Changes to ANSI/IEEE Std 802.3-2000, Annex 30A and 30B

EDITORIAL NOTES - This supplement is based on the current edition of IEEE Std 802.3, 2000. The editing instructions define how to merge the material contained here into this base document set to form the new comprehensive standard as created by the addition of P802.3ae.

Editing instructions are shown in ***bold italic***. Three editing instructions are used: change, delete, and insert. ***Change*** is used to make small corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed either by using ~~strikethrough~~ (to remove old material) or underscore (to add new material). ***Delete*** removes existing material. ***Insert*** adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. Editorial notes will not be carried over into future editions.

Editors' Notes: *To be removed prior to final publication.*

References:
None.

Definitions:
None.

Abbreviations:
None.

Revision History:

Draft 1.1, December 2001	Initial draft for review.

Annex 30A

(normative)

GDMO specification for 802.3 managed object classes

Editor's Note: *to be removed prior to final publication.*
Any values of OBJECT IDENTIFIER required to complete these GDMO definition will be allocated when this draft is issued for Sponsor ballot.

Change the first paragraph of this annex as follows:

This annex formally defines the protocol encodings for CMIP and ISO/IEC 15802-2: 1995 [ANSI/IEEE Std 802.1B and 802.1k, 1995 Edition] for the IEEE 802.3 Managed Objects using the templates specified in ISO/IEC 10165-4: 1992. The application of a GDMO template compiler against 30A.1 to ~~30A.15~~30A.16 will produce the proper protocol encodings.

Add the following subclauses after subclause 30A.15.2:

30A.16 PSE managed object class

30A.16.1 PSE, formal definition

```
oPSE                            MANAGED OBJECT CLASS

    DERIVED FROM                "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":top;
    CHARACTERIZED BY
            pPSEBasic           PACKAGE
                    ATTRIBUTES  aPSEID                          GET,
                                aPSEAdminState                  GET;
            ;
    ;
    CONDITIONAL PACKAGES
            pPSERecommended     PACKAGE
                    ATTRIBUTES  aPSEPowerPairsControlAbility    GET,
                                aPSEPowerPairs                  GET-REPLACE,
                                aPSEPowerDetectionControl       GET-REPLACE,
                                aPSEPowerDetectionStatus        GET,
                                aPSEPowerClassification         GET,
                                aPSEPowerCurrentStatus          GET;
                    ACTIONS     acPSEAdminControl,
                                acPSEPowerCurrentStatusClear;
                    REGISTERED AS
                                {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacd-
                    mgt(30) package(4) pseRecommendedPkg(??)};
                    PRESENT IF  The recommended package is implemented;
    REGISTERED AS   {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) manage-
                    dObjectClass(3) pseObjectClass(??)};
```

nbPSE-repeaterName **NAME BINDING**

SUBORDINATE OBJECT CLASS oPSE;
NAMED BY SUPERIOR OBJECT CLASS oRepeaterPorts AND SUBCLASSES;
WITH ATTRIBUTE aPSEID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) nameBinding(6) pse-repeaterName(??)};

nbPSE-dteName **NAME BINDING**

SUBORDINATE OBJECT CLASS oPSE;
NAMED BY SUPERIOR OBJECT CLASS oPHYEntity AND SUBCLASSES;
WITH ATTRIBUTE aPSEID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) nameBinding(6) pse-dteName(??)};

30A.16.2 PSE attributes

aPSEID **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) pseID(???)};

bPSEID **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.1;

aPSEAdminState **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PortAdminState;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEAdminState;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) pseAdminState(???)};

bPSEAdminState **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.2;

aPSEPowerPairsControlAbility **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PairCtrlAbility;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEPowerPairsControlAbility;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerPairsControlAbility(???)};

bPSEPowerPairsControlAbility **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.3;

aPSEPowerPairs **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PSEPowerPairs;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEPowerPairs;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerPairs(???)};

bPSEPowerPairs **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.4;

aPSEPowerDetectionControl **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.DetectControl;
MATCHES FOR EQUALITY, ORDERING **????**;
BEHAVIOUR bPSEPowerDetectionControl;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerDetectionControl(???)};

bPSEPowerDetectionControl **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.5;

aPSEPowerDetectionStatus **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.DetectStatus;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEPowerDetectionStatus;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerDetectionStatus(???)};

bPSEPowerDetectionStatus **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.6;

aPSEPowerClassification **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PowerClass;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEPowerClassification;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerClassification(???)};

bPSEPowerClassification **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.7;

aPSEPowerCurrentStatus **ATTRIBUTE**

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.CurrentStatus;
MATCHES FOR EQUALITY;
BEHAVIOUR bPSEPowerCurrentStatus;

REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) psePowerCurrentStatus(???)};

bPSEPowerCurrentStatus BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.1.8;

30A.16.3 PSE actions

acPSEAdminControl ACTION

BEHAVIOUR bPSEAdminControl;
MODE CONFIRMED;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) action(9) PSEAdminControl(??)};

bPSEAdminControl BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.2.1;

acPSEPowerCurrentStatusClear ACTION

BEHAVIOUR bPSEPowerCurrentStatusClear;
MODE CONFIRMED;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) action(9) PSEPowerCurrentStatusClear(??)};

bPSEPowerCurrentStatusClear BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.1.2.2;

30A.17 PD managed object class

30A.17.1 PD, formal definition

oPD MANAGED OBJECT CLASS

DERIVED FROM “CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992”:top;
CHARACTERIZED BY
pPDBasic PACKAGE
ATTRIBUTES aPDID GET;
;
;
CONDITIONAL PACKAGES
pPDRecommended PACKAGE
ATTRIBUTES aPDPowerStatus GET,
aPDPowerPairs GET;
REGISTERED AS
{iso(1) member-body(2) us(840) ieee802dot3(10006) csmacd-mgt(30) package(4) pdRecommendedPkg(??)};
PRESENT IF The recommended package is implemented;

REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) managedObjectClass(3) pdObjectClass(??)};

nbPD-repeaterName NAME BINDING

SUBORDINATE OBJECT CLASS oPD;
NAMED BY SUPERIOR OBJECT CLASS oRepeaterPorts AND SUBCLASSES;
WITH ATTRIBUTE aPDID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) nameBinding(6) pd-repeaterName(??)};

nbPD-dteName NAME BINDING

SUBORDINATE OBJECT CLASS oPD;
NAMED BY SUPERIOR OBJECT CLASS oPHYEntity AND SUBCLASSES;
WITH ATTRIBUTE aPDID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) nameBinding(6) pd-dteName(??)};

30A.17.2 PD attributes

aPDID ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.OneOfName;
MATCHES FOR EQUALITY;
BEHAVIOUR bPDID;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) pdID(???)};

bPDID BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.2.1.1;

aPDPowerStatus ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PowerStatus;
MATCHES FOR EQUALITY, ORDERING **????**;
BEHAVIOUR bPDPowerStatus;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) pdPowerStatus(???)};

bPDPowerStatus BEHAVIOUR

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.2.1.2;

aPDPowerPairs ATTRIBUTE

WITH ATTRIBUTE SYNTAX IEEE802Dot3-MgmtAttributeModule.PDPowerPairs;
MATCHES FOR EQUALITY, ORDERING **????**;
BEHAVIOUR bPDPowerPairs;
REGISTERED AS {iso(1) member-body(2) us(840) ieee802dot3(10006) csmacdmgt(30) attribute(7) pdPowerPairs(???)};

bPDPowerPairs **BEHAVIOUR**

DEFINED AS See “BEHAVIOUR DEFINED AS” in 30.9.2.1.3;

Annex 30B

(normative)

GDMO and ASN.1 definitions for management

30B.2 ASN.1 module for CSMA/CD managed objects

Insert the following ASN.1 definitions into the ASN.1 module, in appropriate alphabetic sequence:

```
CurrentStatus :: = ENUMERATED {
    ok                  (0),    -- current normal
    underCurrent        (1),    -- under current detected
    overCurrent         (2),    -- over current detected
    both                (3)     -- underand over current detected
    }

DetectControl ::= ENUMERATED {
    auto                (0),    -- PD detection normal
    test                (1)     -- PD detection test mode
    }

DetectStatus :: = ENUMERATED {
    disabled            (0),    -- PD detection disabled
    searching           (1),    -- PD detection searching
    detected            (2),    -- Valid PD detected but power not supplied
    deliveringPower     (3),    -- Valid PD detected and power supplied
    fault               (4),    -- PD detection fault detected
    invalidPD           (5),    -- Invalid PD detected
    test                (6)     -- PD detection test mode
    }

PairCtrlAbility ::=BOOLEAN

PDPowerPairs ::= ENUMERATED {
    signal              (0),    -- PD Pinout Mode A
    spare               (1),    -- PD Pinout Mode B
    both                (2)     -- PD Pinout Mode A and B
    }

PowerClass :: = ENUMERATED {
    class0              (0),    -- Class 0 PD
    class1              (1),    -- Class 1 PD
    class2              (2),    -- Class 2 PD
    class3              (3),    -- Class 3 PD
```

```
        class4              (4),    -- Class 4 PD
        class5              (5)     -- Class 5 PD
        }


PowerStatus :: = ENUMERATED {
        off                 (0),    -- PD not receiving Power
        receivingPower      (1)     -- PD receiving Power
        }


PSEPowerPairs ::= ENUMERATED {
        signal              (0),    -- PSE Pinout Alternative A
        spare               (1)     -- PSE Pinout Alternative B
        }
```