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Definitions of Managed Objects for SNA Data Link Control (SDLC) using SMIv2

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

Abstract

This specification defines an extension to the Management Information Base (MIB) for use with SNMP-based network management. In particular, it defines objects for managing the configuration, monitoring and control of data link controls in an SNA environment. This draft identifies managed objects for SNA Synchronous Data Link Control (SDLC) links only.

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1. The SNMPv2 Network Management Framework

The SNMPv2 Network Management Framework consists of four major components. They are:

- o RFC 1441 which defines the SMI, the mechanisms used for describing and naming objects for the purpose of management.

- o STD 17, RFC 1213 defines MIB-II, the core set of managed objects for the Internet suite of protocols.

- o RFC 1445 which defines the administrative and other architectural aspects of the framework.

- o RFC 1448 which defines the protocol used for network access to managed objects.

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

1.1. Object Definitions

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the subset of Abstract Syntax Notation One (ASN.1) defined in the SMI. In particular, each object object type is named by an OBJECT IDENTIFIER, an administratively assigned name. The object type together with an object instance serves to uniquely identify a specific instantiation of the object. For human convenience, we often use a textual string, termed the descriptor, to refer to the object type.

2. Overview

This memo identifies the proposed set of objects for configuring, monitoring, and controlling SDLC ports and link stations.

2.1. Tables Defined in the SNADLC SDLC MIB

The SNADLC MIB is composed of two managed entities with three tables each. The two managed entities for SDLC are:

- o Ports: the physical connection, and
- o Link Stations: the logical connections on the Port.

The three management tables are:

- o Adminstration: objects used for configuring and controlling the operation of a Port or Link Station,
- o Operational: objects that reflect the run-time state of the Port or Link Station, and
- o Statistics: objects that reflect the operating metrics of the Port or Link Station.

Considering the above combinations, the following are the actual tables found in this MIB:

1) Port Administration Table,
2) Port Operation Table,
3) Port Statistics Table,
4) Link Station Administration Table,
5) Link Station Operation Table,
6) Link Station Statistics Table.

All variables in this MIB relate to SDLC ports and link stations only. Any variable relating to higher-layer entities in SNA such as Physical Units (PU) and Logical Units (LU) are found in the SNA NAU MIB [4].

2.2. Row Creation Mechanism

Row creation mechanism for the sdlcLSAdminTable is based on the use of the RowStatus object. It follows the rules for the use in SNMPv1 context proposed in the memo "Row creation with SNMPv1" [5]. Before accepting the destroy value for an entry, an agent has to verify the operational state of the corresponding entry in the sdlcLSOperTable entry.

2.3. Relationship to the Interfaces Group

This memo shall conform to the recommendations of [6].

The SDLC layer of each SDLC Port shall be modeled by a row in the ifTable with an ifType using the IANA assigned number for SDLC (17). Each SDLC port interface must comply with the following conformance groups in [6]:

- ifGeneralGroup
- ifStackGroup
- ifPacketGroup

An implementation may optionally comply with the ifTestGroup defined in that memo to execute vendor specific tests. An example of this would be to perform LPDA test functions.

The SDLC port's relation with its physical, or lower-layer interface (i.e., RS-232, V.35, etc.) shall be modeled by a row in the ifStackTable with the ifStackHigherLayer pointing to the SDLC port ifTable instance and the ifStackLowerLayer pointing to the physical media-specific ifTable instance. The media-specific objects of these lower-layer interfaces will, of course, be described in their respective MIBs (i.e., [1]).

The following table provides specific implementation guidelines for all the interface group objects listed in the conformance tables above.

Object	Use for an SDLC Port
ifIndex	Each SDLC port is represented by an ifEntry. All SDLC port tables shall be indexed by ifIndex.
ifDescr	Description of the SDLC port.
ifType	The IANA value reserved for SDLC - 17.
ifMtu	Refer to [6].
ifSpeed	This object shall reflect the value of the corresponding object in the ifEntry of the associated lower-layer interface.
ifPhysAddress	A string denoting the physical location of the SDLC port within its node. This shall have unique significance within each implementing node.

ifAdminStatus	This object shall reflect the value of the corresponding object in the ifEntry of the associated lower-layer interface.
ifOperStatus	This object shall reflect the value of the corresponding object in the ifEntry of the associated lower-layer interface.
ifLastChange	Refer to [6].
ifInOctets	Refer to [6].
ifInUcastPkts	This object shall count packets received from a specific SDLC poll address. Packets for the SDLC broadcast address of x'FF' are not counted.
ifInDiscards	Refer to [6].
ifInErrors	Refer to [6]. Specific counters for these errors are kept in the sdlcPortStatsTable.
ifInUnknownProtos	This counter shall return zero for SDLC ports.
ifOutOctets	Refer to [6].
ifOutUcastPkts	This object shall count packets transmitted to a specific SDLC poll address (not x'FF').
ifOutDiscards	Refer to [6].
ifOutErrors	Refer to [6]. Specific counters for these errors are kept in the sdlcPortStatsTable.
ifName	The textual name of the SDLC port or an octet string of zero length.
ifInMulticastPkts	The value is 0 (not applicable to the SDLC layer).
ifInBroadcastPkts	This object shall count packets received on this interface addressed to the SDLC broadcast address (x'FF'). Only point-to-point ports supporting a secondary switched station should return non-zero values.
ifOutMulticastPkts	The value is 0 (not applicable to the SDLC layer).
ifOutBroadcastPkts	This object shall count packets transmitted on this interface which were addressed to the SDLC broadcast

address (x'FF'). Only point-to-point ports supporting a primary switched station should return non-zero values.

ifHC* Not part of the conformance group.

ifLinkUpDownTrapEnable
Refer to [6]. Default is disabled (2).

ifHighSpeed Refer to [6].

ifPromiscuousMode Should return false if this interface receives only packets addressed to its SDLC poll address(es). However, in certain implementations, the lower-layer interface shall present all frames to the SDLC port regardless of the poll address. Such frames may be the result of a misconfigured peer or the secondary end of a multipoint connection. Such implementations should return true for this object.

ifConnectorPresent Set to 'false'.

ifStackHigherLayer For each SDLC port there will be an ifStackEntry with this object's value referring to the ifIndex of the SDLC port's ifEntry for the SDLC layer.

ifStackLowerLayer For each SDLC port there will be an ifStackEntry with this object's value referring to the ifIndex of the physical layer interface's ifEntry for that SDLC port.

ifStackStatus Refer to [6].

3. Definitions

```
SNA-SDLC-MIB DEFINITIONS ::= BEGIN

IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,
    Counter32, Integer32, TimeTicks
        FROM SNMPv2-SMI
    DisplayString, RowStatus, TimeInterval
        FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF
    mib-2, ifIndex, ifAdminStatus, ifOperStatus
        FROM RFC1213-MIB;


snaDLC MODULE-IDENTITY
        LAST-UPDATED  "9411150000Z"
        ORGANIZATION  "IETF SNA DLC MIB Working Group"
        CONTACT-INFO
                "        Wayne Clark

                 Postal: cisco Systems, Inc.
                         3100 Smoketree Ct.
                         Suite 1000
                         Raleigh, NC 27604
                         US

                    Tel: +1 919 878 6958

                 E-Mail: wclark@cisco.com"

        DESCRIPTION
                "This is the MIB module for objects used to
                 manage SDLC devices."

::= { mib-2 41 }

--
--  The following data link controls are modelled in this MIB module:
--
--     1. SDLC
--

sdlc        OBJECT IDENTIFIER ::= { snaDLC 1 }
```

```
--
--  THE SDLC GROUP
--  ==============
--
--  The following resources are modelled in the SDLC group of this
--  MIB module:
--
--     1. PORTS
--     2. LINK STATIONS

sdlcPortGroup OBJECT IDENTIFIER ::= { sdlc 1 } -- Physical Ports
sdlcLSGroup   OBJECT IDENTIFIER ::= { sdlc 2 } -- Logical Link Stations

--
--  THE SDLC PORT GROUP
--  ===================
--
--  The following classes of information is modelled for each SDLC port:
--
--     1.  ADMINISTRATIVE ( read/write)
--     2.  OPERATIONAL    ( read-only)
--     3.  STATISTICS     ( read-only)

--  Information not found in this group is found in tables described in
--  the following RFCs:
--
--    1.  RFC1213  - MIB-II
--
--            TABLE                       INDEX
--            ====================        ====================
--        a.  ifTable                     ifIndex
--
--    2.  RFC1659  - The RS232-like MIB
--
--            TABLE                       INDEX
--            ====================        ====================
--        a.  rs232PortTable              rs232PortIndex
--        b.  rs232SyncPortTable          rs232SyncPortIndex
--        c.  rs232InSigTable             rs232InSigPortIndex,
--                                        rs232InSigName
--        d.  rs232OutSigTable            rs232OutSigPortIndex,
--                                        rs232OutSigName
--     ** e.  rs232AsyncPortTable         rs232AsyncPortIndex
--
--     ** rs232AsyncPortTable for ISO 3309.3 ( Start-Stop SDLC).
```

```
--  ************************************************************
--  *                                                          *
--  *           THE SDLC PORT ADMINISTRATIVE TABLE             *
--  *                                                          *
--  ************************************************************

sdlcPortAdminTable  OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcPortAdminEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "This table contains objects that can be
                        changed to manage an SDLC port.    Changing one
                        of these parameters may take effect in the
                        operating port immediately or may wait until
                        the interface is restarted depending on the
                        details of the implementation.

                        Most of the objects in this read-write table
                        have corresponding read-only objects in the
                        sdlcPortOperTable that return the current
                        operating value.

                        The operating values may be different from
                        these configured values if  a configured
                        parameter was changed after the interface was
                        started."
                     ::= { sdlcPortGroup 1 }

sdlcPortAdminEntry  OBJECT-TYPE
                    SYNTAX      SdlcPortAdminEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "A list of configured values for an SDLC port."
                    INDEX   { ifIndex }
                    ::= { sdlcPortAdminTable 1 }

SdlcPortAdminEntry  ::= SEQUENCE
{
        sdlcPortAdminName           DisplayString,
        sdlcPortAdminRole           INTEGER,
        sdlcPortAdminType           INTEGER,
        sdlcPortAdminTopology       INTEGER,
        sdlcPortAdminISTATUS        INTEGER,
        sdlcPortAdminACTIVTO        TimeInterval,
        sdlcPortAdminPAUSE          TimeInterval,
        sdlcPortAdminSERVLIM        Integer32,
```

```
        sdlcPortAdminSlowPollTimer  TimeInterval
}

sdlcPortAdminName   OBJECT-TYPE
                    SYNTAX      DisplayString (SIZE (1..10))
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "An octet string that defines the physical port
                        to which this interface is assigned.  It has
                        implementation-specific significance. Its value
                        shall be unique within the administered
                        system.  It must contain only ASCII printable
                        characters.  Should an implementation choose to
                        accept a write operation  for this object, it
                        causes the logical port definition associated
                        with the table instance to be moved to  a
                        different physical port.  A write operation
                        shall not take effect until the port is cycled
                        inactive."
                    ::= { sdlcPortAdminEntry 1 }

sdlcPortAdminRole   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        primary(1),
                        secondary(2),
                        negotiable(3)
                    }
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "This object describes the role that the link
                        station shall assume the next time a connection
                        is established.

                        Even though this is defined as a port object,
                        it is a link station attribute in the sense
                        that a role is per link station.  However, it
                        is not possible to vary link station roles on a
                        particular port.  For example, if an SDLC port
                        is configured to primary, all link stations on
                        that port must be primary."
                    ::= { sdlcPortAdminEntry 2 }

sdlcPortAdminType   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
```

```
                         leased(1),
                         switched(2)
                     }
                     MAX-ACCESS  read-write
                     STATUS      current
                     DESCRIPTION
                         "This parameter defines whether the SDLC port
                         is to connect to a leased or switched line.  A
                         write operation to this administrative  value
                         shall not take effect until the SDLC port has
                         been cycled inactive."
                     DEFVAL { leased }
                     ::= { sdlcPortAdminEntry 3 }

sdlcPortAdminTopology  OBJECT-TYPE
                     SYNTAX      INTEGER
                     {
                         pointToPoint(1),
                         multipoint(2)
                     }
                     MAX-ACCESS  read-write
                     STATUS      current
                     DESCRIPTION
                         "This parameter defines whether the SDLC port is
                         capable of operating in either a point-to-point
                         or multipoint topology.

                         sdlcPortAdminTopology == multipoint implies the
                         port can also operate in a point-to-point
                         topology.  sdlcPortAdminTopology ==
                         pointToPoint does not imply the port can
                         operate in a multipoint topology.

                         A write operation to this administrative value
                         shall not take effect until the SDLC port has
                         been cycled inactive."
                     DEFVAL { pointToPoint }
                     ::= { sdlcPortAdminEntry 4 }

sdlcPortAdminISTATUS  OBJECT-TYPE
                     SYNTAX      INTEGER
                     {
                         inactive(1),
                         active(2)
                     }
                     MAX-ACCESS  read-write
                     STATUS      current
                     DESCRIPTION
```

```
                        "This parameter controls the initial value of
                        the administrative status, ifAdminStatus, of
                        this SDLC port at port start-up.  Depending
                        on the implementation, a write operation to
                        this administrative object may not take effect
                        until the SDLC port has been cycled inactive."
                    DEFVAL { active }
                    ::= { sdlcPortAdminEntry 5 }

sdlcPortAdminACTIVTO    OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "This parameter defines the period of time (in
                        1/100ths of a second) that the port will allow a
                        switched line to remain inactive before
                        disconnecting.  A switched line is considered
                        to be inactive if there are no I-Frames being
                        transferred.  A value of zero indicates no
                        timeout.  Depending on the implementation, a
                        write operation to this administered value may
                        not take effect until the port is cycled
                        inactive.

                        This object only has meaning for SDLC ports
                        where sdlcPortAdminType == switched

                        The object descriptor contains the name of an
                        NCP configuration parameter, ACTIVTO.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP ACTIVTO is
                        represented in seconds."
                    DEFVAL { 0 }
                    ::= { sdlcPortAdminEntry 6 }

sdlcPortAdminPAUSE  OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "This object defines the minimum elapsed time
                        (in 1/100ths of a second) between any two
                        traversals of the poll list for a primary SDLC
                        port.  Depending on the implementation, a write
                        operation to this administered value  may not
                        take effect until the port is cycled inactive.
```

```
                        The object descriptor contains the name of an
                        NCP configuration parameter, PAUSE.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP PAUSE is
                        represented in 1/10ths of a second.

                        This object only has meaning for SDLC ports
                        where sdlcPortAdminRole == primary "
                    DEFVAL { 200 }
                    ::= { sdlcPortAdminEntry 7 }

sdlcPortAdminSERVLIM OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "This object defines the number of times the
                        active poll list will be traversed before
                        polling a station on the slow poll list for a
                        primary, multipoint SDLC port.  Depending  on
                        the implementation, a write operation to this
                        administered value  may not take effect until
                        the port is cycled inactive.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortAdminRole == primary
                        and
                            sdlcPortAdminTopology == multipoint "
                    DEFVAL { 20 }
                    ::= { sdlcPortAdminEntry 8 }

sdlcPortAdminSlowPollTimer OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-write
                    STATUS      current
                    DESCRIPTION
                        "This object describes the elapsed time (in
                        1/100ths of a second) between polls for failed
                        secondary link station addresses.  Depending
                        on the implementation, a write operation to
                        this administered value  may not take effect
                        until the port is cycled inactive.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortAdminRole == primary
                        and
```

```
                            sdlcPortAdminTopology == multipoint "
                    DEFVAL { 2000 }
                    ::= { sdlcPortAdminEntry 9 }

--  ************************************************************
--  *                                                          *
--  *                 THE SDLC PORT OPERATIONAL TABLE          *
--  *                                                          *
--  ************************************************************

sdlcPortOperTable   OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcPortOperEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "This table contains current SDLC port
                        parameters.  Many of these objects have
                        corresponding objects inthe sdlcPortAdminTable."
                    ::= { sdlcPortGroup 2 }

sdlcPortOperEntry   OBJECT-TYPE
                    SYNTAX      SdlcPortOperEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "Currently set parameters for a specific SDLC
                        port."
                    INDEX   { ifIndex }
                    ::= { sdlcPortOperTable 1 }

SdlcPortOperEntry   ::= SEQUENCE
{
        sdlcPortOperName                DisplayString,
        sdlcPortOperRole                INTEGER,
        sdlcPortOperType                INTEGER,
        sdlcPortOperTopology            INTEGER,
        sdlcPortOperISTATUS             INTEGER,
        sdlcPortOperACTIVTO             TimeInterval,
        sdlcPortOperPAUSE               TimeInterval,
        sdlcPortOperSlowPollMethod      INTEGER,
        sdlcPortOperSERVLIM             Integer32,
        sdlcPortOperSlowPollTimer       TimeInterval,
        sdlcPortOperLastModifyTime      TimeTicks,
        sdlcPortOperLastFailTime        TimeTicks,
        sdlcPortOperLastFailCause       INTEGER
}

sdlcPortOperName    OBJECT-TYPE
```

```
                    SYNTAX      DisplayString (SIZE (1..8))
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "An octet string that describes the physical
                        port to which this interface is currently
                        attached.  It has  implementation-specific
                        significance."
                    ::= { sdlcPortOperEntry 1 }

sdlcPortOperRole    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        primary(1),
                        secondary(2),
                        undefined(3)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the role that the link
                        station has assumed on this connection.

                        Even though this is defined as a port object,
                        it is a link station attribute in the sense
                        that a role is per link station.  However, it
                        is not possible to vary link station roles on a
                        particular port.  For example, if an SDLC port
                        is configured to primary, all link stations on
                        that port must be primary.

                        The value of sdlcPortOperRole is undefined(3)
                        whenever the link station role has not yet been
                        established by the mode setting command."
                    ::= { sdlcPortOperEntry 2 }

sdlcPortOperType    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         leased(1),
                         switched(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This parameter defines whether the SDLC port
                        is currently operating as though connected to a
                        leased or switched line."
```

```
                    ::= { sdlcPortOperEntry 3 }

sdlcPortOperTopology  OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         pointToPoint(1),
                         multipoint(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This parameter defines whether the SDLC port is
                        currently operating in a point-to-point or
                        multipoint topology."
                    ::= { sdlcPortOperEntry 4 }

sdlcPortOperISTATUS OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         inactive(1),
                         active(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This parameter describes the initial value of
                        the administrative status, ifAdminStatus, of
                        this SDLC port at last port start-up."
                    ::= { sdlcPortOperEntry 5 }


sdlcPortOperACTIVTO OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This parameter defines the period of time (in
                        100ths of a second) that the port will allow a
                        switched line to remain inactive before
                        disconnecting.  A switched line is considered
                        to be inactive if there are no I-Frames being
                        transferred.

                        The object descriptor contains the name of an
                        NCP configuration parameter, ACTIVTO.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP ACTIVTO is
                        represented in seconds.
```

```
                        A value of zero indicates no timeout."
                    ::= { sdlcPortOperEntry 6 }

sdlcPortOperPAUSE   OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the current minimum
                        elapsed time (in 1/100ths of a second) between
                        any two traversals of the poll list for a
                        primary SDLC port.

                        The object descriptor contains the name of an
                        NCP configuration parameter, PAUSE.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP PAUSE is
                        represented in 1/10ths of a second.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortAdminRole == primary "
                    ::= { sdlcPortOperEntry 7 }

sdlcPortOperSlowPollMethod OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         servlim(1),
                         pollpause(2),
                         other(3)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object defines the exact method that is in
                        effect for periodically polling failed secondary
                        link station addresses.

                        If sdlcPortOperSlowPollMethod == servlim, then
                        sdlcPortOperSERVLIM defines the actual polling
                        characteristics.

                        If sdlcPortOperSlowPollMethod == pollpause,
                        then sdlcPortOperSlowPollTimer defines the
                        actual polling characteristics.

                        If sdlcPortOperSlowPollMethod == other, then
                        the polling characteristics are modeled in
```

```
                        vendor-specific objects.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortOperRole == primary
                        and
                            sdlcPortOperTopology == multipoint "
                    ::= { sdlcPortOperEntry 8 }

sdlcPortOperSERVLIM OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the number of times the
                        active poll list is currently being traversed
                        before polling a station on the slow poll list
                        for a primary, multipoint SDLC port.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortOperRole == primary
                        and
                            sdlcPortOperTopology == multipoint "
                    ::= { sdlcPortOperEntry 9 }

sdlcPortOperSlowPollTimer OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the elapsed time (in
                        1/100ths of a second) between polls for failed
                        secondary link station addresses.

                        This object only has meaning for SDLC ports
                        where
                            sdlcPortOperRole == primary
                        and
                            sdlcPortOperTopology == multipoint "
                    ::= { sdlcPortOperEntry 10 }

sdlcPortOperLastModifyTime    OBJECT-TYPE
                    SYNTAX      TimeTicks
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the value of sysUpTime
```

```
                         when this port definition was last modified.
                         If the port has not been modified, then this
                         value shall be zero."
                    ::= { sdlcPortOperEntry 11 }

sdlcPortOperLastFailTime    OBJECT-TYPE
                    SYNTAX      TimeTicks
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the value of sysUpTime
                        when this SDLC port last failed.  If the port
                        has not failed, then this value shall be zero."
                    ::= { sdlcPortOperEntry 12 }

sdlcPortOperLastFailCause    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        undefined(1),
                        physical(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This enumerated object describes the cause of
                        the last failure of this SDLC port.  If the
                        port has not failed, then this object has a
                        value of undefined(1)."
                    DEFVAL { undefined }
                    ::= { sdlcPortOperEntry 13 }
```

```
--  ************************************************************
--  *                                                          *
--  *           THE SDLC PORT STATISTICS TABLE                 *
--  *                                                          *
--  ************************************************************

sdlcPortStatsTable  OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcPortStatsEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "Each entry in this table contains statistics
                        for a specific SDLC port."
                     ::= { sdlcPortGroup 3 }

sdlcPortStatsEntry  OBJECT-TYPE
                    SYNTAX      SdlcPortStatsEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "A list of statistics for an SDLC port."
                    INDEX   { ifIndex }
                    ::= { sdlcPortStatsTable 1 }

SdlcPortStatsEntry ::= SEQUENCE
{
        sdlcPortStatsPhysicalFailures Counter32,
        sdlcPortStatsInvalidAddresses Counter32,
        sdlcPortStatsDwarfFrames      Counter32,
        sdlcPortStatsPollsIn          Counter32,
        sdlcPortStatsPollsOut         Counter32,
        sdlcPortStatsPollRspsIn       Counter32,
        sdlcPortStatsPollRspsOut      Counter32,
        sdlcPortStatsLocalBusies      Counter32,
        sdlcPortStatsRemoteBusies     Counter32,
        sdlcPortStatsIFramesIn        Counter32,
        sdlcPortStatsIFramesOut       Counter32,
        sdlcPortStatsOctetsIn         Counter32,
        sdlcPortStatsOctetsOut        Counter32,
        sdlcPortStatsProtocolErrs     Counter32,
        sdlcPortStatsActivityTOs      Counter32,
        sdlcPortStatsRNRLIMITs        Counter32,
        sdlcPortStatsRetriesExps      Counter32,
        sdlcPortStatsRetransmitsIn    Counter32,
        sdlcPortStatsRetransmitsOut   Counter32
}

sdlcPortStatsPhysicalFailures OBJECT-TYPE
```

```
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of times
                        this port has failed due to its physical media
                        since port startup.  At port startup time,
                        this object must be initialized to zero."
                    ::= { sdlcPortStatsEntry 1 }

sdlcPortStatsInvalidAddresses OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                        frames received by this port with invalid link
                        station addresses."
                    ::= { sdlcPortStatsEntry 2 }

sdlcPortStatsDwarfFrames OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                        frames received by this port which were
                        delivered intact by the physical layer but were
                        too short to be legal.

                        Ignoring the frame check sequence (FCS), a
                        frame is considered to be too short if it
                        is less than 2 bytes for sdlcLSOperMODULO of
                        eight, or if it is less than 3 bytes for
                        sdlcLSOperMODULO of onetwentyeight."

                    ::= { sdlcPortStatsEntry 3 }

sdlcPortStatsPollsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of polls
                         received by this port since the port was
                         created."

                    ::= { sdlcPortStatsEntry 4 }
```

```
sdlcPortStatsPollsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of polls
                         sent by this port since the port was created."

                    ::= { sdlcPortStatsEntry 5 }

sdlcPortStatsPollRspsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of poll
                         responses received by this port since the port
                         was created."

                    ::= { sdlcPortStatsEntry 6 }

sdlcPortStatsPollRspsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of poll
                         responses sent by this port since the port was
                         created."

                    ::= { sdlcPortStatsEntry 7 }

sdlcPortStatsLocalBusies OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the local SDLC link stations on
                         this port have entered a busy state (RNR).
                         This object is initialized to zero when the
                         port is created."
                    ::= { sdlcPortStatsEntry 8 }

sdlcPortStatsRemoteBusies OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
```

```
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the adjacent (i.e., remote) SDLC
                         link stations on this port have entered a busy
                         state (RNR).  This object is initialized to
                         zero when the port is created."
                    ::= { sdlcPortStatsEntry 9 }

sdlcPortStatsIFramesIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         I-Frames that have been received by SDLC link
                         stations on this port.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 10 }

sdlcPortStatsIFramesOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         I-Frames that have been transmitted by SDLC
                         link stations on this port.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 11 }

sdlcPortStatsOctetsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total octets
                         received from adjacent SDLC link stations on
                         this port.  This object covers the address,
                         control, and information field of I-Frames
                         only.  This object is initialized to zero when
                         the port is created."
                    ::= { sdlcPortStatsEntry 12 }

sdlcPortStatsOctetsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
```

```
                         "This object reflects the total octets
                         transmitted to adjacent SDLC link stations on
                         this port.  This object covers the address,
                         control, and information field of I-Frames
                         only.  This object is initialized to zero when
                         the port is created."
                    ::= { sdlcPortStatsEntry 13 }

sdlcPortStatsProtocolErrs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the SDLC link stations on this port
                         have deactivated the link as a result of
                         having received a protocol violation from the
                         adjacent link station.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 14 }

sdlcPortStatsActivityTOs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the SDLC link stations on this port
                         have deactivated the link as a result of no
                         activity on the link.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 15 }

sdlcPortStatsRNRLIMITs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the SDLC link stations on this port
                         have deactivated the link as a result of its
                         RNRLIMIT timer expiring.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 16 }

sdlcPortStatsRetriesExps OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
```

```
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         times that the SDLC link stations on this port
                         have deactivated the link as a result of a
                         retry sequence being exhausted.  This object
                         is initialized to zero when the port is
                         created."
                    ::= { sdlcPortStatsEntry 17 }

sdlcPortStatsRetransmitsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         I-Frames retransmitted by remote link stations
                         for all SDLC link stations on this port.  This
                         object is initialized to zero when the port is
                         created."
                    ::= { sdlcPortStatsEntry 18 }

sdlcPortStatsRetransmitsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "This object reflects the total number of
                         I-Frames retransmitted by all local SDLC link
                         stations on this port.  This object is
                         initialized to zero when the port is created."
                    ::= { sdlcPortStatsEntry 19 }
```

```
--
--  THE SDLC LINK STATION GROUP
--  ===========================
--

--  The following classes of information is modelled for each SDLC link
--  station:
--
--     1.  ADMINISTRATIVE ( read-write)
--     2.  OPERATIONAL    ( read-only)
--     3.  STATISTICS     ( read-only)

--  ************************************************************
--  *                                                          *
--  *        THE SDLC LINK STATION ADMINISTRATIVE TABLE        *
--  *                                                          *
--  ************************************************************

sdlcLSAdminTable  OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcLSAdminEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "This table contains objects that can be
                        changed to manage an SDLC link station.
                        Changing one of these parameters may take
                        effect in the operating link immediately or may
                        wait until the link is restarted depending on
                        the details of the implementation.

                        The entries in sdlcLSAdminTable can be created
                        either by an agent or a management station. The
                        management station can create an entry in
                        sdlcLSAdminTable by setting the appropriate
                        value in sdlcLSAdminRowStatus.

                        Most of the objects in this read-create table
                        have corresponding read-only objects in the
                        sdlcLSOperTable that reflect the current
                        operating value.

                        The operating values may be different from
                        these configured values if changed by XID
                        negotiation or if a configured parameter was
                        changed after the link was started."
                    ::= { sdlcLSGroup 1 }

sdlcLSAdminEntry    OBJECT-TYPE
```

```
                    SYNTAX      SdlcLSAdminEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                         "A list of configured values for an SDLC link
                         station."
                    INDEX   { ifIndex, sdlcLSAddress }
                    ::= { sdlcLSAdminTable 1 }

SdlcLSAdminEntry ::= SEQUENCE
{
        sdlcLSAddress           INTEGER,
        sdlcLSAdminName         DisplayString,
        sdlcLSAdminState        INTEGER,
        sdlcLSAdminISTATUS      INTEGER,
        sdlcLSAdminMAXDATASend  Integer32,
        sdlcLSAdminMAXDATARcv   Integer32,
        sdlcLSAdminREPLYTO      TimeInterval,
        sdlcLSAdminMAXIN        INTEGER,
        sdlcLSAdminMAXOUT       INTEGER,
        sdlcLSAdminMODULO       INTEGER,
        sdlcLSAdminRETRIESm     INTEGER,
        sdlcLSAdminRETRIESt     TimeInterval,
        sdlcLSAdminRETRIESn     Integer32,
        sdlcLSAdminRNRLIMIT     TimeInterval,
        sdlcLSAdminDATMODE      INTEGER,
        sdlcLSAdminGPoll        INTEGER,
        sdlcLSAdminSimRim       INTEGER,
        sdlcLSAdminXmitRcvCap   INTEGER,
        sdlcLSAdminRowStatus    RowStatus
}

sdlcLSAddress       OBJECT-TYPE
                    SYNTAX      INTEGER (1..255)
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                         "This value is the poll address of the
                         secondary link station for this SDLC link.  It
                         uniquely identifies the SDLC link station
                         within a single SDLC port."
                    ::= { sdlcLSAdminEntry 1 }

sdlcLSAdminName     OBJECT-TYPE
                    SYNTAX      DisplayString (SIZE (1..10))
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
```

```
                        "An octet string that defines the local name of
                        the SDLC link station.  This field may be sent
                        in the XID3 control vector 0x0E, type 0xF7."
                    ::= { sdlcLSAdminEntry 2 }

sdlcLSAdminState    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         inactive(1),
                         active(2)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the desired state of the
                        SDLC station.  The managed system shall attempt
                        to keep the operational state, sdlcLSOperState,
                        consistent with this value."
                    DEFVAL { active }
                    ::= { sdlcLSAdminEntry 3 }

sdlcLSAdminISTATUS  OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         inactive(1),
                         active(2)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This parameter controls the desired state,
                        sdlcLSAdminState, of the SDLC link station at
                        link station start-up."
                    DEFVAL { active }
                    ::= { sdlcLSAdminEntry 4 }

sdlcLSAdminMAXDATASend  OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object contains the maximum PDU size that
                        the local link station thinks it can send to
                        the adjacent link station before having
                        received any XID from the ALS.  After the
                        maximum PDU size that the ALS can receive is
                        known (via XID exchange) that value is
                        reflected in sdlcLSOperMAXDATASend and takes
```

```
                        precedence over this object.

                        This value includes the Transmission Header
                        (TH) and the Request Header (RH)."
                    ::= { sdlcLSAdminEntry 5 }

sdlcLSAdminMAXDATARcv  OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object contains the maximum PDU size that
                        the local link station can receive from the
                        adjacent link station.  This value is sent in
                        the XID to the ALS.

                        This value includes the Transmission Header
                        (TH) and the Request Header (RH)."
                    ::= { sdlcLSAdminEntry 6 }

sdlcLSAdminREPLYTO  OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the reply timeout (in
                        1/100ths of a second) for an SDLC link
                        station.  If the link station does not receive
                        a response to a poll or message before the
                        specified time expires then the appropriate
                        error recovery shall be initiated.

                        The object descriptor contains the name of an
                        NCP configuration parameter, REPLYTO.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP REPLYTO is
                        represented in 1/10ths of a second.

                        Depending on the implementation, a write
                        operation to this administered value  may not
                        change the operational value, sdlcLSOperREPLYTO,
                        until the link station is cycled inactive.

                        This object only has meaning for SDLC ports
                        where sdlcPortAdminRole == primary "
                    DEFVAL { 100 }
                    ::= { sdlcLSAdminEntry 7 }
```

```
sdlcLSAdminMAXIN    OBJECT-TYPE
                    SYNTAX      INTEGER (1..127)
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the maximum number of
                        unacknowledged I-frames which an SDLC link
                        station may receive.  This should range from 1
                        to (sdlcLSAdminMODULO - 1).  This value is sent
                        in the XID to the ALS.

                        A write operation to this administered value
                        will not change the operational value,
                        sdlcLSOperMAXIN, until the link station is
                        cycled inactive."
                    DEFVAL { 7 }
                    ::= { sdlcLSAdminEntry 8 }

sdlcLSAdminMAXOUT   OBJECT-TYPE
                    SYNTAX      INTEGER (1..127)
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the maximum number of
                        consecutive unacknowledged I-frames which an
                        SDLC link station shall send without an
                        acknowledgement.  This shall range from 1 to
                        (sdlcLSAdminMODULO - 1).

                        For link stations on switched SDLC lines,
                        certain implementions may choose to override
                        this administered value with the value
                        received in the XID exchange.

                        Depending on the implementation, a write
                        operation to this administered value may not
                        change the operational value,
                        sdlcLSOperMAXOUT, until the link station is
                        cycled inactive.

                        An implementation can support only modulo 8,
                        only modulo 128, or both."
                    DEFVAL { 1 }
                    ::= { sdlcLSAdminEntry 9 }

sdlcLSAdminMODULO   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
```

```
                        eight(8),
                        onetwentyeight(128)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the modulus for an SDLC
                        link station.  This modulus determines the size
                        of the rotating acknowledgement window used the
                        SDLC link station pair.

                        A write operation to this administered value
                        will not change the operational value,
                        sdlcLSOperMODULO, until the link station is
                        cycled inactive.

                        An implementation can support only modulo 8,
                        only modulo 128, or both."
                    DEFVAL { eight }
                    ::= { sdlcLSAdminEntry 10 }

sdlcLSAdminRETRIESm OBJECT-TYPE
                    SYNTAX      INTEGER (0..128)
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls number of retries in a
                        retry sequence for the local SDLC link
                        station.  A retry sequence is a series of
                        retransmitted frames ( data or control) for
                        which no positive acknowledgement is received.

                        The number of times that the retry sequence is
                        to be repeated is controlled by the object:
                        sdlcLSAdminRETRIESn.  The interval between retry
                        sequences is controlled by the object:
                        sdlcLSAdminRETRIESt.

                        A value of zero indicates no retries. If the
                        value of sdlcLSAdminRETRIESm is zero, then the
                        values of sdlcLSAdminRETRIESt and
                        sdlcLSAdminRETRIESn should also be zero.

                        Depending on the implementation, a write
                        operation to this administered value  may not
                        change the operational value,
                        sdlcLSOperRETRIESm, until the link station is
                        cycled inactive."
```

```
                    DEFVAL { 15 }
                    ::= { sdlcLSAdminEntry 11 }

sdlcLSAdminRETRIESt OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the interval (in 1/100ths
                        of a second) between retry sequences for the
                        local SDLC link station if multiple retry
                        sequences are specified .  A retry sequence is
                        a series of retransmitted frames ( data or
                        control) for which no positive acknowledgement
                        is received.

                        The number of repeated retries sequences is
                        controlled by the object: sdlcLSAdminRETRIESn.
                        The retries per sequence is controlled by the
                        object:  sdlcLSAdminRETRIESm.

                        The object descriptor contains the name of an
                        NCP configuration parameter, RETRIESt.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP RETRIESt is
                        represented in seconds.

                        Depending on the implementation, a write
                        operation to this administered value  may not
                        change the operational value,
                        sdlcLSOperRETRIESt, until the link station is
                        cycled inactive."
                    DEFVAL { 0 }
                    ::= { sdlcLSAdminEntry 12 }

sdlcLSAdminRETRIESn OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the number of times that
                        a retry sequence is repeated for the local SDLC
                        link station.  A retry sequence is a series of
                        retransmitted frames ( data or control) for
                        which no positive acknowledgement is received.

                        The interval between retry sequences is
                        controlled by the object: sdlcLSAdminRETRIESn.
```

```
                        The retries per sequence is controlled by the
                        object:  sdlcLSAdminRETRIESm.

                        Depending on the implementation, a write
                        operation to this administered value  may not
                        change the operational value,
                        sdlcLSOperRETRIESn, until the link station is
                        cycled inactive."
                    DEFVAL { 0 }
                    ::= { sdlcLSAdminEntry 13 }

sdlcLSAdminRNRLIMIT OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the length of time (in
                        1/100ths of a second) that an SDLC link station
                        will allow its adjacent link station to remain
                        in a busy (RNR) state before declaring it
                        inoperative.

                        A value of sdlcLSAdminRNRLIMIT == 0 means there
                        is no limit.

                        The object descriptor contains the name of an
                        NCP configuration parameter, RNRLIMIT.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP RNRLIMIT is
                        represented in minutes.

                        Depending on the implementation, a write
                        operation to this administered value  may not
                        change the operational value,
                        sdlcLSOperRNRLIMIT, until the link station is
                        cycled inactive."
                    DEFVAL { 18000 }
                    ::= { sdlcLSAdminEntry 14 }

sdlcLSAdminDATMODE  OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        half(1),
                        full(2)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
```

```
                        "This object controls whether communications
                        mode with the adjacent link station is
                        two-way-alternate (half) or two-way-simultaneous
                        (full).

                        A write operation to this administered value
                        will not change the operational value,
                        sdlcLSOperDATMODE, until the link station is
                        cycled inactive."
                    DEFVAL { half }
                    ::= { sdlcLSAdminEntry 15 }

sdlcLSAdminGPoll    OBJECT-TYPE
                    SYNTAX      INTEGER (0..254)
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object describes the group poll address
                        for this link station instance.  If group poll
                        is not in effect for this link station
                        instance, the value for sdlcLSAdminGPoll should
                        be zero.

                        Depending on the implementation, a write
                        operation to this administered value may not
                        change the operational value, sdlcLSOperGPoll,
                        until the link station is cycled inactive."
                    ::= { sdlcLSAdminEntry 16 }

sdlcLSAdminSimRim   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         no(1),
                         yes(2)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the support for
                        transmission and receipt of SIM and RIM control
                        frames for this link station.  The value of
                        this object controls the setting of the
                        transmit-receive capability sent in the XID
                        field."
                    DEFVAL { no }
                    ::= { sdlcLSAdminEntry 17 }

sdlcLSAdminXmitRcvCap OBJECT-TYPE
```

```
                    SYNTAX      INTEGER
                    {
                         twa(1),
                         tws(2)
                    }
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object controls the transmit-receive
                        capabilities for this SDLC link station.  The
                        value of this object establishes the value of
                        the transmit-receive capability indicator sent
                        in the XID image to the adjacent link station."
                    DEFVAL { twa }
                    ::= { sdlcLSAdminEntry 18 }

sdlcLSAdminRowStatus OBJECT-TYPE
                    SYNTAX      RowStatus
                    MAX-ACCESS  read-create
                    STATUS      current
                    DESCRIPTION
                        "This object is used by a management station to
                        create or delete the row entry in
                        sdlcLSAdminTable following the RowStatus
                        textual convention.

                        Upon successful creation of the row, an agent
                        automatically creates a corresponding entry in
                        the sdlcLSOperTable with sdlcLSOperState equal
                        to 'discontacted (1)'."
                    ::= { sdlcLSAdminEntry 19 }

--  ************************************************************
--  *                                                          *
--  *           THE SDLC LINK STATION OPERATIONAL TABLE        *
--  *                                                          *
--  ************************************************************

sdlcLSOperTable     OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcLSOperEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                          "This table contains current SDLC link
                          parameters.  Many of these objects have
                          corresponding objects in the
                          sdlcLSAdminTable."
                    ::= { sdlcLSGroup 2 }
```

```
sdlcLSOperEntry     OBJECT-TYPE
                    SYNTAX      SdlcLSOperEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                         "A list of status and control values for an
                         SDLC link station."
                    INDEX   { ifIndex, sdlcLSAddress }
                    ::= { sdlcLSOperTable 1 }

SdlcLSOperEntry     ::= SEQUENCE
{
        sdlcLSOperName                  DisplayString,
        sdlcLSOperRole                  INTEGER,
        sdlcLSOperState                 INTEGER,
        sdlcLSOperMAXDATASend           Integer32,
        sdlcLSOperREPLYTO               TimeInterval,
        sdlcLSOperMAXIN                 INTEGER,
        sdlcLSOperMAXOUT                INTEGER,
        sdlcLSOperMODULO                INTEGER,
        sdlcLSOperRETRIESm              INTEGER,
        sdlcLSOperRETRIESt              TimeInterval,
        sdlcLSOperRETRIESn              INTEGER,
        sdlcLSOperRNRLIMIT              TimeInterval,
        sdlcLSOperDATMODE               INTEGER,
        sdlcLSOperLastModifyTime        TimeTicks,
        sdlcLSOperLastFailTime          TimeTicks,
        sdlcLSOperLastFailCause         INTEGER,
        sdlcLSOperLastFailCtrlIn        OCTET STRING,
        sdlcLSOperLastFailCtrlOut       OCTET STRING,
        sdlcLSOperLastFailFRMRInfo      OCTET STRING,
        sdlcLSOperLastFailREPLYTOs      Counter32,
        sdlcLSOperEcho                  INTEGER,
        sdlcLSOperGPoll                 INTEGER,
        sdlcLSOperSimRim                INTEGER,
        sdlcLSOperXmitRcvCap            INTEGER
}

sdlcLSOperName      OBJECT-TYPE
                    SYNTAX      DisplayString (SIZE (1..10))
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                         "An octet string that defines the name of the
                         remote SDLC link station.  This field is
                         received in the XID3 control vector 0x0E, type
                         0xF7."
                    ::= { sdlcLSOperEntry 1 }
```

```
sdlcLSOperRole      OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        primary(1),
                        secondary(2),
                        undefined(3)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current role that the
                        link station is assuming.

                        The value of sdlcLSOperRole is undefined(3)
                        whenever the link station role has not yet been
                        established by the mode setting command."
                    ::= { sdlcLSOperEntry 2 }

sdlcLSOperState     OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        discontacted(1),
                        contactPending(2),
                        contacted(3),
                        discontactPending(4)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the operational state of
                        the SDLC link station.  The managed system
                        shall attempt to keep this value consistent
                        with the administered state, sdlcLSAdminState"
                    ::= { sdlcLSOperEntry 3 }

sdlcLSOperMAXDATASend   OBJECT-TYPE
                    SYNTAX      Integer32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object contains the actual maximum PDU
                        size that the local link station can send to
                        the adjacent link station.  This object is
                        established from the value received in the XID
                        from the adjacent link station.  If no XID
                        is received, then this value is implementation
                        dependent (for instance, it could be the value
                        of sdlcLSAdminMAXDATASend).
```

```
                        This value includes the Transmission Header
                        (TH) and the Request Header (RH)."
                    ::= { sdlcLSOperEntry 4 }

sdlcLSOperREPLYTO   OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current reply timeout
                        (in 1/100ths of a second) for an SDLC link
                        station.  If the link station does not receive
                        a response to a poll or message before the
                        specified time expires then the appropriate
                        error recovery shall be initiated.

                        The object descriptor contains the name of an
                        NCP configuration parameter, REPLYTO.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP REPLYTO is
                        represented in 1/10ths of a second.

                        This object only has meaning for SDLC ports
                        where sdlcPortOperRole == primary "
                    ::= { sdlcLSOperEntry 5 }

sdlcLSOperMAXIN    OBJECT-TYPE
                    SYNTAX      INTEGER (1..127)
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current maximum
                        number of unacknowledged I-frames which an SDLC
                        link station may receive.  This shall range
                        from 1 to (sdlcLSOperMODULO - 1)."
                    ::= { sdlcLSOperEntry 6 }

sdlcLSOperMAXOUT    OBJECT-TYPE
                    SYNTAX      INTEGER (1..127)
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object controls the maximum number of
                        consecutive unacknowledged I-frames which an
                        SDLC link station shall send without an
                        acknowledgement.  This shall range from 1 to
                        (sdlcLSAdminMODULO - 1).
```

```
                        This value may controlled by the administered
                        MAXOUT, sdlcLSAdminMAXOUT, or by the MAXIN value
                        received during the XID exchange."
                    ::= { sdlcLSOperEntry 7 }

sdlcLSOperMODULO   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        eight(8),
                        onetwentyeight(128)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current modulus for
                        an SDLC link station.  This modulus determines
                        the size of rotating acknowledgement window
                        used by the SDLC link station pair."
                     DEFVAL { eight }
                    ::= { sdlcLSOperEntry 8 }

sdlcLSOperRETRIESm  OBJECT-TYPE
                    SYNTAX      INTEGER (0..128)
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object controls number of retries in a
                        retry sequence for an SDLC link station.  A
                        retry sequence is a series of retransmitted
                        frames ( data or control) for which no positive
                        acknowledgement is received.

                        The current number of times that the retry
                        sequence is to be repeated is reflected by the
                        object:  sdlcLSOperRETRIESn.  The current
                        interval between retry sequences is reflected
                        by the object:  sdlcLSOperRETRIESt."
                    ::= { sdlcLSOperEntry 9 }

sdlcLSOperRETRIESt  OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current interval (in
                        1/100ths of a second) between retry sequences
                        for an SDLC link station if multiple retry
                        sequences are specified.  A retry sequence is a
```

```
                        series of retransmitted frames ( data or
                        control) for which no positive acknowledgement
                        is received.

                        The object descriptor contains the name of an
                        NCP configuration parameter, RETRIESt.  Please
                        note that the value of this object represents
                        1/100ths of a second while the NCP RETRIESt is
                        represented in seconds.

                        The current number of repeated retries
                        sequences is reflected by the object:
                        sdlcLSOperRETRIESn.  The current retries per
                        sequence is reflected by the object:
                        sdlcLSOperRETRIESm."
                    ::= { sdlcLSOperEntry 10 }

sdlcLSOperRETRIESn OBJECT-TYPE
                    SYNTAX      INTEGER (0..127)
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current number of
                        times that a retry sequence is repeated for an
                        SDLC link station.  A retry sequence is a
                        series of retransmitted frames ( data or
                        control) for which no positive acknowledgement
                        is received.

                        The current interval between retry sequences is
                        reflected by the object: sdlcLSOperRETRIESn.
                        The current retries per sequence is reflected
                        by the object:  sdlcLSOperRETRIESm."
                    ::= { sdlcLSOperEntry 11 }

sdlcLSOperRNRLIMIT  OBJECT-TYPE
                    SYNTAX      TimeInterval
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the current length of
                        time (in 1/100ths of a second) that an SDLC
                        link station will allow its adjacent link
                        station to remain in a busy (RNR) state before
                        declaring it inoperative.

                        The object descriptor contains the name of an
                        NCP configuration parameter, RNRLIMIT.  Please
```

```
                        note that the value of this object represents
                        1/100ths of a second while the NCP RNRLIMIT is
                        represented in minutes.

                        A value of sdlcLSOperRNRLIMIT == 0 means there
                        is no limit."
                    ::= { sdlcLSOperEntry 12 }

sdlcLSOperDATMODE   OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                        half(1),
                        full(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects whether the current
                        communications mode with the adjacent link
                        station is two-way-alternate (half) or
                        two-way-simultaneous (full)."
                    ::= { sdlcLSOperEntry 13 }

sdlcLSOperLastModifyTime    OBJECT-TYPE
                    SYNTAX      TimeTicks
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the value of sysUpTime
                         when this link station definition was last
                         modified.  If the link station has not been
                         modified, then this value shall be zero."
                    ::= { sdlcLSOperEntry 14 }

sdlcLSOperLastFailTime    OBJECT-TYPE
                    SYNTAX      TimeTicks
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the value of sysUpTime
                         when this SDLC link station last failed.  If
                         the link station has not failed, then this
                         value shall be zero."
                    ::= { sdlcLSOperEntry 15 }

sdlcLSOperLastFailCause    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
```

```
                        undefined(1),
                        rxFRMR(2),
                        txFRMR(3),
                        noResponse(4),
                        protocolErr(5),
                        noActivity(6),
                        rnrLimit(7),
                        retriesExpired(8)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This enumerated object reflects the cause of
                        the last failure of this SDLC link station.  If
                        the link station has not failed, then this
                        object will have a value of undefined(1)."
                    DEFVAL { undefined }
                    ::= { sdlcLSOperEntry 16 }

sdlcLSOperLastFailCtrlIn  OBJECT-TYPE
                    SYNTAX      OCTET STRING (SIZE(1..2))
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the last control octet or
                        octets (depending on modulus) received by this
                        SDLC link station at the time of the last
                        failure.  If the link station has not failed,
                        then this value has no meaning."
                    ::= { sdlcLSOperEntry 17 }

sdlcLSOperLastFailCtrlOut  OBJECT-TYPE
                    SYNTAX      OCTET STRING (SIZE(1..2))
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the last control octet or
                        octets (depending on modulus) sent by this SDLC
                        link station at the time of the last failure.
                        If the link station has not failed, then this
                        value has no meaning."
                    ::= { sdlcLSOperEntry 18 }

sdlcLSOperLastFailFRMRInfo  OBJECT-TYPE
                    SYNTAX      OCTET STRING (SIZE(3))
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
```

```
                        "This object reflects the information field of
                        the FRMR frame if the last failure for this
                        SDLC link station was as a result of an invalid
                        frame.  Otherwise, this field has no meaning."
                    ::= { sdlcLSOperEntry 19 }

sdlcLSOperLastFailREPLYTOs  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the number of times that
                        the REPLYTO timer had expired for an SDLC link
                        station at the time of the last failure. If the
                        link station has not failed, then this value
                        has no meaning."
                    ::= { sdlcLSOperEntry 20 }

sdlcLSOperEcho      OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         no(1),
                         yes(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object identifies whether the echo bit is
                         in effect for this particular link station."
                    DEFVAL { no }
                    ::= { sdlcLSOperEntry 21 }

sdlcLSOperGPoll     OBJECT-TYPE
                    SYNTAX      INTEGER (0..254)
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object describes the group poll address
                        in effect for this link station instance."
                    DEFVAL { 0 }
                    ::= { sdlcLSOperEntry 22 }

sdlcLSOperSimRim    OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         no(1),
                         yes(2)
                    }
```

```
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the support for
                        transmission and receipt of SIM and RIM control
                        frames for the adjacent link station.  The
                        value of this object is set from the XID field
                        received from the adjacent link station."
                    DEFVAL { no }
                    ::= { sdlcLSOperEntry 23 }

sdlcLSOperXmitRcvCap OBJECT-TYPE
                    SYNTAX      INTEGER
                    {
                         twa(1),
                         tws(2)
                    }
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the transmit-receive
                        capabilities for the adjacent SDLC link
                        station.  The value of this object is the value
                        of the transmit-receive capability indicator
                        received in the XID image from the adjacent
                        link station."
                    DEFVAL { twa }
                    ::= { sdlcLSOperEntry 24 }


--  ************************************************************
--  *                                                          *
--  *           THE SDLC LINK STATION STATISTICS TABLE         *
--  *                                                          *
--  ************************************************************

sdlcLSStatsTable  OBJECT-TYPE
                    SYNTAX      SEQUENCE OF SdlcLSStatsEntry
                    MAX-ACCESS  not-accessible
                    STATUS      current
                    DESCRIPTION
                        "Each entry in this table contains statistics
                        for a specific SDLC link station."
                     ::= { sdlcLSGroup 3 }

sdlcLSStatsEntry  OBJECT-TYPE
                    SYNTAX      SdlcLSStatsEntry
                    MAX-ACCESS  not-accessible
```

```
                    STATUS      current
                    DESCRIPTION
                        "A list of statistics for an SDLC link station."
                    INDEX   { ifIndex, sdlcLSAddress }
                    ::= { sdlcLSStatsTable 1 }

SdlcLSStatsEntry ::= SEQUENCE
{
        sdlcLSStatsBLUsIn             Counter32,
        sdlcLSStatsBLUsOut            Counter32,
        sdlcLSStatsOctetsIn           Counter32,
        sdlcLSStatsOctetsOut          Counter32,
        sdlcLSStatsPollsIn            Counter32,
        sdlcLSStatsPollsOut           Counter32,
        sdlcLSStatsPollRspsIn         Counter32,
        sdlcLSStatsPollRspsOut        Counter32,
        sdlcLSStatsLocalBusies        Counter32,
        sdlcLSStatsRemoteBusies       Counter32,
        sdlcLSStatsIFramesIn          Counter32,
        sdlcLSStatsIFramesOut         Counter32,
        sdlcLSStatsUIFramesIn         Counter32,
        sdlcLSStatsUIFramesOut        Counter32,
        sdlcLSStatsXIDsIn             Counter32,
        sdlcLSStatsXIDsOut            Counter32,
        sdlcLSStatsTESTsIn            Counter32,
        sdlcLSStatsTESTsOut           Counter32,
        sdlcLSStatsREJsIn             Counter32,
        sdlcLSStatsREJsOut            Counter32,
        sdlcLSStatsFRMRsIn            Counter32,
        sdlcLSStatsFRMRsOut           Counter32,
        sdlcLSStatsSIMsIn             Counter32,
        sdlcLSStatsSIMsOut            Counter32,
        sdlcLSStatsRIMsIn             Counter32,
        sdlcLSStatsRIMsOut            Counter32,
        sdlcLSStatsDISCIn             Counter32,
        sdlcLSStatsDISCOut            Counter32,
        sdlcLSStatsUAIn               Counter32,
        sdlcLSStatsUAOut              Counter32,
        sdlcLSStatsDMIn               Counter32,
        sdlcLSStatsDMOut              Counter32,
        sdlcLSStatsSNRMIn             Counter32,
        sdlcLSStatsSNRMOut            Counter32,
        sdlcLSStatsProtocolErrs       Counter32,
        sdlcLSStatsActivityTOs        Counter32,
        sdlcLSStatsRNRLIMITs          Counter32,
        sdlcLSStatsRetriesExps        Counter32,
        sdlcLSStatsRetransmitsIn      Counter32,
        sdlcLSStatsRetransmitsOut     Counter32
```

```
}

sdlcLSStatsBLUsIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total basic link
                        units (BLUs; frames) received from an adjacent
                        SDLC link station since link station startup.
                        At link station startup time, this object must
                        be initialized to zero."
                    ::= { sdlcLSStatsEntry 1 }

sdlcLSStatsBLUsOut   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total basic link
                        units (BLUs; frames), transmitted to an
                        adjacent SDLC link station since link station
                        startup.  At link station startup time, this
                        object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 2 }

sdlcLSStatsOctetsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total octets received
                        from an adjacent SDLC link station since link
                        station startup.  This object covers the
                        address, control, and information field of
                        I-Frames only.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 3 }

sdlcLSStatsOctetsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total octets
                        transmitted to an adjacent SDLC link station
                        since link station startup.  This object covers
                        the address, control, and information field of
```

```
                        I-Frames only.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 4 }

sdlcLSStatsPollsIn  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total polls received
                        from an adjacent SDLC link station since link
                        station startup.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 5 }

sdlcLSStatsPollsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total polls sent to
                        an adjacent SDLC link station since link
                        station startup.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 6 }

sdlcLSStatsPollRspsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of poll
                        responses sent to the adjacent SDLC link
                        station since link station startup.  This value
                        includes I-frames that are sent in response to
                        a poll.

                        At link station startup time, this object must
                        be initialized to zero."
                    ::= { sdlcLSStatsEntry 7 }

sdlcLSStatsPollRspsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of poll
                        responses received from the adjacent SDLC link
```

```
                        station since station startup.  This value
                        includes I-frames that are received in response
                        to a poll.

                        At link station startup time, this object must
                        be initialized to zero."
                    ::= { sdlcLSStatsEntry 8 }

sdlcLSStatsLocalBusies OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of times
                        that the local SDLC link station has entered a
                        busy state (RNR) since link station startup.
                        At link station startup time, this object must
                        be initialized to zero."
                    ::= { sdlcLSStatsEntry 9 }

sdlcLSStatsRemoteBusies OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of times
                        that an adjacent ( remote) SDLC link station
                        has entered a busy state (RNR) since link
                        station startup.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 10 }

sdlcLSStatsIFramesIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total I-frames
                        received from an adjacent SDLC link station
                        since link station startup.  At link station
                        startup time, this object must be initialized
                        to zero."
                    ::= { sdlcLSStatsEntry 11 }

sdlcLSStatsIFramesOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
```

```
                    DESCRIPTION
                        "This object reflects the total I-frames
                        transmitted to an adjacent SDLC link station
                        since link station startup.  At link station
                        startup time, this object must be initialized
                        to zero."
                    ::= { sdlcLSStatsEntry 12 }

sdlcLSStatsUIFramesIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total UI-frames
                        received from an adjacent SDLC link station
                        since link station startup."
                    ::= { sdlcLSStatsEntry 13 }

sdlcLSStatsUIFramesOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                       "This object reflects the total UI-frames
                       transmitted to an adjacent SDLC link station
                       since link station startup."
                    ::= { sdlcLSStatsEntry 14 }

sdlcLSStatsXIDsIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total XID frames
                        received from an adjacent SDLC link station
                        since link station startup."
                    ::= { sdlcLSStatsEntry 15 }

sdlcLSStatsXIDsOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total XID frames
                        transmitted to an adjacent SDLC link station
                        since link station startup."
                    ::= { sdlcLSStatsEntry 16 }
```

```
sdlcLSStatsTESTsIn   OBJECT-TYPE
                     SYNTAX      Counter32
                     MAX-ACCESS  read-only
                     STATUS      current
                     DESCRIPTION
                         "This object reflects the total TEST frames,
                         commands or responses, received from an
                         adjacent SDLC link station since link station
                         startup."
                     ::= { sdlcLSStatsEntry 17 }

sdlcLSStatsTESTsOut  OBJECT-TYPE
                     SYNTAX      Counter32
                     MAX-ACCESS  read-only
                     STATUS      current
                     DESCRIPTION
                         "This object reflects the total TEST frames,
                         commands or responses, transmitted to an
                         adjacent SDLC link station since link station
                         startup."
                     ::= { sdlcLSStatsEntry 18 }

sdlcLSStatsREJsIn    OBJECT-TYPE
                     SYNTAX      Counter32
                     MAX-ACCESS  read-only
                     STATUS      current
                     DESCRIPTION
                         "This object reflects the total REJ frames
                         received from an adjacent SDLC link station
                         since link station startup."
                     ::= { sdlcLSStatsEntry 19 }

sdlcLSStatsREJsOut   OBJECT-TYPE
                     SYNTAX      Counter32
                     MAX-ACCESS  read-only
                     STATUS      current
                     DESCRIPTION
                         "This object reflects the total REJ frames
                         transmitted to an adjacent SDLC link station
                         since link station startup."
                     ::= { sdlcLSStatsEntry 20 }

sdlcLSStatsFRMRsIn   OBJECT-TYPE
                     SYNTAX      Counter32
                     MAX-ACCESS  read-only
                     STATUS      current
                     DESCRIPTION
                         "This object reflects the total frame reject
```

```
                        (FRMR) frames received from an adjacent SDLC
                        link station since link station startup."
                    ::= { sdlcLSStatsEntry 21 }

sdlcLSStatsFRMRsOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total frame reject
                        (FRMR) frames transmitted to an adjacent SDLC
                        link station since link station startup."
                    ::= { sdlcLSStatsEntry 22 }

sdlcLSStatsSIMsIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total set
                        initialization mode (SIM) frames received from
                        an adjacent SDLC link station since link station
                        startup."
                    ::= { sdlcLSStatsEntry 23 }

sdlcLSStatsSIMsOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total set
                        initialization mode (SIM) frames transmitted to
                        an adjacent SDLC link station since link station
                        startup.  At link station startup time, this
                        object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 24 }

sdlcLSStatsRIMsIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total request
                        initialization mode (RIM) frames received from
                        an adjacent SDLC link station since link station
                        startup.  At link station startup time, this
                        object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 25 }
```

```
sdlcLSStatsRIMsOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total request
                        initialization mode (RIM) frames transmitted to
                        an adjacent SDLC link station since link station
                        startup.  At link station startup time, this
                        object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 26 }

sdlcLSStatsDISCIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         disconnect (DISC) requests received from an
                         adjacent SDLC link station since link station
                         startup.  At link station startup time, this
                         object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 27 }

sdlcLSStatsDISCOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         disconnect (DISC) requests transmited to an
                         adjacent SDLC link station since link station
                         startup.  At link station startup time, this
                         object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 28 }

sdlcLSStatsUAIn     OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         unnumbered acknowledgements (UA) requests
                         received from an adjacent SDLC link station
                         since link station startup.  At link station
                         startup time, this object must be initialized
                         to zero."
                    ::= { sdlcLSStatsEntry 29 }
```

```
sdlcLSStatsUAOut    OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         unnumbered acknowledgements (UA) requests
                         transmited to an adjacent SDLC link station
                         since link station startup.  At link station
                         startup time, this object must be initialized
                         to zero."
                    ::= { sdlcLSStatsEntry 30 }

sdlcLSStatsDMIn     OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         disconnect mode (DM) requests received from an
                         adjacent SDLC link station since link station
                         startup.  At link station startup time, this
                         object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 31 }

sdlcLSStatsDMOut    OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         disconnect mode (DM) requests transmited to an
                         adjacent SDLC link station since link station
                         startup.  At link station startup time, this
                         object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 32 }

sdlcLSStatsSNRMIn   OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         set normal response mode (SNRM/SNRME) requests
                         received from an adjacent SDLC link station
                         since link station startup.  At link station
                         startup time, this object must be initialized
                         to zero."
```

```
                    ::= { sdlcLSStatsEntry 33 }

sdlcLSStatsSNRMOut  OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         set normal response mode (SNRM/SNRME) requests
                         transmited to an adjacent SDLC link station
                         since link station startup.  At link station
                         startup time, this object must be initialized
                         to zero."
                    ::= { sdlcLSStatsEntry 34 }

sdlcLSStatsProtocolErrs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total occurrences,
                        since link station startup, where this SDLC
                        link station has inactivated the link as a
                        result of receiving a frame from its adjacent
                        link station which was in violation of the
                        protocol.  At link station startup time, this
                        object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 35 }

sdlcLSStatsActivityTOs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total occurrences,
                        since startup, where this SDLC link station has
                        inactivated the link as a result of no activity
                        on the link.  At link station startup time,
                        this object must be initialized to zero."
                    ::= { sdlcLSStatsEntry 36 }

sdlcLSStatsRNRLIMITs OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total occurrences,
                        since startup, where this SDLC link station has
```

```
                        inactivated the link as a result of its
                        RNRLIMIT timer expiring.  At link station
                        startup time, this object must be initialized
                        to zero."
                    ::= { sdlcLSStatsEntry 37 }

sdlcLSStatsRetriesExps OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total occurrences,
                        since startup, where this SDLC link station has
                        inactivated the link as a result of a retry
                        sequence being exhausted.  At link station
                        startup time, this object must be initialized
                        to zero."
                    ::= { sdlcLSStatsEntry 38 }

sdlcLSStatsRetransmitsIn OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
                    DESCRIPTION
                        "This object reflects the total number of
                         information frames retransmitted by the remote
                         link station because the N(s) received from
                         that link station indicated that one or more
                         information frames sent by that station were
                         lost.  This event causes the first missing
                         information frame of a window and all
                         subsequent information frames to be
                         retransmitted.  At link station startup time,
                         this object must be initialized to zero.

                         Management: If the value of
                         sdlcLSStatsRetransmitsIn grows over time, then
                         the quality of the serial line is in
                         question.  You might want to look at
                         decreasing the value for
                         sdlcLSAdminMAXDATASend to compensate for the
                         lower quality line."
                    ::= { sdlcLSStatsEntry 39 }

sdlcLSStatsRetransmitsOut OBJECT-TYPE
                    SYNTAX      Counter32
                    MAX-ACCESS  read-only
                    STATUS      current
```

```
                     DESCRIPTION
                         "This object reflects the total number of
                          information frames retransmitted to a remote
                          link station because the N(r) received from
                          that link station indicated that one or more
                          information frames sent to that station were
                          lost. This event causes the first missing
                          information frame of a window and all
                          subsequent information frames to be
                          retransmitted.  At link station startup time,
                          this object must be initialized to zero.

                          Management: If the value of
                          sdlcLSStatsRetransmitsOut grows over time,
                          then the quality of the serial line is in
                          question.  You might want to look at
                          decreasing the value for sdlcLSAdminMAXDATASend
                          to compensate for the lower quality line."
                     ::= { sdlcLSStatsEntry 40 }

--
--  TRAP DEFINITIONS
--

--
--  Notifications
--

sdlcTraps  OBJECT IDENTIFIER ::= { sdlc 3 }

sdlcPortStatusChange NOTIFICATION-TYPE
                     OBJECTS    { ifIndex,
                                  ifAdminStatus,
                                  ifOperStatus,
                                  sdlcPortOperLastFailTime,
                                  sdlcPortOperLastFailCause
                                }
                     STATUS  current
                     DESCRIPTION
                         "This trap indicates that the state of an SDLC
                         port has transitioned to active or inactive."
                     ::= { sdlcTraps 1 }

sdlcLSStatusChange   NOTIFICATION-TYPE
                     OBJECTS    { ifIndex,
                                  sdlcLSAddress,
                                  sdlcLSOperState,
                                  sdlcLSAdminState,
```

```
                                sdlcLSOperLastFailTime,
                                sdlcLSOperLastFailCause,
                                sdlcLSOperLastFailFRMRInfo,
                                sdlcLSOperLastFailCtrlIn,
                                sdlcLSOperLastFailCtrlOut,
                                sdlcLSOperLastFailREPLYTOs
                              }
                      STATUS  current
                      DESCRIPTION
                          "This trap indicates that the state of an SDLC
                          link station has transitioned to contacted or
                          discontacted."
                      ::= { sdlcTraps 2 }


--
-- Conformance Information
--

sdlcConformance OBJECT IDENTIFIER ::= { sdlc 4 }

sdlcCompliances   OBJECT IDENTIFIER ::= { sdlcConformance 1 }
sdlcGroups        OBJECT IDENTIFIER ::= { sdlcConformance 2 }

--
-- Compliance Statements
--

sdlcCoreCompliance MODULE-COMPLIANCE
                      STATUS current
                      DESCRIPTION
                          "The core compliance statement for all SDLC
                          nodes."
                      MODULE
                          MANDATORY-GROUPS
                          {
                              sdlcCorePortAdminGroup,
                              sdlcCorePortOperGroup,
                              sdlcCorePortStatsGroup,
                              sdlcCoreLSAdminGroup,
                              sdlcCoreLSOperGroup,
                              sdlcCoreLSStatsGroup
                          }

                      OBJECT      sdlcPortAdminName
                      MIN-ACCESS  read-only
                      DESCRIPTION
                          "Write access is not required."
```

```
                    OBJECT      sdlcPortAdminRole
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcPortAdminType
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcPortAdminTopology
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcPortAdminISTATUS
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAddress
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAdminName
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAdminState
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAdminISTATUS
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAdminMAXDATASend
                    MIN-ACCESS  read-only
                    DESCRIPTION
                        "Write access is not required."

                    OBJECT      sdlcLSAdminMAXDATARcv
                    MIN-ACCESS  read-only
                    DESCRIPTION
```

```
                    "Write access is not required."

                OBJECT      sdlcLSAdminMAXIN
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminMAXOUT
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminMODULO
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminRETRIESm
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminRETRIESt
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminRETRIESn
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminRNRLIMIT
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminDATMODE
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminGPoll
                MIN-ACCESS  read-only
                DESCRIPTION
                    "Write access is not required."

                OBJECT      sdlcLSAdminSimRim
```

```
                        MIN-ACCESS  read-only
                        DESCRIPTION
                            "Write access is not required."

                        OBJECT      sdlcLSAdminRowStatus
                        MIN-ACCESS  read-only
                        DESCRIPTION
                            "Write access is not required."

                        ::= { sdlcCompliances 1 }

sdlcPrimaryCompliance  MODULE-COMPLIANCE
                        STATUS current
                        DESCRIPTION
                            "The compliance statement for all nodes that
                            are performing the role of a Primary link
                            station."
                        MODULE
                            MANDATORY-GROUPS { sdlcPrimaryGroup }

                        OBJECT      sdlcPortAdminPAUSE
                        MIN-ACCESS  read-only
                        DESCRIPTION
                            "Write access is not required."

                        OBJECT      sdlcLSAdminREPLYTO
                        MIN-ACCESS  read-only
                        DESCRIPTION
                            "Write access is not required."

                        ::= { sdlcCompliances 2 }

sdlcPrimaryMultipointCompliance  MODULE-COMPLIANCE
                        STATUS current
                        DESCRIPTION
                            "The compliance statement for all nodes that
                            are performing the role of a primary link
                            station on a multipoint line."
                        MODULE
                            MANDATORY-GROUPS { sdlcPrimaryMultipointGroup }

                        OBJECT      sdlcPortAdminSERVLIM
                        MIN-ACCESS  read-only
                        DESCRIPTION
                            "Write access is not required."

                        OBJECT      sdlcPortAdminSlowPollTimer
                        MIN-ACCESS  read-only
```

```
                      DESCRIPTION
                          "Write access is not required."

                      ::= { sdlcCompliances 3 }


--
-- Core Conformance Groups for All Link Stations
--

sdlcCoreGroups OBJECT IDENTIFIER ::= { sdlcGroups 1 }

sdlcCorePortAdminGroup OBJECT-GROUP
                      OBJECTS
                      {
                          sdlcPortAdminName,      sdlcPortAdminRole,
                          sdlcPortAdminType,      sdlcPortAdminTopology,
                          sdlcPortAdminISTATUS
                      }
                      STATUS current
                      DESCRIPTION
                          "The sdlcCorePortAdminGroup defines objects
                          which are common to the PortAdmin group of all
                          compliant link stations."
                      ::= { sdlcCoreGroups 1 }

sdlcCorePortOperGroup OBJECT-GROUP
                      OBJECTS
                      {
                          sdlcPortOperName,
                          sdlcPortOperRole,
                          sdlcPortOperType,
                          sdlcPortOperTopology,
                          sdlcPortOperISTATUS,
                          sdlcPortOperACTIVTO,
                          sdlcPortOperLastFailTime,
                          sdlcPortOperLastFailCause
                      }
                      STATUS current
                      DESCRIPTION
                          "The sdlcCorePortOperGroup defines objects
                          which are common to the PortOper group of all
                          compliant link stations."
                      ::= { sdlcCoreGroups 2 }


sdlcCorePortStatsGroup OBJECT-GROUP
                      OBJECTS
```

```
                        {
                            sdlcPortStatsPhysicalFailures,
                            sdlcPortStatsInvalidAddresses,
                            sdlcPortStatsDwarfFrames
                        }
                        STATUS current
                        DESCRIPTION
                            "The sdlcCorePortStatsGroup defines objects
                            which are common to the PortStats group of all
                            compliant link stations."
                        ::= { sdlcCoreGroups 3 }


sdlcCoreLSAdminGroup OBJECT-GROUP
                        OBJECTS
                        {
                            sdlcLSAddress,
                            sdlcLSAdminName,
                            sdlcLSAdminState,
                            sdlcLSAdminISTATUS,
                            sdlcLSAdminMAXDATASend,
                            sdlcLSAdminMAXDATARcv,
                            sdlcLSAdminMAXIN,
                            sdlcLSAdminMAXOUT,
                            sdlcLSAdminMODULO,
                            sdlcLSAdminRETRIESm,
                            sdlcLSAdminRETRIESt,
                            sdlcLSAdminRETRIESn,
                            sdlcLSAdminRNRLIMIT,
                            sdlcLSAdminDATMODE,
                            sdlcLSAdminGPoll,
                            sdlcLSAdminSimRim,
                            sdlcLSAdminRowStatus
                        }
                        STATUS current
                        DESCRIPTION
                            "The sdlcCorePortAdminGroup defines objects
                            which are common to the PortAdmin group of all
                            compliant link stations."
                        ::= { sdlcCoreGroups 4 }

sdlcCoreLSOperGroup  OBJECT-GROUP
                        OBJECTS
                        {
                            sdlcLSOperRole,
                            sdlcLSOperState,
                            sdlcLSOperMAXDATASend,
                            sdlcLSOperMAXIN,
```

```
                            sdlcLSOperMAXOUT,
                            sdlcLSOperMODULO,
                            sdlcLSOperRETRIESm,
                            sdlcLSOperRETRIESt,
                            sdlcLSOperRETRIESn,
                            sdlcLSOperRNRLIMIT,
                            sdlcLSOperDATMODE,
                            sdlcLSOperLastFailTime,
                            sdlcLSOperLastFailCause,
                            sdlcLSOperLastFailCtrlIn,
                            sdlcLSOperLastFailCtrlOut,
                            sdlcLSOperLastFailFRMRInfo,
                            sdlcLSOperLastFailREPLYTOs,
                            sdlcLSOperEcho,
                            sdlcLSOperGPoll
                        }
                        STATUS current
                        DESCRIPTION
                            "The sdlcCorePortOperGroup defines objects
                            which are common to the PortOper group of all
                            compliant link stations."
                        ::= { sdlcCoreGroups 5 }


sdlcCoreLSStatsGroup OBJECT-GROUP
                        OBJECTS
                        {
                            sdlcLSStatsBLUsIn,
                            sdlcLSStatsBLUsOut,
                            sdlcLSStatsOctetsIn,
                            sdlcLSStatsOctetsOut,
                            sdlcLSStatsPollsIn,
                            sdlcLSStatsPollsOut,
                            sdlcLSStatsPollRspsIn,
                            sdlcLSStatsPollRspsOut,
                            sdlcLSStatsLocalBusies,
                            sdlcLSStatsRemoteBusies,
                            sdlcLSStatsIFramesIn,
                            sdlcLSStatsIFramesOut,
                            sdlcLSStatsRetransmitsIn,
                            sdlcLSStatsRetransmitsOut,
                            sdlcLSStatsUIFramesIn,
                            sdlcLSStatsUIFramesOut,
                            sdlcLSStatsXIDsIn,
                            sdlcLSStatsXIDsOut,
                            sdlcLSStatsTESTsIn,
                            sdlcLSStatsTESTsOut,
                            sdlcLSStatsREJsIn,
```

```
                        sdlcLSStatsREJsOut,
                        sdlcLSStatsFRMRsIn,
                        sdlcLSStatsFRMRsOut,
                        sdlcLSStatsSIMsIn,
                        sdlcLSStatsSIMsOut,
                        sdlcLSStatsRIMsIn,
                        sdlcLSStatsRIMsOut,
                        sdlcLSStatsProtocolErrs,
                        sdlcLSStatsRNRLIMITs,
                        sdlcLSStatsRetriesExps
                    }
                    STATUS current
                    DESCRIPTION
                        "The sdlcCorePortStatsGroup defines objects
                        which are common to the PortStats group of all
                        compliant link stations."
                    ::= { sdlcCoreGroups 6 }


--
-- Conformance Groups for Primary Link Stations
--

sdlcPrimaryGroups OBJECT IDENTIFIER ::= { sdlcGroups 2 }

sdlcPrimaryGroup OBJECT-GROUP
                    OBJECTS
                    {
                        sdlcPortAdminPAUSE,
                        sdlcPortOperPAUSE,
                        sdlcLSAdminREPLYTO,
                        sdlcLSOperREPLYTO
                    }
                    STATUS current
                    DESCRIPTION
                        "The sdlcPrimaryGroup defines objects which
                        are common to all compliant primary link
                        stations."
                    ::= { sdlcPrimaryGroups 1 }

sdlcPrimaryMultipointGroup OBJECT-GROUP
                    OBJECTS
                    {
                        sdlcPortAdminSERVLIM,
                        sdlcPortAdminSlowPollTimer,
                        sdlcPortOperSlowPollMethod,
                        sdlcPortOperSERVLIM,
                        sdlcPortOperSlowPollTimer
```

```
                    }
                    STATUS current
                    DESCRIPTION
                        "The sdlcPrimaryMultipointGroup defines objects
                        which are common to all compliant primary link
                        stations that are in a multipoint topology."
                    ::= { sdlcPrimaryGroups 2 }


END
```

4. Acknowledgments

Thanks goes to the SNADLC MIB working group for reviewing this MIB and for their infinite patience through the editing process.

5. References

[1] Stewart, B., "Definitions of Managed Objects for RS-232-like Hardware Devices using SMIv2", RFC 1659, Xyplex, July 1994.

[2] "Synchronous Data Link Control: Concepts", IBM Publication No. GA27-3093-04, 5th edition, May 1992.

[3] "Vocabulary for Data Processing Telecommunications, and Office Systems", IBM Publication No. GC20-1699-6.

[4] Kostick, D., Kielczewski, Z., and K. Shih, Editors, "Definitions of Managed Objects for SNA NAUs using SMIv2", RFC 1666, Eicon Technology Corporation, Bell Communications Research, Novell, August 1994.

[5] Waldbusser, S., "Row Creation with SNMPv1", Work in Progress.

[6] McCloghrie K., and F. Kastenholz, "Evolution of the Interfaces Group of MIB-II", RFC 1573, Hughes LAN Syst, FTP Software, January 1994.

6. Glossary

link station
: A link station comprises procedures and control information that coordinate the transfer of data between two nodes joined by a link connection. All traffic over the link connection is from the primary link station to one or more secondary link stations, or from a secondary link station to the primary link station.

primary link station
: The link station instance on a link connection that is responsible for the control of the data link. There must be only one primary link station on a link connection. The primary link station issues commands to one or more secondary link stations.

secondary link station
: The link station instance on a link connection that receives commands from the primary link station and issues responses to it.

switched line
: A telecommunications line in which the connection is established by dialing. For switched lines, the SDLC startup sequence typically begins with a null exchange identifier (null XID).

leased line
: A telecommunications line on which connections do not have to be established by dialing. For leased lines, the SDLC startup sequence may or may not begin with an exchange identifer (XID). While there are interface (e.g., RS.232) differences between leased and switched lines, those interface differences do not map one-to-one with differences in the SDLC startup protocol (i.e., the interface and the SDLC protocol are independent from one another).

point-to-point link
: A link that connects the single primary link station to single secondary link station. A point-to-point link may be either switched or leased.

multipoint link
: A link that connects the single primary link station to several secondary link stations. A multipoint link may be either switched or leased. Note: The physical interface signals for a multipoint link are different than for a point-to-point link.

Synonymous with multidrop line.

7. Security Considerations

Security issues are not discussed in this memo.

8. Authors' Addresses

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