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--The following MIB has been developed for use by FDOT. This MIB
--contains new objects specifically developed to fulfill FDOT-specific
--functional requirements.

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--Development Date: March 15, 2001
--Version: v02
--Compiled using the NTCIP Exerciser 3.3b

--Filename:      FDOT-specific DMS MIB v02.MIB
--Discription:  This MIB describes the FDOT Specific DMS Objects

--*****
--05/01/02  This MIB was Modified by the FDOT-TERL as follows:
--          Changed filename from FDOT-specific DMS MIB v01c.MIB
--          to FDOT-specific DMS MIB v02.MIB
--          Changed status of fdotCriticalMaxTemperature.0 object
--          from mandatory to optional.
--          Changed description of fdotCriticalMaxTemperature.0 object.
--          Changed description of fdotLog90Full.0 object to reflect
--          that this object is to reflect whether or not any configured
--          event class is 90% full.
--          Changed status of dmsNoActivityTime.0 from mandatory to
--          optional.
--*****

FDOT-DMS-MIB DEFINITIONS ::= BEGIN
IMPORTS
    OBJECT-TYPE
        FROM RFC-1212
    nemaPrivate
        FROM NEMA_SMI
    devices, protocols, profiles, DisplayString
        FROM TMIB-II
    Opaque, Counter, Gauge
        FROM RFC1155-SMI
    MessageIDCode
        FROM DMS-MIB;

    farradyne OBJECT IDENTIFIER ::= {nemaPrivate 6}

fdot-dms OBJECT IDENTIFIER ::= {farradyne 11}
-- This node is an identifier used to group all objects specifically developed
for
-- Florida DOT's deployment of 'NTCIP-compliant' DMS signs.  The functionalities
of
-- these objects have not been addressed in any NTCIP or NTCIP-referenced
standards
-- or draft standards.

--the following objects indicate whether any of the power supplies have failed.
--Additionally, a table includes objects to query the various power supply
voltages.
fdotPowerSupplyFailures OBJECT-TYPE
SYNTAX      OCTET STRING (SIZE (0..4))

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ACCESS read-only  
STATUS ~~mandatory~~ optional  
DESCRIPTION "Indicates whether each power supply within a DMS is operational, expressed as a bitmap. If a power supply failed, its associated bit is set to a value greater than zero (>0). Each power supply is associated with a bit (bit-power supply correlation order specified by manufacturer) allowing for up to 32 power supply to report failure status."  
::= {fdot-dms 1}

fdotPowerSupplyTableRows OBJECT-TYPE  
SYNTAX INTEGER (0..255)  
ACCESS read-only  
STATUS ~~mandatory~~ optional  
DESCRIPTION "Indicates the maximum number of rows in the fdotPowerSupplyTable. Each row represents a particular power supply."  
::={fdot-dms 2}

fdotPowerSupplyTable OBJECT-TYPE  
SYNTAX SEQUENCE OF FdotPowerSupplyEntry  
ACCESS not-accessible  
STATUS ~~mandatory~~ optional  
DESCRIPTION "A table containing the detected power supply voltages, power supply status, and descriptions for each power supply associated with this device. The number of rows is given by the value of fdotPowerSupplyTableRows-object."  
::= { fdot-dms 3}

fdotPowerSupplyEntry OBJECT-TYPE  
SYNTAX FdotPowerSupplyEntry  
ACCESS not-accessible  
STATUS optional  
DESCRIPTION "Parameters of the FDOT-specific Power Supply Status Table."  
INDEX {fdotPowerSupplyNumber}  
::={ fdotPowerSupplyTable 1}

FdotPowerSupplyEntry ::= SEQUENCE {  
fdotPowerSupplyNumber INTEGER,  
fdotPowerSupplyType INTEGER,  
fdotPowerSupplyDescription OCTET STRING,  
fdotPowerSupplyVoltage INTEGER,  
fdotPowerSupplyStatus INTEGER}

fdotPowerSupplyNumber OBJECT-TYPE  
SYNTAX INTEGER (1..32)  
ACCESS read-only  
STATUS ~~mandatory~~ optional  
DESCRIPTION "The number assigned by the device vendor to a power supply. This value is the first and only index into this table. It shall be mandatory that the vendor assign the power supply numbers sequentially."  
::= { fdotPowerSupplyEntry 1}

fdotPowerSupplyType OBJECT-TYPE  
SYNTAX INTEGER {  
other (1),  
displayModule (2),  
cabinetPower (3),  
upsPower (4),

```
signHousingPower (5)
}
ACCESS      read-only
STATUS      mandatory optional
DESCRIPTION "indicates the type of power supply associated with this row in the
table. The values are:
other (1) - an type other than the ones explained below. Refer to device
manual.
displayModule (2) - the power supplies associated with the various display
modules which assemble one or more characters.
cabinetPower (3) - the power supplies associated with powering the sign
controller cabinet including the sign controller, communications equipment and
other cabinet electronics.
upsPower (4) - the un-interrupted power supplies within the sign housing and/or
the sign controller cabinet.
signHousingPower (5) - the power supplies associated with powering the sign
housing and other non-display associated electronics. This type may be covered
as part of the displayModule power supplies."
::= { fdotPowerSupplyEntry 2}
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fdotPowerSupplyDescription OBJECT-TYPE
SYNTAX      OCTET STRING (SIZE (0..40)) --Assumed that 40 characters of
description
--is sufficient.
ACCESS      read-only
STATUS      optional --this object may not be needed, since this information
--can be maintained at central.
DESCRIPTION "indicates the description assigned by the vendor to this
particular power supply."
::= { fdotPowerSupplyEntry 3}
```

```
fdotPowerSupplyVoltage OBJECT-TYPE
SYNTAX      INTEGER (0..65535)
ACCESS      read-only
STATUS      mandatory optional
DESCRIPTION "Indicates the detected voltage, in hundredth (1/100) of a volt, of
this power supply. The maximum value (0xFFFF) corresponds to a voltage of
655.35 volts."
::= { fdotPowerSupplyEntry 4}
```

```
fdotPowerSupplyStatus OBJECT-TYPE
SYNTAX      INTEGER (0..1)
ACCESS      read-only
STATUS      mandatory optional
DESCRIPTION "Indicates whether this power supply is operational. A value of
zero (0) indicates that the power supply is operational, while a value of
greater than zero (>0) indicates a non-operational power supply."
::= { fdotPowerSupplyEntry 5}
```

--the following object is used to set the critical threshold for the maximum  
--sign housing temperature.

```
fdotCriticalMaxTemperature OBJECT-TYPE
SYNTAX      INTEGER (-128..127)
ACCESS      read-write
STATUS      mandatory optional
```

DESCRIPTION "Indicates the maximum user-defined temperature, in degrees Celcius, within the sign housing. If this threshold is reached or exceeded, the sign shall be blanked and ~~an the error message be send to the central computer~~ **reflected by the fdotMsgSourceModeExtension object (set to a value of (3)), which also requires that the 'dmsMsgSourceMode' object is set to a value of 'other' (1).. Additionally, the 'temperature error' bit (BIT 9) within the shortErrorStatus object shall be set to a value of (1) to indicate that a temperature value was exceeded.**"  
::={fdot-dms 4}

--the following 2 objects are used to disable the alarm and error generation when the

--sign controller was not polled for a user-defined time.

fdotDmsMaxPollTime OBJECT-TYPE

SYNTAX INTEGER (0..65535)

ACCESS read-write

STATUS mandatory

DESCRIPTION "Indicates the maximum time, in minutes, between communications between the central computer and the sign. This threshold is being used to determine whether to disable the generation of errors and failures that are to be logged (to avoid logging overrun). The value of 65535 indicates an infinite duration."

::= {fdot-dms 5}

fdotDmsErrorGenerationToggle OBJECT-TYPE

SYNTAX INTEGER (0..1)

ACCESS read-write

STATUS mandatory

DESCRIPTION "Indicates whether to stop the generation of new errors and failures, which are to be logged (to avoid logging overruns). A value of zero (0) indicates that all errors and failures are being generated even after the threshold (see fdotDmsMaxPollTime) has been exceeded. A value of greater than zero (>0) indicates that the generation of additional errors and failures is to be terminated after the threshold indicated by the fdotDmsMaxPollTime has been exceeded."

DEFVAL {0}

::= {fdot-dms 6}

--the following object is used to SET the threshold at which the number of failed

--pixels will lead to the 'blanking' of the sign display.

fdotMaxNumPixelFailure OBJECT-TYPE

SYNTAX INTEGER (0..4294967295)

ACCESS read-write

STATUS ~~optional~~ **mandatory**

DESCRIPTION "Indicates the total number of failed pixels that cannot be exceed before the sign must be blanked. A pixel failure is considered to be either stuck-on or stuck-off, i.e., cannot change its state.

Whether the sign display was blank based on exceeding this threshold is indicated by a value of (1) within the fdotMsgSourceModeExtension object."

::= {fdot-dms 7}

--the following 2 objects are used for Hybrid Fiber/Flip signs. The first object

--allows to SET the threshold at which the duration of a power loss shall lead --to the 'blanking' of the sign display. The second object allows to SET the --message (blank) that is to be displayed if the threshold is being exceeded.

fdotLongPowerLossTime OBJECT-TYPE

SYNTAX INTEGER (0..65535)

ACCESS read-write

STATUS optional

DESCRIPTION "the time (inclusive), in seconds, that must elapse before a long power loss is assumed. If this object is set to zero (0), no differentiation between long power loss and short power loss shall be made."

DEFVAL {600} -- suggested value for FDOT (10 minutes)

::= {fdot-dms 8}

dmsLongPowerLossMessage OBJECT-TYPE

SYNTAX MessageIDCode

ACCESS read-write

STATUS optional

DESCRIPTION "Indicates the message that is displayed after the value indicated in the fdotLongPowerLossTime object has elapsed."

--DEFVAL {0x07 0x01 0x00 0x00} - required value for FDOT (blank the sign)

::= { fdot-dms 9}

--the following object indicates whether the log is 90% full.

fdotLog90Full OBJECT-TYPE

SYNTAX INTEGER (0..1)

ACCESS read-only

STATUS mandatory

DESCRIPTION "Indicates whether any of the configured event classes within the log are 90% full. A value of zero (0) indicates that ~~the log has not~~ **none of the configured event classes within the log have** exceeded 90% of ~~its~~ capacity."

::= {fdot-dms 10}

--the following object is used to SET the threshold at which the user is being logged

--off from the sign controller, if not communication activity occurs.

dmsNoActivityTime OBJECT-TYPE

SYNTAX INTEGER (0..65535)

ACCESS read-write

STATUS ~~mandatory~~ optional **Deprecated**

DESCRIPTION "the time (inclusive), in seconds, that must elapse before a user is being logged off due to no communication activity. If this object is set to 65535, a user shall never be logged off."

DEFVAL {600} -- suggested value for FDOT (10 minutes)

::= { fdot-dms 11}

--the following object is an extension to the dmsMsgSourceMode and indicates

--additional reasons/conditions that led to the display of the current

--message, typically a blank message.

fdotMsgSourceModeExtension OBJECT-TYPE

SYNTAX INTEGER {

blankPixelFailure (1),

reserved (2),

excessLedTemperature (3),

longPowerLoss (4) }

ACCESS read-only

STATUS mandatory

DESCRIPTION "Indicates additional sources/reasons that initiated the currently displayed message. The object values are based on agency-specific requirements and will typically lead to a blanked message. Their meaning is:

BlankPixelFailure (1) = if threshold of all failed pixels is exceeded

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reserved (2) = value cannot be used in FDOT implementations.  
excessLedTemperature (3) = if temperature exceeds 'rated operating temperature  
of LEDs'  
longPowerLoss (4) = if the duration of a power loss exceeds the value indicated  
in the fdotLongPowerLossTime object has been elapsed.  
"  
::= {fdot-dms 12}
```

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END
```