALITY;
BEHAVIOUR	bMAUID;
REGISTERED AS	{iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7) mauID(68)};

#### **bMAUID BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.5.1.1.1;

#### **aMAUType ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.TypeValue;
MATCHES FOR	EQUALITY, ORDERING;
BEHAVIOUR	bMAUType;
REGISTERED AS	{iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7) mauType(69)};

#### **bMAUType BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.5.1.1.2;

#### **aMAUTypeList ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule.TypeList;
MATCHES FOR	EQUALITY, ORDERING;
BEHAVIOUR	bMAUTypeList;
REGISTERED AS	{iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7) mauTypeList(70)};

#### **bMAUTypeList BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.5.1.1.3;

#### **aMediaAvailable ATTRIBUTE**

WITH ATTRIBUTE SYNTAX	IEEE802Dot3-MgmtAttributeModule. MediaAvailState;
MATCHES FOR	EQUALITY, ORDERING;
BEHAVIOUR	bMediaAvailable;
REGISTERED AS	{iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7) mauMediaAvailable(71)};

**bMediaAvailable BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.5.1.1.4;

**aLoseMediaCounter ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.aCMCounter;  
 MATCHES FOR EQUALITY, ORDERING;  
 BEHAVIOUR bLoseMediaCounter;  
 REGISTERED AS {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7)  
 mauLoseMediaCounter(72)};

**bLoseMediaCounter BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.5.1.1.5;

**aJabber ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.Jabber;  
 MATCHES FOR EQUALITY, ORDERING;  
 BEHAVIOUR bJabberAttribute;  
 REGISTERED AS {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7)  
 jabber(73)};

**bJabberAttribute BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.5.1.1.6;

**aMAUAdminState ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.AdminState;  
 MATCHES FOR EQUALITY, ORDERING;  
 BEHAVIOUR bMAUAdminState;  
 REGISTERED AS {iso(1) std(0) iso8802(8802) csma(3) csmacdmgt(30) attribute(7)  
 mauAdminState(74)};

**bMAUAdminState BEHAVIOUR**

DEFINED AS See "BEHAVIOUR DEFINED AS" in 30.5.1.1.7;

**aBbMAUXmitRcvSplitType ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.  
 BbandXmitRcvSplitType;  
 MATCHES FOR EQUALITY;  
 BEHAVIOUR bBbMAUXmitRcvSplitType;