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**Management Information Base of Intermediate System to Intermediate
System Multiple Instance
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Abstract

This draft defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. Specifically, this draft describes a MIB for the IS-IS Routing protocol that allows a single router to share one or more links among multiple IS-IS routing protocol instances

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1. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to [section 7 of RFC 3410](#) [[RFC3410](#)].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC 2578](#) [[RFC2578](#)], STD 58, [RFC 2579](#) [[RFC2579](#)] and STD 58, [RFC 2580](#) [[RFC2580](#)].

2. Overview

This document describes a management information base for the Intermediate System to Intermediate System (IS-IS) Routing protocol which supports Multi-Instance based on ISO 10589 [[ISO10589](#)] and [RFC 1195](#) [[RFC1195](#)]. There is an identification information used to identify different routing instances carried in the data object of the routing instance in the MIB. The multiple instance information can be got according to the instance identification.

This MIB imports definitions from SNMPv2-TC [[RFC2579](#)], SNMPv2-SMI [[RFC2578](#)], SNMPv2-CONF [[RFC2580](#)], SNMP-FRAMEWORK-MIB [[RFC3411](#)], DIFFSERV-MIB [[RFC3289](#)], IF-MIB [[RFC2863](#)], and INET-ADDRESS-MIB [[RFC4001](#)]. See the imports section of the MIB for the specific items imported.

This MIB defines some objects to manage Mesh Groups, described in [[RFC2973](#)], and a three-way handshake for point-to-point adjacencies, described in [[RFC3373](#)].

The IS-IS MIB defines the following objects:

System-Wide Attributes

- isisSystem

This table contains information specific to a single instance of the IS-IS protocol running on a router.

- isisManAreaAddr

This table includes area addresses that are manually

configured, which are used to control the associations formed between Level 1 Intermediate Systems.

- isisAreaAddr

This table includes area addresses reported in relevant L1 LSPs.

- isisSummAddr

This table holds summary addresses configured for each Level 2 instance of the IS-IS protocol running on a router.

- isisRedistributeAddr

This table provides criteria to decide whether a route should be leaked from L2 to L1 when Domain Wide Prefix leaking is enabled.

- isisRouter

This table holds the hostname and router ID for Intermediate Systems in the network.

- isisSysLevel

This table contains information specific to a domain (Level 2) or an area (Level 1) of the IS-IS protocol.

- isisNextCircIndex

This scalar is used to provide a unique circuit index.

Circuit-specific Attributes

- isisCirc

This table contains information specific to a point-to-point or a broadcast interface in the system.

- isisCircLevel

This table contains information specific to Level 1 or Level 2 of an interface.

Counters

- isisSystemCounter

Counters in the System table, such as number of times we have wrapped a sequence counter on one of our Link State PDUs.

- isisCircuitCounter

Counters of events particular to a circuit, such as PDUs with an illegal value of the System ID field length.

- isisPacketCounter

Counts of IS-IS Protocol PDUs broken down into packet type.

Attributes associated with an Adjacency

- isisISAdj

This table contains information about adjacencies to routers maintained by the protocol. Entries in this table cannot be created by management action: they are established through the Hello protocol.

- isisISAdjAreaAddr

This table contains the set of Area Addresses of neighboring Intermediate Systems, as reported in IIH PDUs.

- isisISAdjIPAddr

This table contains the set of IP Addresses of neighboring Intermediate Systems, as reported in received IIH PDUs.

- isisISAdjProtSupp

This table contains the set of protocols supported by neighboring Intermediate Systems, as reported in received IIH PDUs.

Attributes Associated with Addresses

- isisRA

The Reachable Address Table.

This table contains information about an address prefix manually configured on the system or learned through another protocol.

- isisIPRA

The IP Reachable Address Table.

This table contains information about an IP reachable address manually configured on this system or learned from another protocol.

Attributes Associated with Link State PDU Table

- isisLSPSummaryTable

The Link State PDU Summary Table.

This table contains information contained in the headers of Link State PDUs stored by the system.

- isisLSPTLVTable

The Link State PDU TLV Table.

This table holds the sequence of TLVs that make up an LSP fragment.

Attributes Associated with a Notification

- isisNotification

This table defines attributes that will be included when reporting IS-IS notifications.

3. Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL", when they appear in this document, are to be interpreted as described in [BCP 14](#), [RFC 2119](#) [[RFC2119](#)].

4. Definition of IS-IS Multi-Instance MIB

```
ISIS-MIB DEFINITIONS ::= BEGIN
  IMPORTS
    TEXTUAL-CONVENTION, RowStatus, TruthValue, TimeStamp
      FROM SNMPv2-TC
      -- RFC2579
    MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,
      Unsigned32, Counter32, mib-2
```



```
        FROM SNMPv2-SMI                -- RFC2578
MODULE-COMPLIANCE, OBJECT-GROUP, NOTIFICATION-GROUP
        FROM SNMPv2-CONF                -- RFC2580
SnmpAdminString
        FROM SNMP-FRAMEWORK-MIB         -- RFC2571
IndexInteger, IndexIntegerNextFree
        FROM DIFFSERV-MIB               -- RFC3289
InterfaceIndex
        FROM IF-MIB                     -- RFC2863
InetAddressType, InetAddress, InetAddressPrefixLength
        FROM INET-ADDRESS-MIB;          -- RFC3291
```

isisMIB MODULE-IDENTITY

```
LAST-UPDATED "201010060000Z" "C October 6, 2010, afternoon
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```

DESCRIPTION

"This draft defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. Specifically, this draft describes a MIB for the IS-IS Routing protocol that allows a single router to share one or more links among multiple IS-IS routing protocol instances.

This memo is based on an IETF [RFC4444](#) by Jeff Parker. This version has been modified to support IS-IS Multi-Instance."

```
::= { mib-2 138 }
```

```
-- Top-level structure of the MIB
```

```
isisNotifications      OBJECT IDENTIFIER ::= { isisMIB 0 }
isisObjects             OBJECT IDENTIFIER ::= { isisMIB 1 }
isisConformance         OBJECT IDENTIFIER ::= { isisMIB 2 }
```

```
-- OBJECT IDENTIFIER definitions
```

```
-- System wide attributes.
```

```
isisSystem OBJECT IDENTIFIER ::= { isisObjects 1 }
```

```
-- Attributes associated with the domain or with the area.
```

```
isisSysLevel OBJECT IDENTIFIER ::= { isisObjects 2 }
```



```
-- Attributes associated with one Circuit
isisCirc OBJECT IDENTIFIER ::= { isisObjects 3 }

-- Attributes associated with area or domain relevant within a Circuit.
isisCircLevelValues OBJECT IDENTIFIER ::= { isisObjects 4 }

-- System and circuit counters.
isisCounters OBJECT IDENTIFIER ::= { isisObjects 5 }

-- Attributes associated with an adjacent Protocol Peer.
isisISAdj OBJECT IDENTIFIER ::= { isisObjects 6 }

-- Attributes associated with a configured address.
isisReachAddr OBJECT IDENTIFIER ::= { isisObjects 7 }

-- Attributes associated with IP routes learned by
-- configuration or through another protocol.
isisIPReachAddr OBJECT IDENTIFIER ::= { isisObjects 8 }

-- The collection of Link State PDUs known to the Intermediate System
isisLSPDataBase OBJECT IDENTIFIER ::= { isisObjects 9 }

-- Objects included in Notifications.
isisNotification OBJECT IDENTIFIER ::= { isisObjects 10 }

-- Type definitions

IsisOSINSAddress ::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION
        "OSI Network Service Address, e.g., NSAP, SNPA, or Network
        Entity Title"
    SYNTAX OCTET STRING (SIZE(0..20))

IsisSystemID ::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION
        "The ID for an Intermediate System. This should
        be unique within a network, and is included
        in all PDUs originated by an Intermediate System.
        The protocol does not place any meanings upon
        the bits, other than using ordering to break
        ties in electing a Designated IS on a LAN."
    REFERENCE "{ISIS.aoi systemId (119)}"
    SYNTAX OCTET STRING (SIZE(6))

IsisLinkStatePDUID ::= TEXTUAL-CONVENTION
```


STATUS current

DESCRIPTION

"The 8-byte Link State PDU (LSP) ID, consisting of the 6-byte SystemID of the originating IS; a one-byte PseudoNode ID, which is 0 unless the LSP represents the topology of a LAN; and a one-byte LSP fragment number that is issued in sequence, starting with 0. Non-zero PseudoNode IDs need to be unique to the IS but need not match the IfIndex."

REFERENCE "{See [section 9.8](#) of ISO 10589}"

SYNTAX OCTET STRING (SIZE(8))

IsisAdminState ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Type used in enabling and disabling a row."

SYNTAX INTEGER

```
{
    on(1),
    off(2)
}
```

IsisLSPBuffSize ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"Integer sub-range for maximum LSP size."

SYNTAX Unsigned32 (512..16000)

IsisLevelState ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"States of the IS-IS protocol."

SYNTAX INTEGER

```
{
    off (1),
    on (2),
    waiting (3),
    overloaded(4)
}
```

IsisSupportedProtocol ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Types of network protocol supported by Integrated IS-IS.
The values for IS08473 and IP are those registered for


```
        these protocols in ISO TR9577."
REFERENCE "{See section 5.3.1 of RFC 1195}"
SYNTAX INTEGER
{
    iso8473(129),
    ipv6(142),
    ip(204)
}

IsisDefaultMetric ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "Integer sub-range for default metric for single hop.
        ISO 10589 provides for 4 types of metric. Only the
        'default' metric is used in practice."
    REFERENCE "{See section 7.2.2 of ISO 10589}"
    SYNTAX Unsigned32 (0..63)

IsisWideMetric ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "Wide metric for IS Neighbors. ISO 10589 provides a
        6-bit metric. Traffic Engineering extensions provide
        24-bit metrics."
    REFERENCE "{See section 3 of RFC 3784}"
    SYNTAX Unsigned32 (0..16777215)

IsisFullMetric ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "Full metric for IP Routes. Traffic Engineering extensions
        provide 32-bit metrics."
    REFERENCE "{See section 4 of RFC 3784}"
    SYNTAX Unsigned32

IsisMetricType ::= TEXTUAL-CONVENTION
    STATUS current
    DESCRIPTION
        "Is this an Internal or External Metric?"
    REFERENCE "{See section 7.2.2 of ISO 10589}"
    SYNTAX INTEGER
    {
        internal(1),
        external(2)
    }
```


IsisMetricStyle ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Do we use [RFC 1195](#) style metrics or wide metrics?"

REFERENCE "{See [section 5 of RFC 3787](#)}"

SYNTAX INTEGER

```
{
    narrow(1),
    wide(2),
    both(3)
}
```

IsisISLevel ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Identifies a level."

REFERENCE "{See definitions 3.6.1 and 3.6.11 of ISO 10589}"

SYNTAX INTEGER

```
{
    area(1),          -- L1
    domain(2)         -- L2
}
```

IsisLevel ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Identifies one or more levels."

REFERENCE "{See definitions 3.6.1 and 3.6.11 of ISO 10589}"

SYNTAX INTEGER

```
{
    level1(1),
    level2(2),
    level1and2(3)
}
```

IsisPDUHeader ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"A block to contain the header from a PDU."

SYNTAX OCTET STRING (SIZE(0..64))

IsisCircuitID ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"ID for a circuit."

REFERENCE "{See [section 7.2.7](#) of ISO 10589}"

SYNTAX OCTET STRING (SIZE(0|7))


```
IsisISPriority ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "Integer sub-range for IS-IS priority."
    REFERENCE "{See section 9.5 of ISO 10589}"
    SYNTAX Unsigned32 (0..127)
```

```
IsisUnsigned16TC ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "An Unsigned32 further restricted to 16 bits. Note that
        the ASN.1 BER encoding may still require 24 bits for
        some values."
    SYNTAX Unsigned32 (0..65535)
```

```
IsisUnsigned8TC ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "An Unsigned32 further restricted to 8 bits. Note that
        the ASN.1 BER encoding may still require 16 bits for
        some values."
    SYNTAX Unsigned32 (0..255)
```

```
IsisSysInstanceId ::= TEXTUAL-CONVENTION
    DISPLAY-HINT "d"
    STATUS current
    DESCRIPTION
        "Instance id for each certain IS-IS instance."
    SYNTAX Unsigned32 (0..65535)
```

-- Behavior Definitions

-- ResettingTimer behavior definition
--

-- "This behavior applies to objects that specify the interval
-- between events in the operation of the protocol state machine.
-- If the value of such an object is set to a new value while
-- the protocol state machine is in operation, the implementation
-- shall take the necessary steps to ensure that for any time
-- interval that was in progress when the value of the
-- corresponding object was changed, the next expiration of that
-- interval takes place the specified time after the original
-- start of that interval, or immediately, whichever is later.


```
-- The precision with which this time shall be implemented shall
-- be the same as that associated with the basic operation of
-- the timer object."
```

```
-- ReplaceOnlyWhileDisabled behavior definition
-- "This behavior applies to objects that may not be modified
-- while the corresponding table row's variable of type
-- IsisAdminState is in state on."
```

```
-- ManualOrAutomatic behavior definition
-- "This behavior applies to objects that are read-write
-- if the object was created manually. Objects that were
-- created automatically that have this behavior are
-- read-only.
```

```
isisSysObject OBJECT IDENTIFIER ::= { isisSystem 1 }
```

```
isisSysVersion OBJECT-TYPE
```

```
SYNTAX INTEGER
```

```
{
    unknown(0),
    one(1)
}
```

```
MAX-ACCESS read-only
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The version number of the IS-IS protocol that
is implemented."
```

```
REFERENCE "{ISIS.aoi version (1)}"
```

```
DEFVAL { one }
```

```
::= { isisSysObject 1 }
```

```
isisSysLevelType OBJECT-TYPE
```

```
SYNTAX IsisLevel
```

```
MAX-ACCESS read-write
```

```
STATUS current
```

```
DESCRIPTION
```

```
"At which levels is the Intermediate System
running? This object may not be modified when
the isisSysAdminState variable is in state 'on'
for this Intermediate System.
```

```
Configured values MUST survive an agent reboot."
```

```
REFERENCE "{ISIS.aoi iSType (2)}"
```

```
DEFVAL { level1and2 }
```

```
::= { isisSysObject 2 }
```

```
isisSysID OBJECT-TYPE
```



```
SYNTAX IsisSystemID
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "The ID for this Intermediate System.
    This value is appended to each of the
    area addresses to form the Network Entity Titles.
    The derivation of a value for this object is
    implementation specific. Some implementations may
    automatically assign values and not permit an
    SNMP write, while others may require the value
    to be set manually.

    Configured values MUST survive an agent reboot."
REFERENCE "{ISIS.aoi systemId (119)}"
 ::= { isisSysObject 3 }

isisSysMaxPathSplits OBJECT-TYPE
    SYNTAX Unsigned32 (1..32)
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "Maximum number of paths with equal routing metric value
        which it is permitted to split between. This object
        may not be modified when the isisSysAdminState variable
        is in state 'on' for this Intermediate System.

        Configured values MUST survive an agent reboot."
REFERENCE "{ISIS.aoi maximumPathSplits (3)}"
    DEFVAL { 2 }
 ::= { isisSysObject 4 }

isisSysMaxLSPGenInt OBJECT-TYPE
    SYNTAX Unsigned32 (1..65235)
    UNITS "seconds"
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "Maximum interval, in seconds, between generated LSPs
        by this Intermediate System. This object follows
        the ResettingTimer behavior. The value must be
        greater than any value configured for
        isisSysLevelMinLSPGenInt, and should be at least 300
        seconds less than isisSysMaxAge.

        Configured values MUST survive an agent reboot."
REFERENCE "{ISIS.aoi maximumLSPGenerationInterval (6)}"
    DEFVAL { 900 }
```



```
::= { isisSysObject 5 }
```

```
isisSysPolleSHelloRate OBJECT-TYPE
```

```
    SYNTAX IsisUnsigned16TC (1..65535)
```

```
    UNITS "seconds"
```

```
    MAX-ACCESS read-write
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The value, in seconds, to be used for the suggested ES  
        configuration timer in ISH PDUs when soliciting the ES  
        configuration."
```

```
        Configured values MUST survive an agent reboot."
```

```
    REFERENCE "{ISIS.aoi polleSHelloRate (13)}"
```

```
    DEFVAL { 50 }
```

```
::= { isisSysObject 6 }
```

```
isisSysWaitTime OBJECT-TYPE
```

```
    SYNTAX IsisUnsigned16TC (1..65535)
```

```
    UNITS "seconds"
```

```
    MAX-ACCESS read-write
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "Number of seconds to delay in state 'waiting' before  
        entering the state 'on'. This object follows the  
        ResettingTimer behavior."
```

```
        Configured values MUST survive an agent reboot."
```

```
    REFERENCE "{ISIS.aoi waitingTime (15)}"
```

```
    DEFVAL { 60 }
```

```
::= { isisSysObject 7 }
```

```
isisSysAdminState OBJECT-TYPE
```

```
    SYNTAX IsisAdminState
```

```
    MAX-ACCESS read-write
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The administrative state of this Intermediate  
        System. Setting this object to the value 'on'  
        when its current value is 'off' enables  
        the Intermediate System."
```

```
        Configured values MUST survive an agent reboot."
```

```
    DEFVAL { off }
```

```
::= { isisSysObject 8 }
```

```
isisSysL2toL1Leaking OBJECT-TYPE
```

```
    SYNTAX TruthValue
```



```
MAX-ACCESS read-write
STATUS current
DESCRIPTION
    "If true, allow the router to leak L2 routes into L1.
    Configured values MUST survive an agent reboot."
DEFVAL { false }
 ::= { isisSysObject 9 }
```

```
isisSysMaxAge OBJECT-TYPE
    SYNTAX IsisUnsigned16TC (350..65535)
    UNITS "seconds"
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "Value to place in RemainingLifeTime field of
        the LSPs we generate.
        This should be at least 300 seconds greater than
        isisSysMaxLSPGenInt.

        Configured values MUST survive an agent reboot."
    DEFVAL { 1200 }
 ::= { isisSysObject 10 }
```

```
isisSysReceiveLSPBufferSize OBJECT-TYPE
    SYNTAX IsisUnsigned16TC (1492..16000)
    UNITS "bytes"
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "Size of the largest buffer we are designed or
        configured to store. This should be at least
        as big as the maximum isisSysLevelOrigLSPBuffSize
        supported by the system.
        If resources allow, we will store and flood LSPs
        larger than isisSysReceiveLSPBufferSize, as this
        can help avoid problems in networks with different
        values for isisSysLevelOrigLSPBuffSize.

        Configured values MUST survive an agent reboot."
    DEFVAL { 1492 }
 ::= { isisSysObject 11 }
```

```
isisSysProtSupported OBJECT-TYPE
    SYNTAX BITS {
        iso8473 (0),
        ipv4 (1),
        ipv6 (2)
    }
```



```
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "This attribute contains the set of protocols
    supported by this Intermediate System."
::= { isisSysObject 12 }
```

```
isisSysNotificationEnable OBJECT-TYPE
    SYNTAX TruthValue
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "If this object is set to true(1), then it enables
        the emission of IS-IS Notifications. If it is
        set to false(2), these notifications are not sent.

        Configured values MUST survive an agent reboot."
    DEFVAL { true }
::= { isisSysObject 13 }
```

```
isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
::= { isisSysObject 14 }
```

-- The Level 1 Manual Area Address Table

```
isisManAreaAddrTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisManAreaAddrEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The set of manual area addresses configured on this
        Intermediate System.

        At least one row in which the value of
        isisManAreaAddrExistState is active must be present.
        The maximum number of rows in this table for
        which the object isisManAreaAddrExistState has the
        value active is 3.
```


An attempt to create more than 3 rows of
isisManAreaAddrEntry with state 'active' in one
instance of the IS-IS protocol should
return inconsistentValue."

REFERENCE "{ISIS.aoi manualAreaAddresses (10)}"
::= { isisSystem 2 }

isisManAreaAddrEntry OBJECT-TYPE

SYNTAX IsisManAreaAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one area address manually configured
on this system.

Dynamically created rows MUST survive an agent reboot."

INDEX { isisSysInstance,
isisManAreaAddr }

::= { isisManAreaAddrTable 1 }

IsisManAreaAddrEntry ::=

SEQUENCE {

isisManAreaAddr

IsisOSINSAddress,

isisManAreaAddrExistState

RowStatus,

isisSysInstance

IsisSysInstanceId

}

isisManAreaAddr OBJECT-TYPE

SYNTAX IsisOSINSAddress

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A manually configured area address for this system.

Note: An index for the entry {1, {49.0001} active} in
this table would be the ordered pair

(1, (0x03 0x49 0x00 0x01)), as the length of an octet
string is part of the OID."

::= { isisManAreaAddrEntry 1 }

isisManAreaAddrExistState OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The state of the isisManAreaAddrEntry. If the isisSysAdminState for this Intermediate System is 'on' and an attempt is made to set this object to the value 'destroy' or 'notInService' when this is the only isisManAreaAddrEntry in state 'active' for this Intermediate System should return inconsistentValue.

A row entry cannot be modified when the value of this object is 'active'."

::= { isisManAreaAddrEntry 2 }

isisSysInstance OBJECT-TYPE

SYNTAX IsisSysInstanceId

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unique identifier of the Integrated IS-IS instance to which this row corresponds. This object follows the index behavior. The identifier is carried in the data object of the routing instance in the MIB."

::= { isisManAreaAddrEntry 3 }

-- The Level 1 Area Address Table

-- The Level 1 Area Address Table contains the
-- union of the sets of relevant area addresses configured
-- or learned from Level 1 LSPs received by this Intermediate System.

isisAreaAddrTable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisAreaAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The union of the sets of area addresses reported in all Level 1 LSPs with fragment number zero generated by this Intermediate System, or received from other Intermediate Systems that are reachable via Level 1 routing."

REFERENCE "{ISIS.aoi areaAddresses (18)}"

::= { isisSystem 3 }

isisAreaAddrEntry OBJECT-TYPE

SYNTAX IsisAreaAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one area address reported in a Level 1 LSP generated or received by this Intermediate

System.

Dynamically learned rows do not survive an agent reboot."

```
INDEX { isisSysInstance,
        isisAreaAddr }
 ::= { isisAreaAddrTable 1 }
```

```
IsisAreaAddrEntry ::=
  SEQUENCE {
    isisAreaAddr
      IsisOSINSAddress,
    isisSysInstance
      IsisSysInstanceId
  }
```

```
isisAreaAddr OBJECT-TYPE
  SYNTAX IsisOSINSAddress
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "An area address reported in a Level 1 LSP."
  ::= { isisAreaAddrEntry 1 }
```

```
isisSysInstance OBJECT-TYPE
  SYNTAX IsisSysInstanceId
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION
    "The unique identifier of the Integrated IS-IS
     instance to which this row corresponds.
     This object follows the index behavior. The
     identifier is carried in the data object of the
     routing instance in the MIB."
  ::= { isisAreaAddrEntry 2 }
```

-- The Summary Address Table

-- The Summary Address Table contains the set of summary
-- addresses manually configured for the Intermediate System.

--

-- This is used to control leaking L1 routes into L2.

```
isisSummAddrTable OBJECT-TYPE
  SYNTAX SEQUENCE OF IsisSummAddrEntry
  MAX-ACCESS not-accessible
  STATUS current
  DESCRIPTION
    "The set of IP summary addresses to use in forming
```


summary TLVs originated by this Intermediate System.

An administrator may use a summary address to combine and modify IP Reachability announcements. If the Intermediate system can reach any subset of the summary address, the summary address MUST be announced instead, at the configured metric."

::= { isisSystem 4 }

isisSummAddrEntry OBJECT-TYPE

SYNTAX IsisSummAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one IP summary address.

Dynamically created rows MUST survive an agent reboot.

Implementers need to be aware that if the total number of elements (octets or sub-identifiers) in isisSummAddress and isisSummAddrPrefixLen is too great, then OIDs of column instances in this table will have more than 128 subidentifiers and cannot be accessed using SNMPv1, SNMPv2c, or SNMPv3."

INDEX { isisSysInstance,
isisSummAddressType,
isisSummAddress,
isisSummAddrPrefixLen }

::= { isisSummAddrTable 1 }

IsisSummAddrEntry ::=

SEQUENCE {
isisSummAddressType
InetAddressType,
isisSummAddress
InetAddress,
isisSummAddrPrefixLen
InetAddressPrefixLength,
isisSummAddrExistState
RowStatus,
isisSummAddrMetric
IsisDefaultMetric,
isisSummAddrFullMetric
IsisFullMetric,
isisSysInstance
IsisSysInstanceId
}

isisSummAddressType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Type of IP address for this summary address."

::= { isisSummAddrEntry 1 }

isisSummAddress OBJECT-TYPE

SYNTAX InetAddress

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The IP Address value for this summary address.

The address must not contain any set host bits
(bits set after the address prefix determined by
isisSummAddrPrefixLen).

The type of this address is determined by the value of
the isisSummAddressType object."

::= { isisSummAddrEntry 2 }

isisSummAddrPrefixLen OBJECT-TYPE

SYNTAX InetAddressPrefixLength

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Length of the IP NetMask for this summary address.

The values for the index objects isisSummAddress and
isisSummAddrPrefixLen must be consistent. When the value
of isisSummAddress (excluding the zone index, if one
is present) is x, then the bitwise logical-AND
of x with the value of the mask formed from the
corresponding index object isisSummAddrPrefixLen MUST be
equal to x. If not, then the index pair is not
consistent, and an inconsistentName error must be
returned on SET or CREATE requests."

::= { isisSummAddrEntry 3 }

isisSummAddrExistState OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The existence state of this summary address. Support
for 'createAndWait' and 'notInService' is not required.

A row entry cannot be modified when the value of this object is 'active'."

::= { isisSummAddrEntry 4 }

isisSummAddrMetric OBJECT-TYPE

SYNTAX IsisDefaultMetric

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The metric value to announce this summary address within LSPs generated by this system."

DEFVAL { 20 }

::= { isisSummAddrEntry 5 }

isisSummAddrFullMetric OBJECT-TYPE

SYNTAX IsisFullMetric

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The wide metric value to announce this summary address within LSPs generated by this system."

DEFVAL { 20 }

::= { isisSummAddrEntry 6 }

isisSysInstance OBJECT-TYPE

SYNTAX IsisSysInstanceId

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unique identifier of the Integrated IS-IS instance to which this row corresponds.

This object follows the index behavior. The identifier is carried in the data object of the routing instance in the MIB."

::= { isisSummAddrEntry 7 }

-- The Redistribution table defines addresses that should be

-- leaked from L2 to L1 if isisSysL2toL1Leaking is enabled.

isisRedistributeAddrTable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisRedistributeAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table provides criteria to decide if a route should be leaked from L2 to L1 when Domain Wide Prefix leaking is enabled.

Addresses that match the summary mask in the table MUST be announced at L1 by routers when isisSysL2toL1Leaking is enabled. Routes that fall into the ranges specified are announced as is, without being summarized. Routes that do not match a summary mask are not announced."

::= { isisSystem 5 }

isisRedistributeAddrEntry OBJECT-TYPE

SYNTAX IsisRedistributeAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one configured IP summary address to manage leaking L2 addresses into L1.

Dynamically created rows MUST survive an agent reboot.

Implementers need to be aware that if the total number of elements (octets or sub-identifiers) in isisRedistributeAddrAddress and isisRedistributeAddrPrefixLen is too great, then OIDs of column instances in this table will have more than 128 subidentifiers and cannot be accessed using SNMPv1, SNMPv2c, or SNMPv3."

INDEX { isisSysInstance,
isisRedistributeAddrType,
isisRedistributeAddrAddress,
isisRedistributeAddrPrefixLen }

::= { isisRedistributeAddrTable 1 }

IsisRedistributeAddrEntry ::=

SEQUENCE {
isisRedistributeAddrType
InetAddressType,
isisRedistributeAddrAddress
InetAddress,
isisRedistributeAddrPrefixLen
InetAddressPrefixLength,
isisRedistributeAddrExistState
RowStatus,
isisSysInstance
IsisSysInstanceId
}

isisRedistributeAddrType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Type of IP address for this summary address."
 ::= { isisRedistributeAddrEntry 1 }

isisRedistributeAddrAddress OBJECT-TYPE

SYNTAX InetAddress

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The IP Address value for this summary address.
The type of this address is determined by the
value of the isisRedistributeAddrType object.
The address must not contain any set host bits -
bits set after the address prefix determined by
isisRedistributeAddrPrefixLen."

::= { isisRedistributeAddrEntry 2 }

isisRedistributeAddrPrefixLen OBJECT-TYPE

SYNTAX InetAddressPrefixLength

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The Length of the IP NetMask for this summary address.

The values for the index objects
isisRedistributeAddrAddress and
isisRedistributeAddrPrefixLen must be consistent.
When the value of isisRedistributeAddrAddress
(excluding the zone index, if one is present) is x,
then the bitwise logical-AND of x with the value of
the mask formed from the corresponding index object
isisRedistributeAddrPrefixLen MUST be equal to x.
If not, then the index pair is not consistent, and an
inconsistentName error must be returned on SET or
CREATE requests."

::= { isisRedistributeAddrEntry 3 }

isisRedistributeAddrExistState OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The existence state of this summary address. Support
for createAndWait and notInService is not required.
A row entry cannot be modified when the value of this
object is 'active'."


```
::= { isisRedistributeAddrEntry 4 }
```

```
isisSysInstance OBJECT-TYPE
```

```
    SYNTAX IsisSysInstanceId
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The unique identifier of the Integrated IS-IS  
        instance to which this row corresponds.
```

```
        This object follows the index behavior. The  
        identifier is carried in the data object of the  
        routing instance in the MIB."
```

```
::= { isisRedistributeAddrEntry 5 }
```

```
-- The Router Table keeps track of hostnames and router IDs
```

```
-- associated with Intermediate Systems in the area and domain.
```

```
isisRouterTable OBJECT-TYPE
```

```
    SYNTAX SEQUENCE OF IsisRouterEntry
```

```
    MAX-ACCESS not-accessible
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The set of hostnames and router ID."
```

```
::= { isisSystem 6 }
```

```
isisRouterEntry OBJECT-TYPE
```

```
    SYNTAX IsisRouterEntry
```

```
    MAX-ACCESS not-accessible
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "Each entry tracks information about one Intermediate  
        System at one level.
```

```
        Dynamically learned rows do not survive an agent reboot."
```

```
    INDEX { isisSysInstance,  
            isisRouterSysID,  
            isisRouterLevel }
```

```
::= { isisRouterTable 1 }
```

```
IsisRouterEntry ::=
```

```
    SEQUENCE {
```

```
        isisRouterSysID
```

```
        IsisSystemID,
```

```
        isisRouterLevel
```

```
        IsisISLevel,
```

```
        isisRouterHostName
```

```
        SnmpAdminString,
```

```
        isisRouterID
```



```
        Unsigned32,
        isisSysInstance
        IsisSysInstanceId
    }

isisRouterSysID OBJECT-TYPE
    SYNTAX IsisSystemID
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The System ID of the Intermediate System."
 ::= { isisRouterEntry 1 }

isisRouterLevel OBJECT-TYPE
    SYNTAX IsisISLevel
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The level at which the information about this
        Intermediate System was received."
 ::= { isisRouterEntry 2 }

isisRouterHostName OBJECT-TYPE
    SYNTAX SnmpAdminString
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The hostname listed in the LSP, or a zero-length
        string if none."
 ::= { isisRouterEntry 3 }

isisRouterID OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The Router ID found in the LSP, or zero if none."
 ::= { isisRouterEntry 4 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
```



```
        routing instance in the MIB."
 ::= { isisRouterEntry 5 }
```

```
-- The System Level Table
```

```
-- This table captures level-specific information about the system
```

```
isisSysLevelTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisSysLevelEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Level specific information about the System."
 ::= { isisSysLevel 1 }
```

```
isisSysLevelEntry OBJECT-TYPE
    SYNTAX IsisSysLevelEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Each row describes variables configured for Area or Domain.
        Configured values MUST survive an agent reboot."
    INDEX { isisSysInstance,
            isisSysLevelIndex }
 ::= { isisSysLevelTable 1 }
```

```
IsisSysLevelEntry ::=
    SEQUENCE {
        isisSysLevelIndex
            IsisISLevel,
        isisSysLevelOrigLSPBuffSize
            IsisLSPBuffSize,
        isisSysLevelMinLSPGenInt
            IsisUnsigned16TC,
        isisSysLevelState
            IsisLevelState,
        isisSysLevelSetOverload
            TruthValue,
        isisSysLevelSetOverloadUntil
            Unsigned32,
        isisSysLevelMetricStyle
            IsisMetricStyle,
        isisSysLevelSPFConsiders
            IsisMetricStyle,
        isisSysLevelTEEnabled
            TruthValue,
        isisSysInstance
            IsisSysInstanceId
    }
```


isisSysLevelIndex OBJECT-TYPE

SYNTAX IsisISLevel

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The level that this entry describes."

::= { isisSysLevelEntry 1 }

isisSysLevelOrigLSPBuffSize OBJECT-TYPE

SYNTAX IsisLSPBuffSize

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The maximum size of LSPs and SNPs originated by this Intermediate System at this level. This object may not be modified when the isisSysAdminState variable is in state 'on' for this Intermediate System."

REFERENCE "{ISIS.aoi originatingL1LSPBufferSize (9)}"

DEFVAL { 1492 }

::= { isisSysLevelEntry 2 }

isisSysLevelMinLSPGenInt OBJECT-TYPE

SYNTAX IsisUnsigned16TC (1..65535)

UNITS "seconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Minimum interval, in seconds, between successive generation of LSPs with the same LSPID at this level by this Intermediate System."

REFERENCE "{ISIS.aoi minimumLSPGenerationInterval (11)}"

DEFVAL { 30 }

::= { isisSysLevelEntry 3 }

isisSysLevelState OBJECT-TYPE

SYNTAX IsisLevelState

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The state of the database at this level.

The value 'off' indicates that IS-IS is not active at this level.

The value 'on' indicates that IS-IS is active at this level and is not overloaded.

The value 'waiting' indicates a database that is low on an essential resource, such as memory.

The administrator may force the state to 'overloaded' by setting the object `isisSysLevelSetOverload`. If the state is 'waiting' or 'overloaded', we originate LSPs with the overload bit set."

REFERENCE "{ISIS.aoi l1State (17)}"

```
::= { isisSysLevelEntry 4 }
```

`isisSysLevelSetOverload` OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Administratively set the overload bit for the level. The overload bit MUST continue to be set if the implementation runs out of memory, independent of this variable. It may also be set manually independent of this variable, using the `isisSysLevelSetOverloadUntil` object."

DEFVAL { false }

```
::= { isisSysLevelEntry 5 }
```

`isisSysLevelSetOverloadUntil` OBJECT-TYPE

SYNTAX Unsigned32

UNITS "Seconds until clearing manually set Overload Bit"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"If this object is non-zero, the overload bit is set at this level when the `isisSysAdminState` variable goes to state 'on' for this Intermediate System. The overload bit remains set for `isisSysLevelSetOverloadUntil` seconds. When `isisSysLevelSetOverloadUntil` seconds have elapsed, the overload flag remains set if the implementation has run out of memory, or if it is set manually using the `isisSysLevelSetOverload` object.

If `isisSysLevelSetOverload` is false, the system clears the overload bit when `isisSysLevelSetOverloadUntil` seconds have elapsed, if the system has not run out of memory."

```
::= { isisSysLevelEntry 6 }
```

`isisSysLevelMetricStyle` OBJECT-TYPE

SYNTAX IsisMetricStyle

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Which style of metric do we generate in our LSPs at this level?"


```
    DEFVAL { narrow }  
 ::= { isisSysLevelEntry 7 }
```

```
isisSysLevelSPFConsiders OBJECT-TYPE  
    SYNTAX IsisMetricStyle  
    MAX-ACCESS read-write  
    STATUS current  
    DESCRIPTION  
        "Which style of metric do we consider in our  
        SPF computation at this level?"  
    DEFVAL { narrow }  
 ::= { isisSysLevelEntry 8 }
```

```
isisSysLevelTEEnabled OBJECT-TYPE  
    SYNTAX TruthValue  
    MAX-ACCESS read-write  
    STATUS current  
    DESCRIPTION  
        "Do we do Traffic Engineering at this level?"  
    DEFVAL { false }  
 ::= { isisSysLevelEntry 9 }
```

```
isisSysInstance OBJECT-TYPE  
    SYNTAX IsisSysInstanceId  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "The unique identifier of the Integrated IS-IS  
        instance to which this row corresponds.  
        This object follows the index behavior. The  
        identifier is carried in the data object of the  
        routing instance in the MIB."  
 ::= { isisSysLevelEntry 10 }
```

```
-- Static to provide next CircIndex
```

```
isisNextCircIndex OBJECT-TYPE  
    SYNTAX IndexIntegerNextFree  
    MAX-ACCESS read-only  
    STATUS current  
    DESCRIPTION  
        "This object is used to assist a management  
        application in creating new rows in the  
        isisCircTable. If it is possible to create  
        a new instance of isisCircEntry, then this  
        object will contain a non-zero value that  
        is not in use as the index of any row in the  
        isisCircTable. The network manager reads the
```


value of this object and then (if the value read is non-zero) attempts to create the corresponding instance of isisCircEntry. If the set request fails with the code 'inconsistentValue', then the process must be repeated; if the set request succeeds, then the agent will change the value of this object according to an implementation-specific algorithm."

INDEX { isisSysInstance }

::= { isisCirc 1 }

-- The Circuit Table
-- Each broadcast or point-to-point interface on the system
-- corresponds to one entry in the Circuit table. However, there
-- may be multiple X.25 DA circuit entries in the Circuit table
-- for a given X.25 interface.

isisCircTable OBJECT-TYPE
SYNTAX SEQUENCE OF IsisCircEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The table of circuits used by this
Intermediate System."

::= { isisCirc 2 }

isisCircEntry OBJECT-TYPE
SYNTAX IsisCircEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An isisCircEntry exists for each circuit configured
for Integrated IS-IS on this system.

Dynamically created rows MUST survive an agent reboot."

INDEX { isisSysInstance,
isisCircIndex }

::= { isisCircTable 1 }

IsisCircEntry ::=

SEQUENCE {
isisCircIndex
IndexInteger,
isisCircIfIndex
InterfaceIndex,
isisCircAdminState


```
        IsisAdminState,
isisCircExistState
        RowStatus,
isisCircType
        INTEGER,
isisCircExtDomain
        TruthValue,
isisCircLevelType
        IsisLevel,
isisCircPassiveCircuit
        TruthValue,
isisCircMeshGroupEnabled
        INTEGER,
isisCircMeshGroup
        Unsigned32,
isisCircSmallHellos
        TruthValue,
isisCircLastUpTime
        TimeStamp,
isisCirc3WayEnabled
        TruthValue,
isisCircExtendedCircID
        Unsigned32,
isisSysInstance
        IsisSysInstanceId
}
```

isisCircIndex OBJECT-TYPE

SYNTAX IndexInteger

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An index used to uniquely identify this circuit. When creating a row in this table, the isisNextCircIndex object should be retrieved, and its value should be specified as the value of this index using a SET operation. A retrieved value of zero(0) indicates that no rows can be created at this time."

::= { isisCircEntry 1 }

isisCircIfIndex OBJECT-TYPE

SYNTAX InterfaceIndex

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The value of ifIndex for the interface to which this circuit corresponds. This object cannot be modified"


```
        after creation."
 ::= { isisCircEntry 2 }

isisCircAdminState OBJECT-TYPE
    SYNTAX IsisAdminState
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The administrative state of the circuit."
    DEFVAL { off }
 ::= { isisCircEntry 3 }

isisCircExistState OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The existence state of this circuit.  Setting the state
        to 'notInService' halts the generation and processing of
        IS-IS protocol PDUs on this circuit.  Setting the state
        to destroy will also erase any configuration associated
        with the circuit.  Support for 'createAndWait' and
        'notInService' is not required.

        A row entry cannot be modified when the value of this
        object is 'active'."
 ::= { isisCircEntry 4 }

isisCircType OBJECT-TYPE
    SYNTAX INTEGER
        {
            broadcast(1),
            ptToPt(2),
            staticIn(3),
            staticOut(4),
            dA(5)
        }
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The type of the circuit.  This object follows the
        ReplaceOnlyWhileDisabled behavior.  The type specified
        must be compatible with the type of the interface defined
        by the value of isisCircIfIndex."
    REFERENCE "{ISIS.aoi type (33)}"
 ::= { isisCircEntry 5 }

isisCircExtDomain OBJECT-TYPE
```



```
SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "If true, suppress normal transmission of and
    interpretation of Intra-domain IS-IS PDUs on this
    circuit."
REFERENCE "{ISIS.aoi externalDomain (46)}"
DEFVAL { false }
 ::= { isisCircEntry 6 }

isisCircLevelType OBJECT-TYPE
    SYNTAX IsisLevel
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Indicates which type of packets will be sent and
        accepted on this circuit. The values set will be
        saved, but the values used will be modified by
        the settings of isisSysLevelType. Thus, if the
        isisSysType is level2 and the isisCircLevelType
        for a circuit is level1, the circuit will not send
        or receive IS-IS packets. This object follows the
        ReplaceOnlyWhileDisabled behavior."
    DEFVAL { level1and2 }
 ::= { isisCircEntry 7 }

isisCircPassiveCircuit OBJECT-TYPE
    SYNTAX TruthValue
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Should we include this interface in LSPs, even if
        it is not running the IS-IS Protocol?"
    DEFVAL { false }
 ::= { isisCircEntry 8 }

isisCircMeshGroupEnabled OBJECT-TYPE
    SYNTAX INTEGER
        {
            inactive(1),
            blocked(2),
            set(3)
        }
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Is this port a member of a mesh group, or is it
```


blocked? Circuits in the same mesh group act as a virtual multiaccess network. LSPs seen on one circuit in a mesh group will not be flooded to another circuit in the same mesh group."

REFERENCE "{ [RFC 2973](#) }"
DEFVAL { inactive }
::= { isisCircEntry 9 }

isisCircMeshGroup OBJECT-TYPE

SYNTAX Unsigned32
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"Circuits in the same mesh group act as a virtual multiaccess network. LSPs seen on one circuit in a mesh group will not be flooded to another circuit in the same mesh group. If isisCircMeshGroupEnabled is inactive or blocked, this value is ignored."

REFERENCE "{ [RFC 2973](#) }"
::= { isisCircEntry 10 }

isisCircSmallHellos OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"Can we send unpadded hellos on LAN circuits? False means the LAN Hellos must be padded. Implementations should allow the administrator to read this value. An implementation need not be able to support unpadded hellos to be conformant."

DEFVAL { false }
::= { isisCircEntry 11 }

isisCircLastUpTime OBJECT-TYPE

SYNTAX TimeStamp
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"How long the circuit has been enabled, measured in hundredths of seconds since the last re-initialization of the network management subsystem; 0 if the circuit has never been 'on'."

::= { isisCircEntry 12 }

isisCirc3WayEnabled OBJECT-TYPE

SYNTAX TruthValue


```
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Is this circuit enabled to run 3Way handshake?"
    DEFVAL { true }
    ::= { isisCircEntry 13 }
```

```
isisCircExtendedCircID OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The value to be used as the extended circuit ID in
        3Way handshake.  This value is only used if
        isisCirc3WayEnabled is true, and it must be unique
        across all circuits on this IS."
    ::= { isisCircEntry 14 }
```

```
isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
    ::= { isisCircEntry 15 }
```

-- The Circuit Level Table

-- This table captures level-specific information about a circuit

```
isisCircLevelTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisCircLevelEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Level specific information about circuits used by IS-IS."
    ::= { isisCircLevelValues 1 }
```

```
isisCircLevelEntry OBJECT-TYPE
    SYNTAX IsisCircLevelEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An isisCircLevelEntry exists for each level on
        each circuit configured for Integrated IS-IS on
```


this system.

Configured values MUST survive an agent reboot."

```
INDEX { isisSysInstance,  
        isisCircIndex,  
        isisCircLevelIndex }  
 ::= { isisCircLevelTable 1 }
```

IsisCircLevelEntry ::=

```
SEQUENCE {  
    isisCircLevelIndex  
        IsisISLevel,  
    isisCircLevelMetric  
        IsisDefaultMetric,  
    isisCircLevelWideMetric  
        IsisWideMetric,  
    isisCircLevelISPriority  
        IsisISPriority,  
    isisCircLevelIDOctet  
        Unsigned32,  
    isisCircLevelID  
        IsisCircuitID,  
    isisCircLevelDesIS  
        IsisCircuitID,  
    isisCircLevelHelloMultiplier  
        Unsigned32,  
    isisCircLevelHelloTimer  
        Unsigned32,  
    isisCircLevelDRHelloTimer  
        Unsigned32,  
    isisCircLevelLSPThrottle  
        IsisUnsigned16TC,  
    isisCircLevelMinLSPRetransInt  
        Unsigned32,  
    isisCircLevelCSNPInterval  
        Unsigned32,  
    isisCircLevelPartSNPInterval  
        Unsigned32,  
    isisSysInstance  
        IsisSysInstanceId  
}
```

isisCircLevelIndex OBJECT-TYPE

SYNTAX IsisISLevel

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION


```
        "The level that this entry describes."
 ::= { isisCircLevelEntry 1 }

isisCircLevelMetric OBJECT-TYPE
    SYNTAX IsisDefaultMetric
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The metric value of this circuit for this level."
    REFERENCE "{ISIS.aoi l1DefaultMetric (35)}"
    DEFVAL { 10 }
 ::= { isisCircLevelEntry 2 }

isisCircLevelWideMetric OBJECT-TYPE
    SYNTAX IsisWideMetric
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The wide metric value of this circuit for this level."
    DEFVAL { 10 }
 ::= { isisCircLevelEntry 3 }

isisCircLevelISPriority OBJECT-TYPE
    SYNTAX IsisISPriority
    MAX-ACCESS read-write
    STATUS current
    DESCRIPTION
        "The priority for becoming the LAN-Designated
         Intermediate System at this level."
    REFERENCE "{ISIS.aoi l2IntermediateSystemPriority (73)}"
    DEFVAL { 64 }
 ::= { isisCircLevelEntry 4 }

isisCircLevelIDOctet OBJECT-TYPE
    SYNTAX Unsigned32(0..255)
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "A one-byte identifier for the circuit selected by the
         Intermediate System.

        On point-to-point circuits, the value is used as the Local
        Circuit ID in point-to-point IIH PDUs transmitted on this
        circuit.  In this case, values of isisCircLevelIDOctet do
        not need to be unique.

        For broadcast circuits, the value is used to generate the
        LAN ID that will be used if this Intermediate System is
```


elected as the Designated IS on this circuit. The value is required to differ on LANs where the Intermediate System is the Designated Intermediate System."

::= { isisCircLevelEntry 5 }

isisCircLevelID OBJECT-TYPE

SYNTAX IsisCircuitID

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"On a point-to-point circuit with a fully initialized adjacency to a peer IS, the value of this object is the circuit ID negotiated during adjacency initialization. On a point to point circuit without such an adjacency, the value is the concatenation of the local system ID and the one-byte isisCircLevelIDOctet for this circuit, i.e., the value that would be proposed for the circuit ID. On other circuit types, the value returned is the zero-length OCTET STRING."

REFERENCE "{ISIS.aoi ptPtCircuitID (51)}"

::= { isisCircLevelEntry 6 }

isisCircLevelDesIS OBJECT-TYPE

SYNTAX IsisCircuitID

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The ID of the LAN-Designated Intermediate System on this circuit at this level. If, for any reason, this system is not partaking in the relevant Designated Intermediate System election process, then the value returned is the zero-length OCTET STRING."

REFERENCE "{ISIS.aoi l2DesignatedIntermediateSystem (75)}"

::= { isisCircLevelEntry 7 }

isisCircLevelHelloMultiplier OBJECT-TYPE

SYNTAX Unsigned32 (2..100)

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This value is multiplied by the corresponding HelloTimer, and the result in seconds (rounded up) is used as the holding time in transmitted hellos, to be used by receivers of hello packets from this IS."

REFERENCE "{ISIS.aoi iSISHelloTimer (45)}"

DEFVAL { 10 }

::= { isisCircLevelEntry 8 }

isisCircLevelHelloTimer OBJECT-TYPE

SYNTAX Unsigned32 (10..600000)

UNITS "milliseconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Maximum period, in milliseconds, between IIH PDUs on multiaccess networks at this level for LANs. The value at L1 is used as the period between Hellos on L1L2 point-to-point circuits. Setting this value at level 2 on an L1L2 point-to-point circuit will result in an error of InconsistentValue. This object follows the ResettingTimer behavior."

REFERENCE "{ISIS.aoi iSISHelloTimer (45)}"

DEFVAL { 3000 }

::= { isisCircLevelEntry 9 }

isisCircLevelDRHelloTimer OBJECT-TYPE

SYNTAX Unsigned32 (10..120000)

UNITS "milliseconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Period, in milliseconds, between Hello PDUs on multiaccess networks when this IS is the Designated Intermediate System. This object follows the ResettingTimer behavior."

REFERENCE "{ISIS.aoi iSISHelloTimer (45)}"

DEFVAL { 1000 }

::= { isisCircLevelEntry 10 }

isisCircLevelLSPThrottle OBJECT-TYPE

SYNTAX IsisUnsigned16TC (1..65535)

UNITS "milliseconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Minimal interval of time, in milliseconds, between transmissions of LSPs on an interface at this level."

REFERENCE

"{ISIS.aoi minimumBroadcastLSPTransmissionInterval (5)}"

DEFVAL { 30 }

::= { isisCircLevelEntry 11 }

isisCircLevelMinLSPRetransInt OBJECT-TYPE

SYNTAX Unsigned32 (1..300)

UNITS "seconds"

MAX-ACCESS read-write

STATUS current
DESCRIPTION
 "Minimum interval, in seconds, between re-transmission of
 an LSP at this level. This object follows the
 ResettingTimer behavior.

 Note that isisCircLevelLSPThrottle controls
 how fast we send back-to-back LSPs. This variable
 controls how fast we re-send the same LSP."
REFERENCE "{ISIS.aoi minimumLSPTransmissionInterval (5)}"
DEFVAL { 5 }
::= { isisCircLevelEntry 12 }

isisCircLevelCSNPInterval OBJECT-TYPE
SYNTAX Unsigned32 (1..600)
UNITS "seconds"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "Interval of time, in seconds, between periodic
 transmission of a complete set of CSNPs on
 multiaccess networks if this router is the
 designated router at this level.
 This object follows the ResettingTimer behavior."
REFERENCE "{ISIS.aoi completeSNPInterval (8)}"
DEFVAL { 10 }
::= { isisCircLevelEntry 13 }

isisCircLevelPartSNPInterval OBJECT-TYPE
SYNTAX Unsigned32 (1..120)
UNITS "seconds"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
 "Minimum interval, in seconds, between sending Partial
 Sequence Number PDUs at this level. This object
 follows the ResettingTimer behavior."
REFERENCE "{ISIS.aoi partialSNPInterval (14)}"
DEFVAL { 2 }
::= { isisCircLevelEntry 14 }

isisSysInstance OBJECT-TYPE
SYNTAX IsisSysInstanceId
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "The unique identifier of the Integrated IS-IS
 instance to which this row corresponds."

This object follows the index behavior. The identifier is carried in the data object of the routing instance in the MIB."

::= { isisCircLevelEntry 15 }

-- isisSystemCounterTable keeps track of system-wide events.

isisSystemCounterTable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisSystemCounterEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"System-wide counters for this Intermediate System."

::= { isisCounters 1 }

isisSystemCounterEntry OBJECT-TYPE

SYNTAX IsisSystemCounterEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"System-wide IS-IS counters."

INDEX { isisSysInstance,
isisSysStatLevel }

::= { isisSystemCounterTable 1 }

IsisSystemCounterEntry ::=

SEQUENCE {

isisSysStatLevel

IsisISLevel,

isisSysStatCorrLSPs

Counter32,

isisSysStatAuthTypeFails

Counter32,

isisSysStatAuthFails

Counter32,

isisSysStatLSPDbase0loads

Counter32,

isisSysStatManAddrDropFromAreas

Counter32,

isisSysStatAttmpToExMaxSeqNums

Counter32,

isisSysStatSeqNumSkips

Counter32,

isisSysStatOwnLSPPurges

Counter32,

isisSysStatIDFieldLenMismatches

Counter32,

isisSysStatPartChanges


```
        Counter32,
isisSysStatSPFRuns
        Counter32,
isisSysStatLSPErrors
        Counter32,
isisSysInstance
        IsisSysInstanceId
    }

isisSysStatLevel OBJECT-TYPE
    SYNTAX IsisISLevel
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The level that this entry describes."
    ::= { isisSystemCounterEntry 1 }

isisSysStatCorrLSPs OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of corrupted in-memory frames"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of corrupted in-memory LSPs detected.

        LSPs received from the wire with a bad checksum
        are silently dropped and are not counted.
        LSPs received from the wire with parse errors
        are counted by isisSysStatLSPErrors."
    REFERENCE "{ISIS.aoi corruptedLSPsDetected (19)}"
    ::= { isisSystemCounterEntry 2 }

isisSysStatAuthTypeFails OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of frames with authentication type mismatches"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of authentication type mismatches recognized
        by this Intermediate System."
    ::= { isisSystemCounterEntry 3 }

isisSysStatAuthFails OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of frames with authentication key failures"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
```



```
        "The number of authentication key failures recognized
        by this Intermediate System."
 ::= { isisSystemCounterEntry 4 }

isisSysStatLSPDbaseOverloads OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times the LSP database has become
        overloaded."
    REFERENCE "{ISIS.aoi lSPL1DatabaseOverloads (20)}"
 ::= { isisSystemCounterEntry 5 }

isisSysStatManAddrDropFromAreas OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times a manual address has been dropped from
        the area."
    REFERENCE "{ISIS.aoi manualAddressesDroppedFromArea (21)}"
 ::= { isisSystemCounterEntry 6 }

isisSysStatAttmpToExMaxSeqNums OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times the IS has attempted to exceed the
        maximum sequence number."
    REFERENCE
        "{ISIS.aoi attemptsToExceedmaximumSequenceNumber (22)}"
 ::= { isisSystemCounterEntry 7 }

isisSysStatSeqNumSkips OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times a sequence number skip has occurred."
    REFERENCE "{ISIS.aoi sequenceNumberSkips (23)}"
 ::= { isisSystemCounterEntry 8 }

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



```
DESCRIPTION
    "Number of times a zero-aged copy of the system's own LSP
      is received from some other node."
REFERENCE "{ISIS.aoi ownLSPPurges (24)}"
::= { isisSystemCounterEntry 9 }

isisSysStatIDFieldLenMismatches OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of frames with ID length mismatches"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times a PDU is received with a different value
          for ID field length from that of the receiving system."
    REFERENCE "{ISIS.aoi idFieldLengthMismatches (25)}"
    ::= { isisSystemCounterEntry 10 }

isisSysStatPartChanges OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Partition changes."
    ::= { isisSystemCounterEntry 11 }

isisSysStatSPFRuns OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of times we ran SPF at this level."
    ::= { isisSystemCounterEntry 12 }

isisSysStatLSPErrors OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of frames with errors that we have received"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Number of LSPs with errors we have received."
    ::= { isisSystemCounterEntry 13 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
```



```
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
 ::= { isisSystemCounterEntry 14 }

-- isisCircuitCounterTable keeps track of events
-- specific to a circuit and a level

isisCircuitCounterTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisCircuitCounterEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Circuit specific counters for this
        Intermediate System."
 ::= { isisCounters 2 }

isisCircuitCounterEntry OBJECT-TYPE
    SYNTAX IsisCircuitCounterEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "An isisCircuitCounterEntry exists for each circuit
        used by Integrated IS-IS on this system."
    INDEX { isisSysInstance,
            isisCircIndex,
            isisCircuitType }
 ::= { isisCircuitCounterTable 1 }

IsisCircuitCounterEntry ::= SEQUENCE {
    isisCircuitType
        INTEGER,
    isisCircAdjChanges
        Counter32,
    isisCircNumAdj
        Unsigned32,
    isisCircInitFails
        Counter32,
    isisCircRejAdjs
        Counter32,
    isisCircIDFieldLenMismatches
        Counter32,
    isisCircMaxAreaAddrMismatches
        Counter32,
    isisCircAuthTypeFails
        Counter32,
    isisCircAuthFails
```



```
        Counter32,
    isisCircLanDesISChanges
        Counter32,
    isisSysInstance
        IsisSysInstanceId
    }

isisCircuitType OBJECT-TYPE
    SYNTAX INTEGER
    {
        lanlevel1(1),
        lanlevel2(2),
        p2pcircuit(3)
    }
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "What type of circuit saw these counts?

        The point-to-point Hello PDU includes
        both L1 and L2, and ISs form a single
        adjacency on point-to-point links.
        Thus, we combine counts on
        point-to-point links into one group."
 ::= { isisCircuitCounterEntry 1 }

isisCircAdjChanges OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an adjacency state change has
        occurred on this circuit."
    REFERENCE "{ISIS.aoi changesInAdjacencyState (40)}"
 ::= { isisCircuitCounterEntry 2 }

isisCircNumAdj OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of adjacencies on this circuit."
    REFERENCE "{ISIS.aoi changesInAdjacencyState (40)}"
 ::= { isisCircuitCounterEntry 3 }

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



```
STATUS current
DESCRIPTION
    "The number of times initialization of this circuit has
    failed. This counts events such as PPP NCP failures.
    Failures to form an adjacency are counted by
    isisCircRejAdjs."
::= { isisCircuitCounterEntry 4 }

isisCircRejAdjs OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an adjacency has been rejected on
        this circuit."
    REFERENCE "{ISIS.aoi rejectedAdjacencies (42)}"
::= { isisCircuitCounterEntry 5 }

isisCircIDFieldLenMismatches OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of frames with ID field length mismatch"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an IS-IS control PDU with an ID
        field length different from that for this system has been
        received."
    REFERENCE "{ISIS.aoi idFieldLengthMismatches (25)}"
::= { isisCircuitCounterEntry 6 }

isisCircMaxAreaAddrMismatches OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an IS-IS control PDU with a
        max area address field different from that for this
        system has been received."
    REFERENCE "{ISIS.aoi idFieldLengthMismatches (25)}"
::= { isisCircuitCounterEntry 7 }

isisCircAuthTypeFails OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an IS-IS control PDU with
        an auth type field different from that for this
```



```
        system has been received."
 ::= { isisCircuitCounterEntry 8 }

isisCircAuthFails OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times an IS-IS control PDU with
         the correct auth type has failed to pass authentication
         validation."
 ::= { isisCircuitCounterEntry 9 }

isisCircLANDesISChanges OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of times the Designated IS has changed
         on this circuit at this level.  If the circuit is
         point to point, this count is zero."
 ::= { isisCircuitCounterEntry 10 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
         instance to which this row corresponds.
         This object follows the index behavior. The
         identifier is carried in the data object of the
         routing instance in the MIB."
 ::= { isisCircuitCounterEntry 11 }

-- isisPacketCounterTable keeps track of the number of IS-IS
-- control packets sent and received at each level

isisPacketCounterTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisPacketCounterEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Information about IS-IS protocol traffic at one level,
         on one circuit, in one direction."
 ::= { isisCounters 3 }

isisPacketCounterEntry OBJECT-TYPE
```



```
SYNTAX IsisPacketCounterEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "Information about IS-IS protocol traffic at one level,
    on one circuit, in one direction."
INDEX { isisSysInstance,
        isisCircIndex,
        isisPacketCountLevel,
        isisPacketCountDirection }
 ::= { isisPacketCounterTable 1 }

IsisPacketCounterEntry ::=
    SEQUENCE {
        isisPacketCountLevel
            IsisISLevel,
        isisPacketCountDirection
            INTEGER,
        isisPacketCountIIHello
            Counter32,
        isisPacketCountISHello
            Counter32,
        isisPacketCountESHello
            Counter32,
        isisPacketCountLSP
            Counter32,
        isisPacketCountCSNP
            Counter32,
        isisPacketCountPSNP
            Counter32,
        isisPacketCountUnknown
            Counter32,
        isisSysInstance
            IsisSysInstanceId
    }

isisPacketCountLevel OBJECT-TYPE
    SYNTAX IsisISLevel
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The level at which these PDU counts have been collected."
    ::= { isisPacketCounterEntry 1 }

isisPacketCountDirection OBJECT-TYPE
    SYNTAX INTEGER
    {
        sending(1),
```



```
        receiving(2)
    }
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Were we sending or receiving these PDUs?"
 ::= { isisPacketCounterEntry 2 }

isisPacketCountIIHello OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of IS-IS Hellos frames seen in this direction
        at this level"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of IS-IS Hello PDUs seen in this
        direction at this level.

        Point-to-Point IIH PDUs are counted at
        the lowest enabled level: at L1 on L1 or L1L2 circuits,
        and at L2 otherwise."
    REFERENCE "{ISIS.aoi iSISControlPDUsSent (43)}"
 ::= { isisPacketCounterEntry 3 }

isisPacketCountISHello OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of ES-IS frames seen in this direction at
        this level."
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of ES-IS Hello PDUs seen in this
        direction. ISH PDUs are counted at the
        lowest enabled level: at L1 on L1 or L1L2
        circuits, and at L2 otherwise."
 ::= { isisPacketCounterEntry 4 }

isisPacketCountESHello OBJECT-TYPE
    SYNTAX Counter32
    UNITS "Number of ES Hello frames seen in this direction at
        this level"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of ES Hello PDUs seen in this
        direction. ESH PDUs are counted at the
        lowest enabled level: at L1 on L1 or L1L2
        circuits, and at L2 otherwise."
```



```
::= { isisPacketCounterEntry 5 }
```

```
isisPacketCountLSP OBJECT-TYPE
```

```
    SYNTAX Counter32
```

```
    UNITS "Number of IS-IS LSP frames seen in this direction at  
          this level"
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The number of IS-IS LSPs seen in this  
        direction at this level."
```

```
    REFERENCE "{ISIS.aoi iSISControlPDUsSent (43)}"
```

```
::= { isisPacketCounterEntry 6 }
```

```
isisPacketCountCSNP OBJECT-TYPE
```

```
    SYNTAX Counter32
```

```
    UNITS "Number of IS-IS CSNP frames seen in this direction at  
          this level"
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The number of IS-IS CSNPs seen in this  
        direction at this level."
```

```
    REFERENCE "{ISIS.aoi iSISControlPDUsSent (43)}"
```

```
::= { isisPacketCounterEntry 7 }
```

```
isisPacketCountPSNP OBJECT-TYPE
```

```
    SYNTAX Counter32
```

```
    UNITS "Number of IS-IS PSNP frames seen in this direction at  
          this level"
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The number of IS-IS PSNPs seen in this  
        direction at this level."
```

```
    REFERENCE "{ISIS.aoi iSISControlPDUsSent (43)}"
```

```
::= { isisPacketCounterEntry 8 }
```

```
isisPacketCountUnknown OBJECT-TYPE
```

```
    SYNTAX Counter32
```

```
    UNITS "Number of unknown IS-IS frames seen at this level"
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The number of unknown IS-IS PDUs seen  
        at this level."
```

```
    REFERENCE "{ISIS.aoi iSISControlPDUsSent (43)}"
```

```
::= { isisPacketCounterEntry 9 }
```



```
isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
    ::= { isisPacketCounterEntry 10 }
```

```
-- The IS Adjacency Table
--
-- Each adjacency to an IS corresponds to one entry in this
-- table.
```

```
isisISAdjTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisISAdjEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The table of adjacencies to Intermediate Systems."
    ::= { isisISAdj 1 }
```

```
isisISAdjEntry OBJECT-TYPE
    SYNTAX IsisISAdjEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Each entry corresponds to one adjacency to an
        Intermediate System on this system.

        Dynamically learned rows do not survive an agent reboot."
    INDEX { isisSysInstance,
            isisCircIndex,
            isisISAdjIndex }
    ::= { isisISAdjTable 1 }
```

```
IsisISAdjEntry ::=
    SEQUENCE {
        isisISAdjIndex
            Unsigned32,
        isisISAdjState
            INTEGER,
        isisISAdj3WayState
            INTEGER,
        isisISAdjNeighSNPAAAddress
```



```
        IsisOSINSAddress,
isisISAdjNeighSysType
        INTEGER,
isisISAdjNeighSysID
        IsisSystemID,
isisISAdjNbrExtendedCircID
        Unsigned32,
isisISAdjUsage
        IsisLevel,
isisISAdjHoldTimer
        IsisUnsigned16TC,
isisISAdjNeighPriority
        IsisISPriority,
isisISAdjLastUpTime
        TimeStamp,
isisSysInstance
        IsisSysInstanceId
}
```

isisISAdjIndex OBJECT-TYPE

SYNTAX Unsigned32(1..4294967295)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A unique value identifying the IS adjacency from all other such adjacencies on this circuit. This value is automatically assigned by the system when the adjacency is created."

::= { isisISAdjEntry 1 }

isisISAdjState OBJECT-TYPE

SYNTAX INTEGER

```
{
    down (1),
    initializing (2),
    up (3),
    failed(4)
}
```

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The state of the adjacency."

REFERENCE "{ISIS.aoi adjacencyState (78)}"

::= { isisISAdjEntry 2 }

isisISAdj3WayState OBJECT-TYPE

SYNTAX INTEGER

```
{
```



```
        up (0),
        initializing (1),
        down (2),
        failed (3)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The 3Way state of the adjacency. These are picked
        to match the historical on-the-wire representation
        of the 3Way state and are not intended to match
        isisISAdjState."
    REFERENCE "{ RFC 3373 }"
 ::= { isisISAdjEntry 3 }

isisISAdjNeighSNPAAAddress OBJECT-TYPE
    SYNTAX IsisOSINSAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The SNPA address of the neighboring system."
    REFERENCE "{ISIS.aoi neighbourSNPAAAddress (79)}"
 ::= { isisISAdjEntry 4 }

isisISAdjNeighSysType OBJECT-TYPE
    SYNTAX INTEGER
    {
        l1IntermediateSystem(1),
        l2IntermediateSystem(2),
        l1L2IntermediateSystem(3),
        unknown(4)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The type of the neighboring system."
    REFERENCE "{ISIS.aoi neighbourSystemType (80)}"
 ::= { isisISAdjEntry 5 }

isisISAdjNeighSysID OBJECT-TYPE
    SYNTAX IsisSystemID
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The system ID of the neighboring Intermediate
        System."
    REFERENCE "{ISIS.aoi neighbourSystemIds (83)}"
 ::= { isisISAdjEntry 6 }
```


isisISAdjNbrExtendedCircID OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The 4-byte Extended Circuit ID learned from the
Neighbor during 3-way handshake, or 0."

::= { isisISAdjEntry 7 }

isisISAdjUsage OBJECT-TYPE

SYNTAX IsisLevel

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"How is the adjacency used? On a point-to-point link,
this might be level1and2, but on a LAN, the usage will
be level1 on the adjacency between peers at L1,
and level2 for the adjacency between peers at L2."

REFERENCE "{ISIS.aoi adjacencyUsage (82)}"

::= { isisISAdjEntry 8 }

isisISAdjHoldTimer OBJECT-TYPE

SYNTAX IsisUnsigned16TC (1..65535)

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The holding time, in seconds, for this adjacency.
This value is based on received IIH PDUs and
the elapsed time since receipt."

REFERENCE "{ISIS.aoi holdingTimer (85)}"

::= { isisISAdjEntry 9 }

isisISAdjNeighPriority OBJECT-TYPE

SYNTAX IsisISPriority

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Priority of the neighboring Intermediate System for
becoming the Designated Intermediate System."

REFERENCE "{ISIS.aoi LANPriority (86)}"

::= { isisISAdjEntry 10 }

isisISAdjLastUpTime OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"When the adjacency most recently entered the state 'up',
measured in hundredths of a second since the last
re-initialization of the network management subsystem.
Holds 0 if the adjacency has never been in state 'up'."

::= { isisISAdjEntry 11 }

isisSysInstance OBJECT-TYPE

SYNTAX IsisSysInstanceId

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unique identifier of the Integrated IS-IS
instance to which this row corresponds.

This object follows the index behavior. The
identifier is carried in the data object of the
routing instance in the MIB."

::= { isisISAdjEntry 12 }

-- The IS Adjacency Area Address Table

-- The IS Adjacency Area Address Table contains the set of

-- Area Addresses of neighboring

-- Intermediate Systems as reported in IIH PDUs.

isisISAdjAreaAddrTable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisISAdjAreaAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains the set of Area Addresses of
neighboring Intermediate Systems as reported in received
IIH PDUs."

REFERENCE "{ISIS.aoi areaAddressesOfNeighbour (84)}"

::= { isisISAdj 2 }

isisISAdjAreaAddrEntry OBJECT-TYPE

SYNTAX IsisISAdjAreaAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one Area Address reported by a
neighboring Intermediate System in its IIH PDUs.

Dynamically learned rows do not survive an agent reboot."

INDEX { isisSysInstance,
isisCircIndex,
isisISAdjIndex,
isisISAdjAreaAddrIndex }


```
::= { isisISAdjAreaAddrTable 1 }
```

```
IsisISAdjAreaAddrEntry ::=
```

```
    SEQUENCE {  
        isisISAdjAreaAddrIndex  
            Unsigned32,  
        isisISAdjAreaAddress  
            IsisOSINSAddress,  
        isisSysInstance  
            IsisSysInstanceId  
    }
```

```
isisISAdjAreaAddrIndex OBJECT-TYPE
```

```
    SYNTAX Unsigned32(1..4294967295)
```

```
    MAX-ACCESS not-accessible
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "An index for the areas associated with one neighbor.  
        This provides a simple way to walk the table."
```

```
::= { isisISAdjAreaAddrEntry 1 }
```

```
isisISAdjAreaAddress OBJECT-TYPE
```

```
    SYNTAX IsisOSINSAddress
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "One Area Address as reported in IIH PDUs received from  
        the neighbor."
```

```
::= { isisISAdjAreaAddrEntry 2 }
```

```
isisSysInstance OBJECT-TYPE
```

```
    SYNTAX IsisSysInstanceId
```

```
    MAX-ACCESS read-only
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The unique identifier of the Integrated IS-IS  
        instance to which this row corresponds.
```

```
        This object follows the index behavior. The  
        identifier is carried in the data object of the  
        routing instance in the MIB."
```

```
::= { isisISAdjAreaAddrEntry 3 }
```

```
-- The IS Adjacency IP Address Table
```

```
-- The IS Adjacency IP Address Table contains the  
-- set of IP Addresses of neighboring Intermediate Systems  
-- as reported in received IIH PDUs.
```


isisISAdjIPAddrTable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisISAdjIPAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This table contains the set of IP Addresses of
neighboring Intermediate Systems as reported in received
IIH PDUs."

::= { isisISAdj 3 }

isisISAdjIPAddrEntry OBJECT-TYPE

SYNTAX IsisISAdjIPAddrEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry contains one IP Address reported by a
neighboring Intermediate System in its IIH PDUs."

Dynamically learned rows do not survive an agent reboot."

INDEX { isisSysInstance,
isisCircIndex,
isisISAdjIndex,
isisISAdjIPAddrIndex
}

::= { isisISAdjIPAddrTable 1 }

IsisISAdjIPAddrEntry ::=

SEQUENCE {
isisISAdjIPAddrIndex
Unsigned32,
isisISAdjIPAddrType
InetAddressType,
isisISAdjIPAddrAddress
InetAddress,
isisSysInstance
IsisSysInstanceId
}

isisISAdjIPAddrIndex OBJECT-TYPE

SYNTAX Unsigned32(1..4294967295)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An index to this table that identifies the IP addresses
to which this entry belongs."

::= { isisISAdjIPAddrEntry 1 }

isisISAdjIPAddrType OBJECT-TYPE


```
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The type of one IP Address as reported in IIH PDUs
    received from the neighbor."
::= { isisISAdjIPAddrEntry 2 }

isisISAdjIPAddrAddress OBJECT-TYPE
    SYNTAX InetAddress
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "One IP Address as reported in IIH PDUs received from the
        neighbor.
        The type of this address is determined by the value of
        the isisISAdjIPAddrType object."
    ::= { isisISAdjIPAddrEntry 3 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
    ::= { isisISAdjIPAddrEntry 4 }

-- The IS Adjacency Protocol Supported Table
--
-- The IS Adjacency Protocol Supported Table contains the set of
-- protocols supported by neighboring
-- Intermediate Systems as reported in received IIH PDUs.

isisISAdjProtSuppTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisISAdjProtSuppEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "This table contains the set of protocols supported by
        neighboring Intermediate Systems as reported in received
        IIH PDUs."
    ::= { isisISAdj 4 }

isisISAdjProtSuppEntry OBJECT-TYPE
```



```
SYNTAX IsisISAdjProtSuppEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "Each entry contains one protocol supported by a
    neighboring Intermediate System as reported in its IIH
    PDUs.
    Dynamically learned rows do not survive an agent reboot."
INDEX { isisSysInstance,
        isisCircIndex,
        isisISAdjIndex,
        isisISAdjProtSuppProtocol }
 ::= { isisISAdjProtSuppTable 1 }

IsisISAdjProtSuppEntry ::=
    SEQUENCE {
        isisISAdjProtSuppProtocol
        IsisSupportedProtocol,
        isisSysInstance
        IsisSysInstanceId
    }

isisISAdjProtSuppProtocol OBJECT-TYPE
    SYNTAX IsisSupportedProtocol
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "One supported protocol as reported in IIH PDUs received
        from the neighbor."
 ::= { isisISAdjProtSuppEntry 1 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
        instance to which this row corresponds.
        This object follows the index behavior. The
        identifier is carried in the data object of the
        routing instance in the MIB."
 ::= { isisISAdjProtSuppEntry 2 }

-- The Reachable Address Group
--
-- The Reachable Address Table
-- Each entry records information about a reachable address
```


-- (NSAP or address prefix) manually configured on the system
-- or learned through another protocol.

isisRATable OBJECT-TYPE

SYNTAX SEQUENCE OF IsisRAEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table of Reachable Addresses to NSAPs or Address
Prefixes."

::= { isisReachAddr 1 }

isisRAEntry OBJECT-TYPE

SYNTAX IsisRAEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Each entry defines a configured Reachable Address
to an NSAP or Address Prefix.
Dynamically created rows MUST survive an agent reboot."

INDEX { isisSysInstance,
isisCircIndex,
isisRAIndex }

::= { isisRATable 1 }

IsisRAEntry ::=

SEQUENCE {

isisRAIndex

Unsigned32,

isisRAExistState

RowStatus,

isisRAAdminState

IsisAdminState,

isisRAAddrPrefix

IsisOSINSAddress,

isisRAMapType

INTEGER,

isisRAMetric

IsisDefaultMetric,

isisRAMetricType

IsisMetricType,

isisRASNPAAAddress

IsisOSINSAddress,

isisRASNPAMask

IsisOSINSAddress,

isisRASNPAPrefix

IsisOSINSAddress,

isisRAType


```
        INTEGER,
        isisSysInstance
        IsisSysInstanceId
    }

isisRAIndex OBJECT-TYPE
    SYNTAX Unsigned32(1..4294967295)
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The identifier for this isisRAEntry. This value must be
        unique amongst all Reachable Addresses on the same parent
        Circuit."
    ::= { isisRAEntry 1 }

isisRAExistState OBJECT-TYPE
    SYNTAX RowStatus
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The existence state of this Reachable Address. This
        object follows the ManualOrAutomatic behaviors. Support
        for 'createAndWait' and 'notInService' is not required.
        A row entry cannot be modified when the value of this
        object is 'active'."
    ::= { isisRAEntry 2 }

isisRAAdminState OBJECT-TYPE
    SYNTAX IsisAdminState
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The administrative state of the Reachable Address. This
        object follows the ManualOrAutomatic behaviors."
    DEFVAL { off }
    ::= { isisRAEntry 3 }

isisRAAddrPrefix OBJECT-TYPE
    SYNTAX IsisOSINSAddress
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The destination of this Reachable Address. This is an
        Address Prefix. This object follows the
        ReplaceOnlyWhileDisabled and ManualOrAutomatic
        behaviors."
    REFERENCE "{ISIS.aoi addressPrefix (98)}"
    ::= { isisRAEntry 4 }
```


isisRAMapType OBJECT-TYPE

SYNTAX INTEGER

```
{
    none (1),
    explicit (2),
    extractIDI (3),
    extractDSP (4)
}
```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The type of mapping to be employed to ascertain the SNPA Address that should be used in forwarding PDUs for this Reachable Address prefix. This object follows the ManualOrAutomatic behavior. The following values of mapping type are defined:

none: The mapping is null because the neighbor SNPA is implicit by nature of the subnetwork (e.g., a point-to-point linkage).

explicit: The subnetwork addresses in the object isisRASNPAAAddress are to be used.

extractIDI: The SNPA is embedded in the IDI of the destination NSAP Address. The mapping algorithm extracts the SNPA to be used according to the format and encoding rules of ISO8473/Add2. This SNPA extraction algorithm can be used in conjunction with Reachable Address prefixes from the X.121, F.69, E.163, and E.164 addressing subdomains.

Extract DSP: All, or a suffix, of the SNPA is embedded in the DSP of the destination address. This SNPA extraction algorithm extracts the embedded subnetwork addressing information by performing a logical AND of the isisRASNPAMask object value with the destination address. The part of the SNPA extracted from the destination NSAP is appended to the isisRASNPAPrefix object value to form the next hop subnetwork addressing information."

REFERENCE "{ISO10589-ISIS.aoi mappingType (107)}"

::= { isisRAEntry 5 }

isisRAMetric OBJECT-TYPE

SYNTAX IsisDefaultMetric

MAX-ACCESS read-create

STATUS current

DESCRIPTION


```
    "The metric value for reaching the specified
    prefix over this circuit. This object follows the
    ManualOrAutomatic behavior."
REFERENCE "{ISIS.aoi DefaultMetric (99)}"
DEFVAL { 20 }
::= { isisRAEntry 6 }

isisRAMetricType OBJECT-TYPE
    SYNTAX IsisMetricType
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Indicates whether the metric is internal or
        external. This object follows the ManualOrAutomatic
        behavior."
    REFERENCE "{ISIS.aoi DefaultMetricType (103)}"
    DEFVAL { internal }
    ::= { isisRAEntry 7 }

isisRASNPAAAddress OBJECT-TYPE
    SYNTAX IsisOSINSAddress
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The SNPA Address to which a PDU may be forwarded in
        order to reach a destination that matches the address
        prefix of the Reachable Address. This object follows the
        ManualOrAutomatic behavior."
    REFERENCE "{ISIS.aoi sNPAAAddresses (109)}"
-- Note only one address may be specified per Reachable Address
-- in the MIB
    DEFVAL { 'H }
    ::= { isisRAEntry 8 }

isisRASNPAMask OBJECT-TYPE
    SYNTAX IsisOSINSAddress
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "A bit mask with 1 bit indicating the positions in the
        effective destination address from which embedded SNPA
        information is to be extracted. For the extraction, the
        first octet of the isisRASNPAMask object value is aligned
        with the first octet (AFI) of the NSAP Address. If the
        isisRASNPAMask object value and NSAP Address are of
        different lengths, the shorter of the two is logically
        padded with zeros before performing the extraction. This
        object follows the ManualOrAutomatic behavior."
```



```
REFERENCE "{ISIS.aoi sNPAMask (122)}"
DEFVAL { '00'H }
::= { isisRAEntry 9 }
```

isisRASNPAPrefix OBJECT-TYPE

```
SYNTAX IsisOSINSAddress
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "A fixed SNPA prefix for use when the isisRAMapType is
    extractDSP. The SNPA Address to use is formed by
    concatenating the fixed SNPA prefix with a variable SNPA
    part that is extracted from the effective destination
    address. For Reachable Address prefixes in which the
    entire SNPA is embedded in the DSP, the SNPA Prefix shall
    be null. This object follows the ManualOrAutomatic
    behavior."
REFERENCE "{ISIS.aoi sNPAPrefix (123)}"
DEFVAL { '00'H }
::= { isisRAEntry 10 }
```

isisRAType OBJECT-TYPE

```
SYNTAX INTEGER
{
    manual (1),
    automatic (2)
}
MAX-ACCESS read-create
STATUS current
DESCRIPTION
    "The type of Reachable address. Those of type
    manual are created by the network manager. Those
    of type automatic are created through propagation
    of routing information from another routing
    protocol (e.g., IDRP). "
DEFVAL {manual}
::= {isisRAEntry 11 }
```

isisSysInstance OBJECT-TYPE

```
SYNTAX IsisSysInstanceId
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "The unique identifier of the Integrated IS-IS
    instance to which this row corresponds.
    This object follows the index behavior. The
    identifier is carried in the data object of the
    routing instance in the MIB."
```



```
::= { isisRAEntry 12 }
```

```
-- The IP Reachable Address Table
```

```
-- Each entry records information about one IP reachable  
-- address manually configured on this system or learned from  
-- another protocol.
```

```
isisIPRATable OBJECT-TYPE
```

```
    SYNTAX SEQUENCE OF IsisIPRAEntry
```

```
    MAX-ACCESS not-accessible
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The table of IP Reachable Addresses to networks,  
        subnetworks, or hosts either manually configured or  
        learned from another protocol."
```

```
::= { isisIPReachAddr 1 }
```

```
isisIPRAEntry OBJECT-TYPE
```

```
    SYNTAX IsisIPRAEntry
```

```
    MAX-ACCESS not-accessible
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "Each entry defines an IP Reachable Address to a network,  
        subnetwork, or host.
```

```
        Each IP Reachable Address may have multiple entries in the  
        table, one for each equal cost path to the reachable  
        address.
```

```
        Dynamically created rows MUST survive an agent reboot.  
        Implementers need to be aware that if the total number  
        of elements (octets or sub-identifiers) in  
        isisIPRADest, isisIPRADestPrefixLen, and  
        isisIPRANextHopIndex is too great, then OIDs of column  
        instances in this table will have more than 128  
        subidentifiers and cannot be accessed using SNMPv1,  
        SNMPv2c, or SNMPv3."
```

```
    INDEX { isisSysInstance,  
            isisSysLevelIndex,  
            isisIPRADestType,  
            isisIPRADest,  
            isisIPRADestPrefixLen,  
            isisIPRANextHopIndex }
```

```
::= { isisIPRATable 1 }
```

```
IsisIPRAEntry ::=
```

```
    SEQUENCE {
```



```
    isisIPRADestType
        InetAddressType,
    isisIPRADest
        InetAddress,
    isisIPRADestPrefixLen
        InetAddressPrefixLength,
    isisIPRANextHopIndex
        Unsigned32,
    isisIPRANextHopType
        InetAddressType,
    isisIPRANextHop
        InetAddress,
    isisIPRAType
        INTEGER,
    isisIPRAExistState
        RowStatus,
    isisIPRAAdminState
        IsisAdminState,
    isisIPRAMetric
        IsisDefaultMetric,
    isisIPRAMetricType
        IsisMetricType,
    isisIPRAFullMetric
        IsisFullMetric,
    isisIPRASNPAAAddress
        IsisOSINSAddress,
    isisIPRASourceType
        INTEGER,
    isisSysInstance
        IsisSysInstanceId
}
```

```
isisIPRADestType OBJECT-TYPE
    SYNTAX InetAddressType
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The type of this IP Reachable Address."
    ::= { isisIPRAEntry 1 }
```

```
isisIPRADest OBJECT-TYPE
    SYNTAX InetAddress
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The destination of this IP Reachable Address.  This is
        a network address, subnetwork address, or host
        address."
```


The type of this address is determined by the value of the isisIPRADestType object."

::= { isisIPRAEntry 2 }

isisIPRADestPrefixLen OBJECT-TYPE

SYNTAX InetAddressPrefixLength

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The length of the IP Netmask for Reachability Address. The values for the index objects isisIPRADest and isisIPRADestPrefixLen must be consistent. When the value of isisIPRADest (excluding the zone index, if one is present) is x, then the bitwise logical-AND of x with the value of the mask formed from the corresponding index object isisIPRADestPrefixLen MUST be equal to x. If not, then the index pair is not consistent, and an inconsistentName error must be returned on SET or CREATE requests."

::= { isisIPRAEntry 3 }

isisIPRANextHopIndex OBJECT-TYPE

SYNTAX Unsigned32(1..4294967295)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Index of next hop. Used when there are multiple Equal Cost Multipath alternatives for the same destination."

::= { isisIPRAEntry 4 }

isisIPRANextHopType OBJECT-TYPE

SYNTAX InetAddressType

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The type of the IP next hop address."

::= { isisIPRAEntry 5 }

isisIPRANextHop OBJECT-TYPE

SYNTAX InetAddress

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The IP next hop to this destination. The type of this address is determined by the value of the isisIPRANextHopType object."

::= { isisIPRAEntry 6 }

isisIPRAType OBJECT-TYPE

SYNTAX INTEGER

```
{
    manual (1),
    automatic (2)
}
```

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The type of this IP Reachable Address. Those of type manual are created by the network manager. Those of type automatic are created through propagation of routing information from another routing protocol. This object follows the ManualOrAutomatic behavior."

::= { isisIPRAEntry 7 }

isisIPRAExistState OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The state of this IP Reachable Address. This object follows the ExistenceState and ManualOrAutomatic behaviors. Support for 'createAndWait' and 'notInService' is not required.

A row entry cannot be modified when the value of this object is 'active'."

::= { isisIPRAEntry 8 }

isisIPRAAdminState OBJECT-TYPE

SYNTAX IsisAdminState

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The administrative state of the IP Reachable Address. This object follows the IsisAdminState and ManualOrAutomatic behaviors."

DEFVAL { off }

::= { isisIPRAEntry 9 }

isisIPRAMetric OBJECT-TYPE

SYNTAX IsisDefaultMetric

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The metric value for reaching the specified destination over this circuit. This object follows the ManualOrAutomatic behavior."


```
    DEFVAL { 10 }
 ::= { isisIPRAEntry 10 }

isisIPRAMetricType OBJECT-TYPE
    SYNTAX IsisMetricType
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "Indicates whether the metric is internal or
        external. This object follows the ManualOrAutomatic
        behavior."
    DEFVAL { internal }
 ::= { isisIPRAEntry 11 }

isisIPRAFullMetric OBJECT-TYPE
    SYNTAX IsisFullMetric
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The wide metric value for reaching the specified
        destination over this circuit. This object follows the
        ManualOrAutomatic behavior."
    DEFVAL { 10 }
 ::= { isisIPRAEntry 12 }

isisIPRASNPAddress OBJECT-TYPE
    SYNTAX IsisOSINSAddress
    MAX-ACCESS read-create
    STATUS current
    DESCRIPTION
        "The SNPA Address to which a PDU may be forwarded in
        order to reach a destination that matches this IP
        Reachable Address. This object follows the
        ManualOrAutomatic behavior."
    DEFVAL { 'H' }
 ::= { isisIPRAEntry 13 }

isisIPRASourceType OBJECT-TYPE
    SYNTAX INTEGER
    {
        static (1),
        direct (2),
        ospfv2 (3),
        ospfv3 (4),
        isis (5),
        rip (6),
        igrp (7),
        eigrp (8),
```



```
        bgp      (9),
        other (10)
    }
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The origin of this route."
 ::= { isisIPRAEntry 14 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
         instance to which this row corresponds.
         This object follows the index behavior. The
         identifier is carried in the data object of the
         routing instance in the MIB."
 ::= { isisIPRAEntry 15 }

-- The LSP Database Table
--
-- The first table provides Summary Information about LSPs
-- The next table provides a complete record

isisLSPSummaryTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisLSPSummaryEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The table of LSP Headers."
 ::= { isisLSPDataBase 1 }

isisLSPSummaryEntry OBJECT-TYPE
    SYNTAX IsisLSPSummaryEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Each entry provides a summary describing an
         LSP currently stored in the system.
         Dynamically learned rows will not survive an
         agent reboot."
    INDEX { isisSysInstance,
            isisLSPLevel,
            isisLSPID }
 ::= { isisLSPSummaryTable 1 }
```


IsisLSPSummaryEntry ::=

```
SEQUENCE {
    isisLSPLevel
        IsisISLevel,
    isisLSPID
        IsisLinkStatePDUID,
    isisLSPSeq
        Unsigned32,
    isisLSPZeroLife
        TruthValue,
    isisLSPChecksum
        IsisUnsigned16TC,
    isisLSPLifetimeRemain
        IsisUnsigned16TC,
    isisLSPPDULength
        IsisUnsigned16TC,
    isisLSPAttributes
        IsisUnsigned8TC,
    isisSysInstance
        IsisSysInstanceId
}
```

isisLSPLevel OBJECT-TYPE

SYNTAX IsisISLevel

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"At which level does this LSP appear?"

::= { isisLSPSummaryEntry 1 }

isisLSPID OBJECT-TYPE

SYNTAX IsisLinkStatePDUID

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The 8-byte LSP ID for this Link State PDU."

::= { isisLSPSummaryEntry 2 }

isisLSPSeq OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The sequence number for this LSP."

::= { isisLSPSummaryEntry 3 }

isisLSPZeroLife OBJECT-TYPE

SYNTAX TruthValue


```
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Is this LSP being purged by this system?"
 ::= { isisLSPSummaryEntry 4 }

isisLSPChecksum OBJECT-TYPE
    SYNTAX IsisUnsigned16TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The 16-bit Fletcher Checksum for this LSP."
 ::= { isisLSPSummaryEntry 5 }

isisLSPLifetimeRemain OBJECT-TYPE
    SYNTAX IsisUnsigned16TC
    UNITS "seconds"
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The remaining lifetime, in seconds, for this LSP."
 ::= { isisLSPSummaryEntry 6 }

isisLSPPDULength OBJECT-TYPE
    SYNTAX IsisUnsigned16TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The length of this LSP."
 ::= { isisLSPSummaryEntry 7 }

isisLSPAttributes OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "Flags carried by the LSP."
 ::= { isisLSPSummaryEntry 8 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
         instance to which this row corresponds.
         This object follows the index behavior. The
         identifier is carried in the data object of the
```



```
        routing instance in the MIB."
 ::= { isisLSPSummaryEntry 9 }
```

```
-- LSP Table
```

```
--
--
-- The full LSP as a sequence of {Type, Len, Value} tuples
-- Since the underlying LSP may have changed while downloading
-- TLVs, we provide the Sequence number and Checksum for each
-- LSP TLV, so the network manager may verify that they are
-- still working on the same version of the LSP.
```

```
isisLSPTLVTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IsisLSPTLVEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The table of LSPs in the database."
 ::= { isisLSPDataBase 2 }
```

```
isisLSPTLVEntry OBJECT-TYPE
    SYNTAX IsisLSPTLVEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "Each entry describes a TLV within
        an LSP currently stored in the system.
        Dynamically learned rows will not survive an
        agent reboot."
    INDEX { isisSysInstance,
            isisLSPLevel,
            isisLSPID,
            isisLSPTLVIndex }
 ::= { isisLSPTLVTable 1 }
```

```
IsisLSPTLVEntry ::=
    SEQUENCE {
        isisLSPTLVIndex
            Unsigned32,
        isisLSPTLVSeq
            Unsigned32,
        isisLSPTLVChecksum
            IsisUnsigned16TC,
        isisLSPTLVType
            IsisUnsigned8TC,
        isisLSPTLVLen
            IsisUnsigned8TC,
        isisLSPTLVValue
```



```
        OCTET STRING,
        isisSysInstance
        IsisSysInstanceId
    }

isisLSPTLVIndex OBJECT-TYPE
    SYNTAX Unsigned32(1..4294967295)
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The index of this TLV in the LSP.  The first TLV has
        index 1, and the Nth TLV has an index of N."
    ::= { isisLSPTLVEntry 1 }

isisLSPTLVSeq OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The sequence number for this LSP."
    ::= { isisLSPTLVEntry 2 }

isisLSPTLVChecksum OBJECT-TYPE
    SYNTAX IsisUnsigned16TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The 16-bit Fletcher Checksum for this LSP."
    ::= { isisLSPTLVEntry 3 }

isisLSPTLVType OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The type of this TLV."
    ::= { isisLSPTLVEntry 4 }

isisLSPTLVLen OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The length of this TLV."
    ::= { isisLSPTLVEntry 5 }

isisLSPTLVValue OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(0..255))
```



```
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The value of this TLV."
 ::= { isisLSPTLVEntry 6 }

isisSysInstance OBJECT-TYPE
    SYNTAX IsisSysInstanceId
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The unique identifier of the Integrated IS-IS
         instance to which this row corresponds.
         This object follows the index behavior. The
         identifier is carried in the data object of the
         routing instance in the MIB."
 ::= { isisLSPTLVEntry 7 }
```

-- The IS-IS Notification Table

-- The IS-IS Notification Table records fields that are
-- required for notifications

```
isisNotificationEntry OBJECT IDENTIFIER
    ::= { isisNotification 1 }

isisNotificationSysLevelIndex OBJECT-TYPE
    SYNTAX IsisLevel
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "The system level for this notification."
 ::= { isisNotificationEntry 1 }
```

```
isisNotificationCircIfIndex OBJECT-TYPE
    SYNTAX Unsigned32 (1..2147483647)
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "The identifier of this circuit relevant to
         this notification."
 ::= { isisNotificationEntry 2 }
```

```
isisPduLspId OBJECT-TYPE
    SYNTAX IsisLinkStatePDUID
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
```



```
        "An Octet String that uniquely identifies
        a Link State PDU."
 ::= { isisNotificationEntry 3 }

isisPduFragment OBJECT-TYPE
    SYNTAX IsisPDUHeader
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds up to 64 initial bytes of a PDU that
        triggered the notification."
 ::= { isisNotificationEntry 4 }

isisPduFieldLen OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds the System ID length reported in PDU we received."
 ::= { isisNotificationEntry 5 }

isisPduMaxAreaAddress OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds the Max Area Addresses reported in a PDU
        we received."
 ::= { isisNotificationEntry 6 }

isisPduProtocolVersion OBJECT-TYPE
    SYNTAX IsisUnsigned8TC
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds the Protocol version reported in PDU we received."
 ::= { isisNotificationEntry 7 }

isisPduLspSize OBJECT-TYPE
    SYNTAX Unsigned32 (0..2147483647)
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds the size of LSP we received that is too
        big to forward."
 ::= { isisNotificationEntry 8 }

isisPduOriginatingBufferSize OBJECT-TYPE
```



```
SYNTAX IsisUnsigned16TC (0..16000)
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
    "Holds the size of isisSysLevelOrigLSPBuffSize advertised
    by the peer in the originatingLSPBufferSize TLV.
    If the peer does not advertise this TLV, this
    value is set to 0."
 ::= { isisNotificationEntry 9 }

isisPduBufferSize OBJECT-TYPE
    SYNTAX IsisUnsigned16TC (0..16000)
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "Holds the size of LSP received from peer."
 ::= { isisNotificationEntry 10 }

isisPduProtocolsSupported OBJECT-TYPE
    SYNTAX OCTET STRING (SIZE(0..255))
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "The list of protocols supported by an
        adjacent system. This may be empty."
 ::= { isisNotificationEntry 11 }

isisAdjState OBJECT-TYPE
    SYNTAX INTEGER
        {
            down (1),
            initializing (2),
            up (3),
            failed(4)
        }
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "The current state of an adjacency."
 ::= { isisNotificationEntry 12 }

isisErrorOffset OBJECT-TYPE
    SYNTAX Unsigned32
    MAX-ACCESS accessible-for-notify
    STATUS current
    DESCRIPTION
        "An offset to a problem in a PDU. If the problem
        is a malformed TLV, this points to the beginning
```


of the TLV. If the problem is in the header, this points to the byte that is suspicious."

::= { isisNotificationEntry 13 }

isisErrorTLVType OBJECT-TYPE

SYNTAX Unsigned32 (0..255)

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"The type for a malformed TLV."

::= { isisNotificationEntry 14 }

isisNotificationAreaAddress OBJECT-TYPE

SYNTAX IsisOSINSAddress

MAX-ACCESS accessible-for-notify

STATUS current

DESCRIPTION

"An Area Address."

::= { isisNotificationEntry 15 }

isisSysInstance OBJECT-TYPE

SYNTAX IsisSysInstanceId

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The unique identifier of the Integrated IS-IS instance which generated this notification."

::= { isisNotificationEntry 16 }

-- Notification definitions

--

-- Note that notifications can be disabled by setting

-- isisSysNotificationEnable false

isisDatabaseOverload NOTIFICATION-TYPE

OBJECTS {

isisNotificationSysLevelIndex,

isisSysLevelState,

isisSysInstance

}

STATUS current

DESCRIPTION

"This notification is generated when the system enters or leaves the Overload state. The number of times this has been generated and cleared is kept track of by isisSysStatLSPDatabaseOverloads."

::= { isisNotifications 1 }

`isisManualAddressDrops NOTIFICATION-TYPE``OBJECTS {` `isisNotificationAreaAddress,
 isisSysInstance``}``STATUS current``DESCRIPTION`

"This notification is generated when one of the manual areaAddresses assigned to this system is ignored when computing routes. The object isisNotificationAreaAddress describes the area that has been dropped.

The number of times this event has been generated is counted by isisSysStatManAddrDropFromAreas. The agent must throttle the generation of consecutive isisManualAddressDrops notifications so that there is at least a 5-second gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."

`::= { isisNotifications 2 }``isisCorruptedLSPDetected NOTIFICATION-TYPE``OBJECTS {` `isisNotificationSysLevelIndex,
 isisPduLspId,
 isisSysInstance``}``STATUS current``DESCRIPTION`

"This notification is generated when we find that an LSP that was stored in memory has become corrupted. The number of times this has been generated is counted by isisSysCorrLSPs. We forward an LSP ID. We may have independent knowledge of the ID, but in some implementations there is a chance that the ID itself will be corrupted."

`::= { isisNotifications 3 }``isisAttemptToExceedMaxSequence NOTIFICATION-TYPE``OBJECTS {` `isisNotificationSysLevelIndex,
 isisPduLspId,
 isisSysInstance``}``STATUS current`

DESCRIPTION

"When the sequence number on an LSP we generate wraps the 32-bit sequence counter, we purge and wait to re-announce this information. This notification describes that event. Since these should not be generated rapidly, we generate an event each time this happens. While the first 6 bytes of the LSPID are ours, the other two contain useful information."

::= { isisNotifications 4 }

isisIDLenMismatch NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisPduFieldLen,
 isisNotificationCircIfIndex,
 isisPduFragment,
 isisSysInstance
}

STATUS current

DESCRIPTION

"A notification sent when we receive a PDU with a different value for the System ID Length. This notification includes an index to identify the circuit where we saw the PDU and the header of the PDU, which may help a network manager identify the source of the confusion. The agent must throttle the generation of consecutive isisIDLenMismatch notifications so that there is at least a 5-second gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."

::= { isisNotifications 5 }

isisMaxAreaAddressesMismatch NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisPduMaxAreaAddress,
 isisNotificationCircIfIndex,
 isisPduFragment,
 isisSysInstance
}

STATUS current

DESCRIPTION

"A notification sent when we receive a PDU with a different value for the Maximum Area Addresses. This notification includes the header of the packet, which may help a network manager identify the source of the confusion.

The agent must throttle the generation of consecutive isisMaxAreaAddressesMismatch notifications so that there is at least a 5-second gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."

::= { isisNotifications 6 }

isisOwnLSPPurge NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisNotificationCircIfIndex,
 isisPduLspId,
 isisSysInstance
}

STATUS current

DESCRIPTION

"A notification sent when we receive a PDU with our systemID and zero age. This notification includes the circuit Index and router ID from the LSP, if available, which may help a network manager identify the source of the confusion."

::= { isisNotifications 7 }

isisSequenceNumberSkip NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisNotificationCircIfIndex,
 isisPduLspId,
 isisSysInstance
}

STATUS current

DESCRIPTION

"When we receive an LSP with our System ID and different contents, we may need to reissue the LSP with a higher sequence number. We send this notification if we need to increase the sequence number by more than one. If two Intermediate Systems are configured with the same

System ID, this notification will fire."

::= { isisNotifications 8 }

isisAuthenticationTypeFailure NOTIFICATION-TYPE

OBJECTS {

isisNotificationSysLevelIndex,
isisNotificationCircIfIndex,
isisPduFragment,
isisSysInstance

}

STATUS current

DESCRIPTION

"A notification sent when we receive a PDU with the wrong authentication type field. This notification includes the header of the packet, which may help a network manager identify the source of the confusion. The agent must throttle the generation of consecutive isisAuthenticationTypeFailure notifications so that there is at least a 5-second gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."

::= { isisNotifications 9 }

isisAuthenticationFailure NOTIFICATION-TYPE

OBJECTS {

isisNotificationSysLevelIndex,
isisNotificationCircIfIndex,
isisPduFragment,
isisSysInstance

}

STATUS current

DESCRIPTION

"A notification sent when we receive a PDU with an incorrect authentication information field. This notification includes the header of the packet, which may help a network manager identify the source of the confusion. The agent must throttle the generation of consecutive isisAuthenticationFailure notifications so that there is at least a 5-second gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."


```
::= { isisNotifications 10 }
```

```
isisVersionSkew NOTIFICATION-TYPE
```

```
  OBJECTS {
```

```
    isisNotificationSysLevelIndex,  
    isisNotificationCircIfIndex,  
    isisPduProtocolVersion,  
    isisPduFragment,  
    isisSysInstance
```

```
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A notification sent when we receive a Hello  
    PDU from an IS running a different version  
    of the protocol. This notification includes  
    the header of the packet, which may help a  
    network manager identify the source of the  
    confusion.
```

```
    The agent must throttle the generation of  
    consecutive isisVersionSkew notifications  
    so that there is at least a 5-second gap  
    between notifications of this type. When  
    notifications are throttled, they are dropped, not  
    queued for sending at a future time."
```

```
::= { isisNotifications 11 }
```

```
isisAreaMismatch NOTIFICATION-TYPE
```

```
  OBJECTS {
```

```
    isisNotificationCircIfIndex,  
    isisPduFragment,  
    isisSysInstance
```

```
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A notification sent when we receive a Hello  
    PDU from an IS that does not share any  
    area address. This notification includes  
    the header of the packet, which may help a  
    network manager identify the source of the  
    confusion.
```

```
    The agent must throttle the generation of  
    consecutive isisAreaMismatch notifications  
    so that there is at least a 5-second gap  
    between notifications of this type. When  
    notifications are throttled, they are dropped, not  
    queued for sending at a future time."
```



```
::= { isisNotifications 12 }
```

```
isisRejectedAdjacency NOTIFICATION-TYPE
```

```
  OBJECTS {
```

```
    isisNotificationSysLevelIndex,  
    isisNotificationCircIfIndex,  
    isisPduFragment,  
    isisSysInstance
```

```
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A notification sent when we receive a Hello  
    PDU from an IS but do not establish an  
    adjacency for some reason.  
    The agent must throttle the generation of  
    consecutive isisRejectedAdjacency notifications  
    so that there is at least a 5-second gap  
    between notifications of this type.  When  
    notifications are throttled, they are dropped, not  
    queued for sending at a future time."
```

```
::= { isisNotifications 13 }
```

```
isisLSPTooLargeToPropagate NOTIFICATION-TYPE
```

```
  OBJECTS {
```

```
    isisNotificationSysLevelIndex,  
    isisNotificationCircIfIndex,  
    isisPduLspSize,  
    isisPduLspId,  
    isisSysInstance
```

```
  }
```

```
  STATUS current
```

```
  DESCRIPTION
```

```
    "A notification sent when we attempt to propagate  
    an LSP that is larger than the dataLinkBlockSize  
    for the circuit.
```

```
    The agent must throttle the generation of  
    consecutive isisLSPTooLargeToPropagate notifications  
    so that there is at least a 5-second gap  
    between notifications of this type.  When  
    notifications are throttled, they are dropped, not  
    queued for sending at a future time."
```

```
::= { isisNotifications 14 }
```

```
isisOrigLSPBuffSizeMismatch NOTIFICATION-TYPE
```

```
  OBJECTS {
```



```
        isisNotificationSysLevelIndex,
        isisNotificationCircIfIndex,
        isisPduLspId,
        isisPduOriginatingBufferSize,
        isisPduBufferSize,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "A notification sent when a Level 1 LSP or Level
        2 LSP is received that is larger than the local
        value for isisSysLevelOrigLSPBuffSize, or when an
        LSP is received that contains the supported Buffer Size
        option and the value in the PDU option field does
        not match the local value for isisSysLevelOrigLSPBuffSize.
        We pass up the size from the option field and the
        size of the LSP when one of them exceeds our configuration.
        The agent must throttle the generation of
        consecutive isisOrigLSPBuffSizeMismatch notifications
        so that there is at least a 5-second gap
        between notifications of this type. When
        notifications are throttled, they are dropped, not
        queued for sending at a future time."

::= { isisNotifications 15 }

isisProtocolsSupportedMismatch NOTIFICATION-TYPE
    OBJECTS {
        isisNotificationSysLevelIndex,
        isisNotificationCircIfIndex,
        isisPduProtocolsSupported,
        isisPduLspId,
        isisPduFragment,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "A notification sent when a non-pseudonode
        segment 0 LSP is received that has no matching
        protocols supported. This may be because the system
        does not generate the field, or because there are no
        common elements. The list of protocols supported
        should be included in the notification: it may be
        empty if the TLV is not supported, or if the
        TLV is empty.
        The agent must throttle the generation of
        consecutive isisProtocolsSupportedMismatch
        notifications so that there is at least a 5-second
```


gap between notifications of this type. When notifications are throttled, they are dropped, not queued for sending at a future time."

::= { isisNotifications 16 }

isisAdjacencyChange NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisNotificationCircIfIndex,
 isisPduLspId,
 isisAdjState,
 isisSysInstance
}

STATUS current

DESCRIPTION

"A notification sent when an adjacency changes state, entering or leaving state up.
The first 6 bytes of the isisPduLspId are the SystemID of the adjacent IS.
The isisAdjState is the new state of the adjacency."

::= { isisNotifications 17 }

isisLSPErrorDetected NOTIFICATION-TYPE

OBJECTS {
 isisNotificationSysLevelIndex,
 isisPduLspId,
 isisNotificationCircIfIndex,
 isisPduFragment,
 isisErrorOffset,
 isisErrorTLVType,
 isisSysInstance
}

STATUS current

DESCRIPTION

"This notification is generated when we receive an LSP with a parse error. The isisCircIfIndex holds an index of the circuit on which the PDU arrived. The isisPduFragment holds the start of the LSP, and the isisErrorOffset points to the problem. If the problem is a malformed TLV, isisErrorOffset points to the start of the TLV, and isisErrorTLVType holds the value of the type.
If the problem is with the LSP header, isisErrorOffset points to the suspicious byte.
The number of such LSPs is accumulated in isisSysStatLSPErrors."


```
 ::= { isisNotifications 18 }

-- Agent Conformance Definitions
-- We define the objects a conformant agent must define

isisCompliances OBJECT IDENTIFIER ::= { isisConformance 1 }
isisGroups      OBJECT IDENTIFIER ::= { isisConformance 2 }

-- compliance statements

isisCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for agents that support
        the IS-IS MIB.

        There are a number of INDEX objects that cannot be
        represented in the form of OBJECT clauses in SMIV2,
        but for which there are compliance requirements.
        Those requirements and similar requirements for
        related objects are expressed below, in
        pseudo-OBJECT clause form, in this description:

        -- OBJECT isisSummAddressType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4 Summary
        --     Addresses and anticipates the support of
        --     IPv6 addresses.
        --
        -- OBJECT isisRedistributeAddrType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4
        --     Redistribution Addresses and anticipates
        --     the support of IPv6 addresses."
        --
        -- OBJECT isisISAdjIPAddrType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4
        --     Adjacency Addresses and anticipates the
        --     support of IPv6 addresses.
    MODULE -- this module
```



```
MANDATORY-GROUPS {
    isisSystemGroup,
    isisCircuitGroup,
    isisISAdjGroup,
    isisNotificationObjectGroup,
    isisNotificationGroup
}
::= { isisCompliances 1 }

-- List of all groups, mandatory and optional
isisAdvancedCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        "The compliance statement for agents that fully
        support the IS-IS MIB.

        There are a number of INDEX objects that cannot be
        represented in the form of OBJECT clauses in SMIV2,
        but for which there are compliance requirements.
        Those requirements and similar requirements for
        related objects are expressed below, in
        pseudo-OBJECT clause form, in this description:

        -- OBJECT isisSummAddressType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4 Summary
        --     Addresses and anticipates the support of
        --     IPv6 addresses.
        --
        --
        -- OBJECT isisRedistributeAddrType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4
        --     Redistribution Addresses and anticipates
        --     the support of IPv6 addresses."
        --
        -- OBJECT isisISAdjIPAddrType
        -- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
        --
        -- DESCRIPTION
        --     The MIB requires support for IPv4
        --     Adjacency Addresses and anticipates the
        --     support of IPv6 addresses.
        --
```



```
--
-- OBJECT isisIPRADestType
-- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
--
-- DESCRIPTION
--   The MIB requires support for IPv4 RA
--   Addresses and anticipates the support of
--   IPv6 addresses.
--
--
-- OBJECT isisIPRANextHopType
-- SYNTAX InetAddressType { ipv4(1), ipv6(2) }
--
-- DESCRIPTION
--   The MIB requires support for IPv4 NextHop
--   Addresses and anticipates the support of
--   IPv6 addresses.
MODULE -- this module
  MANDATORY-GROUPS {
    isisSystemGroup,
    isisCircuitGroup,
    isisISAdjGroup,
    isisNotificationObjectGroup,
    isisNotificationGroup,
    isisISPDUCounterGroup,
    isisRATableGroup,
    isisISIPRADestGroup,
    isisLSPGroup
  }
 ::= { isisCompliances 2 }

isisReadOnlyCompliance MODULE-COMPLIANCE
  STATUS      current
  DESCRIPTION
    "When this MIB is implemented without support for
    read-create (i.e., in read-only mode), the
    implementation can claim read-only compliance.  Such
    a device can then be monitored but cannot be
    configured with this MIB."
  MODULE -- this module
    MANDATORY-GROUPS {
      isisSystemGroup,
      isisCircuitGroup,
      isisISAdjGroup
    }

  OBJECT isisSysLevelType
  MIN-ACCESS read-only
```


DESCRIPTION

"Write access is not required."

OBJECT isisSysID

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysMaxPathSplits

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysMaxLSPGenInt

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysPollESHelloRate

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysWaitTime

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysAdminState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysL2toL1Leaking

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysMaxAge

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisManAreaAddrExistState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevel0origLSPBuffSize

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelMinLSPGenInt

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelSetOverload

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelSetOverloadUntil

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelMetricStyle

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelSPFConsiders

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysLevelTEEnabled

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysReceiveLSPBufferSize

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSummAddrExistState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSummAddrMetric

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSummAddrFullMetric

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisRedistributeAddrExistState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircAdminState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircExistState

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircType

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircExtDomain

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelType

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircPassiveCircuit

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircMeshGroupEnabled

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircMeshGroup

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircSmallHellos

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircExtendedCircID

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircIfIndex

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCirc3WayEnabled

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelMetric

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelWideMetric

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelISPriority

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelHelloMultiplier

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelHelloTimer

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelDRHelloTimer

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelLSPThrottle

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelMinLSPRetransInt

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelCSNPInterval

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisCircLevelPartSNPInterval

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

OBJECT isisSysInstance

MIN-ACCESS read-only

DESCRIPTION

"Write access is not required."

::= { isisCompliances 3 }

-- MIB Grouping

isisSystemGroup OBJECT-GROUP

OBJECTS {

isisSysVersion,
isisSysLevelType,
isisSysID,
isisSysMaxPathSplits,
isisSysMaxLSPGenInt,
isisSysPollESHelloRate,
isisSysWaitTime,
isisSysAdminState,
isisSysL2toL1Leaking,
isisSysMaxAge,
isisSysProtSupported,
isisSysNotificationEnable,
isisManAreaAddrExistState,
isisSysLevelOrigLSPBuffSize,


```
isisSysLevelMinLSPGenInt,
isisSysLevelState,
isisSysLevelSetOverload,
isisSysLevelSetOverloadUntil,
isisSysLevelMetricStyle,
isisSysLevelSPFConsiders,
isisSysLevelTEEnabled,
isisSysReceiveLSPBufferSize,
isisSummAddrExistState,
isisSummAddrMetric,
isisAreaAddr,
isisSummAddrFullMetric,
isisRedistributeAddrExistState,
isisRouterHostName,
isisRouterID,
isisSysStatCorrLSPs,
isisSysStatLSPDbase0loads,
isisSysStatManAddrDropFromAreas,
isisSysStatAttmpToExMaxSeqNums,
isisSysStatSeqNumSkips,
isisSysStatOwnLSPPurges,
isisSysStatIDFieldLenMismatches,
isisSysStatPartChanges,
isisSysStatSPFRuns,
isisSysStatAuthTypeFails,
isisSysStatAuthFails,
isisSysStatLSPErrors,
isisSysInstance
}
STATUS current
DESCRIPTION
    "The collections of objects used to manage an
    IS-IS router."
 ::= { isisGroups 1 }

isisCircuitGroup OBJECT-GROUP
    OBJECTS {
        isisNextCircIndex,
        isisCircAdminState,
        isisCircExistState,
        isisCircType,
        isisCircExtDomain,
        isisCircLevelType,
        isisCircAdjChanges,
        isisCircNumAdj,
        isisCircInitFails,
        isisCircRejAdjs,
        isisCircIDFieldLenMismatches,
```



```
isisCircMaxAreaAddrMismatches,
isisCircAuthTypeFails,
isisCircAuthFails,
isisCircLANDesISChanges,
isisCircPassiveCircuit,
isisCircMeshGroupEnabled,
isisCircMeshGroup,
isisCircSmallHellos,
isisCircLastUpTime,
isisCirc3WayEnabled,
isisCircExtendedCircID,
isisCircIfIndex,
isisCircLevelMetric,
isisCircLevelWideMetric,
isisCircLevelISPriority,
isisCircLevelIDOctet,
isisCircLevelID,
isisCircLevelDesIS,
isisCircLevelHelloMultiplier,
isisCircLevelHelloTimer,
isisCircLevelDRHelloTimer,
isisCircLevelLSPThrottle,
isisCircLevelMinLSPRetransInt,
isisCircLevelCSNPInterval,
isisCircLevelPartSNPInterval,
isisSysInstance
}
STATUS current
DESCRIPTION
    "The collections of objects used to describe an
    IS-IS Circuit."
 ::= { isisGroups 2 }

isisISAdjGroup OBJECT-GROUP
    OBJECTS {
        isisISAdjState,
        isisISAdj3WayState,
        isisISAdjNeighSNPAAAddress,
        isisISAdjNeighSysType,
        isisISAdjNeighSysID,
        isisISAdjNbrExtendedCircID,
        isisISAdjUsage,
        isisISAdjHoldTimer,
        isisISAdjNeighPriority,
        isisISAdjLastUpTime,
        isisISAdjAreaAddress,
        isisISAdjIPAddrType,
        isisISAdjIPAddrAddress,
```



```
        isisISAdjProtSuppProtocol,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "The collections of objects used to manage an
        IS-IS Adjacency."
 ::= { isisGroups 3 }

isisNotificationObjectGroup OBJECT-GROUP
    OBJECTS {
        isisNotificationSysLevelIndex,
        isisNotificationCircIfIndex,
        isisPduLspId,
        isisPduFragment,
        isisPduFieldLen,
        isisPduMaxAreaAddress,
        isisPduProtocolVersion,
        isisPduLspSize,
        isisPduOriginatingBufferSize,
        isisPduBufferSize,
        isisPduProtocolsSupported,
        isisAdjState,
        isisErrorOffset,
        isisErrorTLVType,
        isisNotificationAreaAddress,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "The objects used to record notification parameters."
 ::= { isisGroups 4 }

isisNotificationGroup          NOTIFICATION-GROUP
    NOTIFICATIONS {
        isisDatabaseOverload,
        isisManualAddressDrops,
        isisCorruptedLSPDetected,
        isisAttemptToExceedMaxSequence,
        isisIDLenMismatch,
        isisMaxAreaAddressesMismatch,
        isisOwnLSPPurge,
        isisSequenceNumberSkip,
        isisAuthenticationTypeFailure,
        isisAuthenticationFailure,
        isisVersionSkew,
        isisAreaMismatch,
```



```
        isisRejectedAdjacency,
        isisLSPTooLargeToPropagate,
        isisOrigLSPBuffSizeMismatch,
        isisProtocolsSupportedMismatch,
        isisAdjacencyChange,
        isisLSPErrorsDetected,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "The collections of notifications sent by an IS."
 ::= { isisGroups 5 }
```

isisISPDUCounterGroup OBJECT-GROUP

```
    OBJECTS {
        isisPacketCountIIHello,
        isisPacketCountISHello,
        isisPacketCountESHello,
        isisPacketCountLSP,
        isisPacketCountCSNP,
        isisPacketCountPSNP,
        isisPacketCountUnknown,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "The collections of objects used to count protocol PDUs."
 ::= { isisGroups 6 }
```

isisRATableGroup OBJECT-GROUP

```
    OBJECTS {
        isisRAExistState,
        isisRAAdminState,
        isisRAAddrPrefix,
        isisRAMapType,
        isisRAMetric,
        isisRAMetricType,
        isisRASNPAAAddress,
        isisRASNPAMask,
        isisRASNPAPrefix,
        isisRAType,
        isisSysInstance
    }
    STATUS current
    DESCRIPTION
        "The collections of objects used to manage the
```



```
        reachable NSAP prefixes."
 ::= { isisGroups 7 }
```

```
isisISIPRADestGroup OBJECT-GROUP
```

```
    OBJECTS {
        isisIPRANextHopType,
        isisIPRANextHop,
        isisIPRAType,
        isisIPRAExistState,
        isisIPRAAdminState,
        isisIPRAMetric,
        isisIPRAFullMetric,
        isisIPRAMetricType,
        isisIPRASNPAAAddress,
        isisIPRASourceType,
        isisSysInstance
    }
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The collections of objects used to manage configured
        IP addresses."
```

```
 ::= { isisGroups 8 }
```

```
isisLSPGroup OBJECT-GROUP
```

```
    OBJECTS {
        isisLSPSeq,
        isisLSPZeroLife,
        isisLSPChecksum,
        isisLSPLifetimeRemain,
        isisLSPPDULength,
        isisLSPAttributes,
        isisLSPTLVSeq,
        isisLSPTLVChecksum,
        isisLSPTLVType,
        isisLSPTLVLen,
        isisLSPTLVValue,
        isisSysInstance
    }
```

```
    STATUS current
```

```
    DESCRIPTION
```

```
        "The collections of objects used to observe the LSP
        Database."
```

```
 ::= { isisGroups 9 }
```

```
END
```


5. IANA Considerations

6. Security Considerations

Please refer to [section 7 of \[RFC4444\]](#).

7. Acknowledgement

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