                      Definitions of Managed Objects
                          for DLUR using SMIv2

Status of this Memo

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2. Introduction

   This memo defines a portion of the Management Information Base (MIB)
   for use with network management protocols in the Internet community.
   In particular, it defines objects for monitoring and controlling
   network devices with DLUR (Dependent LU Requester) capabilities.
   This memo identifies managed objects for the DLUR protocol.

3. The SNMP Network Management Framework

   The SNMP Network Management Framework consists of several components.
   For the purpose of this specification, the applicable components of
   the Framework are the SMI and related documents [1, 2, 3], which
   define the mechanisms used for describing and naming objects for the
   purpose of management.

   The Framework permits new objects to be defined for the purpose of
   experimentation and evaluation.

4. Overview

   This document identifies objects for monitoring the configuration and
   active characteristics of devices with DLUR capabilities. Dependent
   LU requester/server (DLUR/S) is an extension to the Advanced Peer-
   to-Peer Networking (APPN) architecture that provides dependent LU
   services in APPN networks. See the SNANAU APPN MIB [4] for
   management of APPN networks.

   The base APPN architecture only provided for transport of data
   between independent logical units (LUs). However, customers have an
   enormous investment in applications based on dependent LU types.
   DLUR/S provides for support of dependent LU sessions in an APPN
   network.

   A dependent LU server (DLUS) is an APPN node that provides System
   Services Control Point (SSCP) services over an APPN network to remote
   secondary dependent LUs by using SSCP-PU (physical unit) and SSCP-LU
   sessions whose flows are encapsulated on LU 6.2 session flows between
   the DLUS node and the appropriate dependent LU requester (DLUR) node.
   The secondary dependent LUs may be local to the DLUR node, or in
   adjacent type 2.0 or 2.1 nodes.

   The LU 6.2 control sessions between a DLUS node and a DLUR node are
   referred to as a CPSVRMGR pipe. CPSVRMGR refers to the mode used for
   the sessions.

   In this document, we describe DLUR managed objects.

   The DLUR terms and overall architecture are described in [5].

   Highlights of the management functions supported by the DLUR MIB
   module include the following:

Clouston & Moore   Standards Track   [Page 2]

o   Identifying the node's DLUR capabilities

o   Displaying the physical units (PUs) this node is supporting

o   Identification of Dependent LU Servers

o   Displaying the state of control sessions to Dependent LU
        Servers.

This MIB module does not support:

o   Management of dependent LU servers

o   Configuration of DLUR nodes.

o   Changing the state of control session to the DLUS

o   Displaying the dependent LUs this node is supporting

o   Traps. The APPN MIB contains a trap for Alert conditions that
        may affect DLUR resources. The value for the affectedObject
        object contained in the alertTrap is determined by the
        implementation. It may contain a VariablePointer from the DLUR
        MIB. The APPN/DLUR Alerts are defined in [6].

4.1. DLUR MIB Structure

Although DLUR is an extension to APPN, the DLUR MIB relies very
little upon the APPN MIB. The dlurNodeCpName object in this MIB has
the same value as the appnNodeCpName object in the APPN MIB. If the
dlurPuLsName object in the MIB has the same value as the appnLsName
object in the APPN MIB, then the two objects are referring to the
same link station.

The DLUR MIB module contains the following collections of objects:

o   dlurNodeInfo--objects representing the capabilities and
        architecture options supported by the DLUR implementation, as
        well as default primary and backup DLUSs.

o   dlurPuInfo--objects describing the PUs that this APPN node is
        supporting with DLUR.

o   dlurDlusInfo--objects describing the control sessions with
        DLUSs.

These are described below in more detail.

4.1.1. dlurNodeInfo group

   The dlurNodeInfo group consists of the following objects and table:

   1) dlurNodeCapabilities group

   These objects represent the capabilities and options of the DLUR
   implementation, such as the release level of the implementation

   2) dlurDefaultDefBackupDlusTable

   This table identifies the list of defined backup DLUSs for all PUs
   served by this DLUR, if there is no specific DLUS backup list for the
   PU. The list is in descending order of preference as a backup DLUS.

4.1.2. dlurPuInfo group

   The dlurPuInfo group consists of the following tables:

   1) dlurPuTable

   This table has an entry for each PU this node is supporting via DLUR,
   including the locally known name, the SSCP supplied name (if known),
   and the PU status.

   2) dlurPuDefBackupDlusTable

   This table contains the backup DLUS list defined on a PU basis. The
   table has an entry for each specifically defined backup DLUS on each
   PU. The first index to the entry is the PU name, which organizes the
   table by PU name. The second index is a ranking which further sorts
   the table in descending order of preference as a backup DLUS for the
   PU.

   If a PU name is not found in this table, the
   dlurDefaultDefBackupDlusNameTable is used as a backup list for that
   PU.

4.1.3. dlurDlusInfo group

   This group consists of the following table:

   1) dlurDlusTable

   This table contains information about the control sessions (CPSVRMGR
   pipes) with the DLUS, including the control point (CP) name of the
   DLUS and the status of the control session.

5. Definitions

APPN-DLUR-MIB DEFINITIONS ::= BEGIN

IMPORTS
        DisplayString, TruthValue
                FROM SNMPv2-TC

        OBJECT-TYPE, MODULE-IDENTITY, Unsigned32
                FROM SNMPv2-SMI

        MODULE-COMPLIANCE, OBJECT-GROUP
                FROM SNMPv2-CONF

        snanauMIB
                FROM SNA-NAU-MIB

        SnaControlPointName
                FROM APPN-MIB;

dlurMIB MODULE-IDENTITY
        LAST-UPDATED "9705101500Z"
        ORGANIZATION "IETF SNA NAU MIB WG / AIW APPN/HPR MIBs SIG"
        CONTACT-INFO

                   "
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                           Research Triangle Park, NC 27709, USA
                           Tel: 1 919 254 4436
                           E-mail: remoore@ralvm6.vnet.ibm.com
                   "
        DESCRIPTION
                   "This is the MIB module for objects used to manage
                   network devices with DLUR capabilities. This MIB
                   contains information that is useful for managing an APPN
                   product that implements a DLUR (Dependent Logical Unit

                   Requester). The DLUR product has a client/server
                   relationship with an APPN product that implements a DLUS
                   (Dependent Logical Unit Server)."

```
::= { snanauMIB 5 }
-- snanauMIB ::= { mib-2 34 }


-- ********************************************************************
-- Textual Convention
-- ********************************************************************
-- SnaControlPointName is imported from the APPN MIB


-- ********************************************************************
  dlurObjects OBJECT IDENTIFIER ::= { dlurMIB 1 }
-- ********************************************************************


dlurNodeInfo OBJECT IDENTIFIER ::= { dlurObjects 1 }
-- ********************************************************************
-- DLUR Capabilities of the node
--
--  This group represents the capabilities and options of the DLUR
--  implementation.
-- ********************************************************************
dlurNodeCapabilities OBJECT IDENTIFIER ::= { dlurNodeInfo 1 }

dlurNodeCpName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Administratively assigned network name for the APPN node where
          this DLUR implementation resides.  If this object has the same
          value as the appnNodeCpName object in the APPN MIB, then the
          two objects are referring to the same APPN node."

        ::= { dlurNodeCapabilities 1 }

dlurReleaseLevel OBJECT-TYPE
      SYNTAX DisplayString (SIZE (2))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The DLUR release level of this implementation.  This is the
          value that is encoded in the DLUR/DLUS Capabilites (CV 51).
          To insure consistent display, this one-byte value is encoded
          here as two displayable characters that are equivalent to a
          hexadecimal display.  For example, if the one-byte value as
```

          encoded in CV51 is X'01', this object will contain the
          displayable string '01'."

      ::= { dlurNodeCapabilities 2 }

dlurAnsSupport OBJECT-TYPE
      SYNTAX INTEGER {
                    continueOrStop(1),
                    stopOnly(2)
                    }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Automatic Network Shutdown (ANS) capability of this node.

             - 'continueOrStop' indicates that the DLUR implementation
               supports either ANS value (continue or stop) as
               specified by the DLUS on ACTPU for each PU.

             - 'stopOnly' indicates that the DLUR implementation only
               supports the ANS value of stop.

          ANS = continue means that the DLUR node will keep LU-LU
          sessions active even if SSCP-PU and SSCP-LU control sessions
          are interrupted.

          ANS = stop means that LU-LU sessions will be interrupted when
          the SSCP-PU and SSCP-LU sessions are interrupted."

      ::= { dlurNodeCapabilities 3 }

dlurMultiSubnetSupport OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Indication of whether this DLUR implementation can support
          CPSVRMGR sessions that cross NetId boundaries."

      ::= { dlurNodeCapabilities 4 }

dlurDefaultDefPrimDlusName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The SNA name of the defined default primary DLUS for all of
          the PUs served by this DLUR. This can be overridden for a

            particular PU by a defined primary DLUS for that PU,
            represented by the dlurPuDefPrimDlusName object."

        ::= { dlurNodeCapabilities 5 }

dlurNetworkNameForwardingSupport OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Indication of whether this DLUR implementation supports
            forwarding of Network Name control vectors on ACTPUs and
            ACTLUs to DLUR-served PUs and their associated LUs.

            This object corresponds to byte 9. bit 3 of cv51."

        ::= { dlurNodeCapabilities 6 }

dlurNondisDlusDlurSessDeactSup OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Indication of whether this DLUR implementation supports
            nondisruptive deactivation of its DLUR-DLUS sessions.
            Upon receiving from a DLUS an UNBIND for the CPSVRMGR pipe
            with sense data X'08A0 000B', a DLUR that supports this
            option immediately begins attempting to activate a CPSVRMGR
            pipe with a DLUS other than the one that sent the UNBIND.

            This object corresponds to byte 9. bit 4 of cv51."

        ::= { dlurNodeCapabilities 7 }

-- **
-- DLUR default defined backup DLUS table
-- **

dlurDefaultDefBackupDlusTable OBJECT-TYPE
        SYNTAX SEQUENCE OF DlurDefaultDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table contains an ordered list of defined backup DLUSs
            for all of the PUs served by this DLUR. These can be
            overridden for a particular PU by a list of defined backup
            DLUSs for that PU, represented by the
            dlurPuDefBackupDlusNameTable. Entries in this table are

            ordered from most preferred default backup DLUS to least
            preferred."

        ::= { dlurNodeInfo 2 }

dlurDefaultDefBackupDlusEntry OBJECT-TYPE
        SYNTAX DlurDefaultDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table is indexed by an integer-valued index, which
            orders the entries from most preferred default backup DLUS
            to least preferred."

        INDEX { dlurDefaultDefBackupDlusIndex }

        ::= { dlurDefaultDefBackupDlusTable 1 }

DlurDefaultDefBackupDlusEntry ::= SEQUENCE {
        dlurDefaultDefBackupDlusIndex   Unsigned32,
        dlurDefaultDefBackupDlusName   SnaControlPointName
                        }

dlurDefaultDefBackupDlusIndex OBJECT-TYPE
        SYNTAX Unsigned32 (1..4294967295)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "Index for this table. The index values start at 1,
            which identifies the most preferred default backup DLUS."

        ::= { dlurDefaultDefBackupDlusEntry 1 }

dlurDefaultDefBackupDlusName OBJECT-TYPE
        SYNTAX SnaControlPointName
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Fully qualified name of a default backup DLUS for PUs served
            by this DLUR."

        ::= { dlurDefaultDefBackupDlusEntry 2 }

-- **
-- PU Information
--
-- The following table carries information about the PUs that this APPN
-- node is supporting via DLUR.

```
-- *******************************************************************
dlurPuInfo OBJECT IDENTIFIER ::= { dlurObjects 2 }

dlurPuTable OBJECT-TYPE
      SYNTAX SEQUENCE OF DlurPuEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Information about the PUs supported by this DLUR."

      ::= { dlurPuInfo 1 }

dlurPuEntry OBJECT-TYPE
      SYNTAX DlurPuEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Entry in a table of PU information, indexed by PU name."

      INDEX { dlurPuName  }

      ::= { dlurPuTable 1 }

DlurPuEntry ::= SEQUENCE {
      dlurPuName                  DisplayString,
      dlurPuSscpSuppliedName      DisplayString,
      dlurPuStatus                INTEGER,
      dlurPuAnsSupport            INTEGER,
      dlurPuLocation              INTEGER,
      dlurPuLsName                DisplayString,
      dlurPuDlusSessnStatus       INTEGER,
      dlurPuActiveDlusName        DisplayString,
      dlurPuDefPrimDlusName       DisplayString
                  }

dlurPuName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (1..17))
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Locally administered name of the PU."

      ::= { dlurPuEntry 1 }


dlurPuSscpSuppliedName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..17))
      MAX-ACCESS read-only
```

```
      STATUS current
      DESCRIPTION
          "The SNA name of the PU.  This value is supplied to a PU by the
          SSCP that activated it.  If a value has not been supplied, a
          zero-length string is returned."

      ::= { dlurPuEntry 2 }

dlurPuStatus OBJECT-TYPE
      SYNTAX INTEGER {
                      reset(1),
                      pendReqActpuRsp(2),
                      pendActpu(3),
                      pendActpuRsp(4),
                      active(5),
                      pendLinkact(6),
                      pendDactpuRsp(7),
                      pendInop(8),
                      pendInopActpu(9)
                     }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Status of the DLUR-supported PU.  The following values are
          defined:

              reset(1)            -  reset
              pendReqActpuRsp(2)  -  pending a response from the DLUS
                                     to a Request ACTPU
              pendActpu(3)        -  pending an ACTPU from the DLUS
              pendActpuRsp(4)     -  pending an ACTPU response from the PU
              active(5)           -  active
              pendLinkact(6)      -  pending activation of the link to a
                                     downstream PU
              pendDactpuRsp(7)    -  pending a DACTPU response from the PU
              pendInop(8)         -  the CPSVRMGR pipe became inoperative
                                     while the DLUR was pending an ACTPU
                                     response from the PU
              pendInopActpu(9)    -  when the DLUR was in the pendInop
                                     state, a CPSVRMGR pipe became active
                                     and a new ACTPU was received over it,
                                     before a response to the previous
                                     ACTPU was received from the PU."

      ::= { dlurPuEntry 3 }

dlurPuAnsSupport OBJECT-TYPE
      SYNTAX INTEGER {
```

```
                    continue(1),
                    stop(2)
                    }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The Automatic Network Shutdown (ANS) support configured for
          this PU.  This value (as configured by the network
          administrator) is sent by DLUS with ACTPU for each PU.

              - 'continue' means that the DLUR node will attempt to keep
                 LU-LU sessions active even if SSCP-PU and SSCP-LU
                 control sessions are interrupted.

              - 'stop' means that LU-LU sessions will be interrupted
                 when the SSCP-PU and SSCP-LU sessions are interrupted."

      ::= { dlurPuEntry 4 }

dlurPuLocation OBJECT-TYPE
      SYNTAX INTEGER {
                    internal(1),
                    downstream(2) }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Location of the DLUR-support PU:
              internal(1)   - internal to the APPN node itself (no link)
              downstream(2) - downstream of the APPN node (connected via
                              a link)."

      ::= { dlurPuEntry 5 }

dlurPuLsName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..10))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Administratively assigned name of the link station through
          which a downstream PU is connected to this DLUR.  A zero-length
          string is returned for internal PUs.  If this object has the
          same value as the appnLsName object in the APPN MIB, then the
          two are identifying the same link station."

      ::= { dlurPuEntry 6 }

dlurPuDlusSessnStatus OBJECT-TYPE
      SYNTAX INTEGER {
```

```
                          reset(1),
                          pendingActive(2),
                          active(3),
                          pendingInactive(4)
                          }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Status of the control session to the DLUS identified in
          dlurPuActiveDlusName.  This is a combination of the separate
          states for the contention-winner and contention-loser sessions:

          reset(1)            - none of the cases below
          pendingActive(2)    - either contention-winner session or
                                contention-loser session is pending active
          active(3)           - contention-winner and contention-loser
                                sessions are both active
          pendingInactive(4) - either contention-winner session or
                                contention-loser session is pending
                                inactive - this test is made AFTER the
                                'pendingActive' test.

          The following matrix provides a different representation of
          how the values of this object are related to the individual
          states of the contention-winner and contention-loser sessions:

              Conwinner
             | pA | pI | A | X = !(pA | pI | A)
          C +++++++++++++++++++++++++++++++++++
          o pA | 2  |  2 | 2 | 2
          n +++++++++++++++++++++++++++++++++++
          l pI | 2  |  4 | 4 | 4
          o +++++++++++++++++++++++++++++++++++
          s A  | 2  |  4 | 3 | 1
          e +++++++++++++++++++++++++++++++++++
          r X  | 2  |  4 | 1 | 1
             +++++++++++++++++++++++++++++++++++
          "

      ::= { dlurPuEntry 7 }

dlurPuActiveDlusName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..17))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The SNA name of the active DLUS for this PU.  If its length
          is not zero, this name follows the SnaControlPointName textual
```

            convention. A zero-length string indicates that the PU does
            not currently have an active DLUS."

        ::= { dlurPuEntry 8 }

dlurPuDefPrimDlusName OBJECT-TYPE
        SYNTAX DisplayString (SIZE (0..17))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "The SNA name of the defined primary DLUS for this PU, if one
            has been defined. If present, this name follows the
            SnaControlPointName textual convention. A zero-length string
            indicates that no primary DLUS has been defined for this PU, in
            which case the global default represented by the
            dlurDefaultDefPrimDlusName object is used."

        ::= { dlurPuEntry 9 }

-- **
-- Defined backup DLUS table for a PU
-- **

dlurPuDefBackupDlusTable OBJECT-TYPE
        SYNTAX SEQUENCE OF DlurPuDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table contains an ordered list of defined backup DLUSs
            for those PUs served by this DLUR that have their own defined
            backup DLUSs. PUs that have no entries in this table use the
            global default backup DLUSs for the DLUR, represented by the
            dlurDefaultDefBackupDlusNameTable. Entries in this table are
            ordered from most preferred backup DLUS to least preferred for
            each PU."

        ::= { dlurPuInfo 2 }

dlurPuDefBackupDlusEntry OBJECT-TYPE
        SYNTAX DlurPuDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table is indexed by PU name and by an integer-valued
            index, which orders the entries from most preferred backup DLUS
            for the PU to least preferred."

        INDEX { dlurPuDefBackupDlusPuName,

```
                 dlurPuDefBackupDlusIndex }

        ::= { dlurPuDefBackupDlusTable 1 }

DlurPuDefBackupDlusEntry ::= SEQUENCE {
        dlurPuDefBackupDlusPuName            DisplayString,
        dlurPuDefBackupDlusIndex             Unsigned32,
        dlurPuDefBackupDlusName              SnaControlPointName
                        }

dlurPuDefBackupDlusPuName OBJECT-TYPE
        SYNTAX DisplayString (SIZE (1..17))
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "Locally administered name of the PU.  If this object has the
            same value as the dlurPuName object, then the two are
            identifying the same PU."

        ::= { dlurPuDefBackupDlusEntry 1 }

dlurPuDefBackupDlusIndex OBJECT-TYPE
        SYNTAX Unsigned32 (1..4294967295)
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "Secondary index for this table.  The index values start at 1,
            which identifies the most preferred backup DLUS for the PU."

        ::= { dlurPuDefBackupDlusEntry 2 }

dlurPuDefBackupDlusName OBJECT-TYPE
        SYNTAX SnaControlPointName
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Fully qualified name of a backup DLUS for this PU."

        ::= { dlurPuDefBackupDlusEntry 3 }

-- *********************************************************************
--                 DLUS Control Sessions (CPSVRMGR Pipes)
--
-- This table contains information about DLUS control sessions, also
-- known as CPSVRMGR pipes.  Although DLUR uses a pair of CPSVRMGR
-- sessions for communication, for the purpose of status, information
-- about these two sessions is combined to yield a single status for the
-- requester/server connection.
```

-- **

dlurDlusInfo OBJECT IDENTIFIER ::= { dlurObjects 3 }

dlurDlusTable OBJECT-TYPE
        SYNTAX SEQUENCE OF DlurDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "Information about DLUS control sessions."

        ::= { dlurDlusInfo 1}

dlurDlusEntry OBJECT-TYPE
        SYNTAX DlurDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This entry is indexed by the name of the DLUS."

        INDEX { dlurDlusName }

        ::= { dlurDlusTable 1 }

DlurDlusEntry ::= SEQUENCE {
        dlurDlusName   SnaControlPointName,
        dlurDlusSessnStatus   INTEGER
                        }

dlurDlusName OBJECT-TYPE
        SYNTAX SnaControlPointName
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "The SNA name of a DLUS with which this DLUR currently has a
            CPSVRMGR pipe established."

        ::= { dlurDlusEntry 1 }

dlurDlusSessnStatus OBJECT-TYPE
        SYNTAX INTEGER {
                        reset(1),
                        pendingActive(2),
                        active(3),
                        pendingInactive(4)
                        }
        MAX-ACCESS read-only
        STATUS current

          DESCRIPTION
             "Status of the CPSVRMGR pipe between the DLUR and this DLUS.
             This is a combination of the separate states for the
             contention-winner and contention-loser sessions:

             reset(1)   - none of the cases below
             pendingActive(2)   - either contention-winner session or
                                     contention-loser session is pending active
             active(3)   - contention-winner and contention-loser
                                     sessions are both active
             pendingInactive(4) - either contention-winner session or
                                     contention-loser session is pending
                                     inactive - this test is made AFTER the
                                     'pendingActive' test.

             The following matrix provides a different representation of
             how the values of this object are related to the individual
             states of the contention-winner and contention-loser sessions:

                 Conwinner
                 | pA | pI | A | X = !(pA | pI | A)
             C ++++++++++++++++++++++++++++++++++
             o pA | 2 | 2 | 2 | 2
             n ++++++++++++++++++++++++++++++++++
             l pI | 2 | 4 | 4 | 4
             o ++++++++++++++++++++++++++++++++++
             s A | 2 | 4 | 3 | 1
             e ++++++++++++++++++++++++++++++++++
             r X | 2 | 4 | 1 | 1
               ++++++++++++++++++++++++++++++++++
             "

        ::= { dlurDlusEntry 2 }

-- **
-- Conformance information
-- **

dlurConformance   OBJECT IDENTIFIER ::= { dlurMIB 2 }

dlurCompliances   OBJECT IDENTIFIER ::= { dlurConformance 1 }
dlurGroups   OBJECT IDENTIFIER ::= { dlurConformance 2 }

-- Compliance statements

dlurCompliance MODULE-COMPLIANCE
        STATUS current
        DESCRIPTION

```
            "The compliance statement for the SNMPv2 entities which
            implement the DLUR MIB."

        MODULE -- this module

--      Unconditionally mandatory groups
        MANDATORY-GROUPS  { dlurConfGroup }

        ::= { dlurCompliances 1 }

-- Units of conformance
dlurConfGroup OBJECT-GROUP
        OBJECTS {
                dlurNodeCpName,
                dlurReleaseLevel,
                dlurAnsSupport,
                dlurMultiSubnetSupport,
                dlurNetworkNameForwardingSupport,
                dlurNondisDlusDlurSessDeactSup,
                dlurDefaultDefPrimDlusName,
                dlurDefaultDefBackupDlusName,
                dlurPuSscpSuppliedName,
                dlurPuStatus,
                dlurPuAnsSupport,
                dlurPuLocation,
                dlurPuLsName,
                dlurPuDlusSessnStatus,
                dlurPuActiveDlusName,
                dlurPuDefPrimDlusName,
                dlurPuDefBackupDlusName,
                dlurDlusSessnStatus
               }
        STATUS current
        DESCRIPTION
            "A collection of objects providing information on an
            implementation of APPN DLUR."

        ::= { dlurGroups 1 }

-- end of conformance statement

END
```

6. Acknowledgments

   This MIB module is the product of the IETF SNA NAU MIB WG and the AIW
   APPN/HPR MIBs SIG.

7. References

    [1] Case, J., McCloghrie, K., Rose, M., and S. Waldbusser,
         "Structure of Management Information for version 2 of
         the Simple Network Management Protocol (SNMPv2)", RFC 1902,
         January 1996.

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8. Security Considerations

    In most cases, MIBs are not themselves security risks; if SNMP
    security is operating as intended, the use of a MIB to view
    information about a system, or to change some parameter at the
    system, is a tool, not a threat.

    None of the read-only objects in the DLUR MIB reports a password,
    user data, or anything else that is particularly sensitive. Some
    enterprises view their network configuration itself, as well as
    information about network usage and performance, as corporate assets;
    such enterprises may wish to restrict SNMP access to most of the
    objects in the MIB.

    There are no read-write objects in the DLUR MIB.

9. Authors' Addresses

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10. Full Copyright Statement