

Superseded

CableHome™ CAP MIB Specification

CH-SP-MIB-CAP-I06-040806

Issued

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Document Status Sheet

Document Control Number:	CH-SP-MIB-CAP-I06-040806		
Document Title:	CableHome™ CAP MIB Specification		
Revision History:	I06 – August 6, 2004 I05 – January 29, 2004 I04 – August 1, 2003 I03 – April 11, 2003 I02 – September 20, 2002 I01 – April 5, 2002 D03 – March 21, 2002 D02 – January 31, 2002 D01 – January 8, 2002		
Date:	August 6, 2004		
Status:	Work in Progress	Draft	Issued
Distribution Restrictions:	Author Only	CL/Member	CL/ CableHome/Ve ndor
			Public

Key to Document Status Codes:

- Work in Progress** An incomplete document, designed to guide discussion and generate feedback, which may include several alternative requirements for consideration.
- Draft** A document in specification format considered largely complete, but lacking review by Members and vendors. Drafts are susceptible to substantial change during the review process.
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Superseded

This specification describes CableHome Addressing Portal (CAP) MIB Requirements.

2 REFERENCES

2.1 Normative References

In order to claim compliance with this specification, it is necessary to conform to the following standards and other works as indicated, in addition to the other requirements of this specification. Notwithstanding, intellectual property rights may be required to use or implement such normative references.

- [1] CableHome 1.0 Specification, CH-SP-CH1.0-I05-030801, August 1, 2003.
- [2] CableHome 1.1 Specification, CH-SP-CH1.1-I05-040806, August 6, 2004.
- [3] CableLabs® Definition MIB Specification, CL-SP-MIB-CLABDEF-I04-040804, August 4, 2004.

2.2 Reference Acquisition

CableLabs Specifications:

- Cable Television Laboratories, Inc., <http://www.cablelabs.com/>

3 ACRONYMS

This specification uses the following acronyms:

CAP	CableHome Addressing Portal
CDC	CableHome DHCP Client (component of CDP)
CDP	CableHome DHCP Portal
CDS	CableHome DHCP Server (component of CDP)
CMP	CableHome Management Portal
CTP	CableHome Test Portal
DHCP	Dynamic Host Configuration Protocol
NAPT	Network Address and Port Translation
NAT	Network Address Translation
PS	Portal Services

4 REQUIREMENTS

The CableHome™ CAP MIB MUST be implemented as defined below.

```

CABH-CAP-MIB DEFINITIONS ::= BEGIN
IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    Unsigned32,
    Integer32           FROM SNMPv2-SMI
    TimeStamp,
    TruthValue,
    RowStatus,
    DateAndTime,
    PhysAddress        FROM SNMPv2-TC
    OBJECT-GROUP,
    MODULE-COMPLIANCE FROM SNMPv2-CONF
    InetAddressType,
    InetAddress,
    InetPortNumber     FROM INET-ADDRESS-MIB
    clabProjCableHome  FROM CLAB-DEF-MIB
    SntpAdminString    FROM SNMP-FRAMEWORK-MIB;

cabhCapMib MODULE-IDENTITY
    LAST-UPDATED      "200408060000Z" --August 6, 2004
    ORGANIZATION      "CableLabs Broadband Access Department"
    CONTACT-INFO
        "Kevin Luehrs
        Postal: Cable Television
        858 Coal Creek Circle
        Louisville, Colorado 80027
        U.S.A.
        Phone:  +1 303-661-9100
        Fax:    +1 303-661-9199
        E-mail: k.luehrs@cablelabs.com; mibs@cablelabs.com"
    DESCRIPTION
        "This MIB module supplies the basic management objects
        for the CableHome Addressing Portal (CAP) portion of
        the PS."
    ::= { clabProjCableHome 3 }

cabhCapObjects OBJECT IDENTIFIER ::= { cabhCapMib 1 }
cabhCapBase   OBJECT IDENTIFIER ::= { cabhCapObjects 1 }
cabhCapMap    OBJECT IDENTIFIER ::= { cabhCapObjects 2 }

-----
--
--      General CAP Parameters
--
-----

cabhCapTcpTimeWait OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "This object is the maximum inactivity time to wait before

```

```

        assuming TCP session is terminated. It has no relation to
        the TCP session TIME_WAIT state referred to in [RFC793]."
```

REFERENCE

```

        "CableHome 1.1 Specification, Packet Handling & Address
        Translation section."
```

```

DEFVAL { 300 }
 ::= { cabhCapBase 1 }
```

cabhCapUdpTimeWait OBJECT-TYPE

```

SYNTAX      Unsigned32
UNITS       "seconds"
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The inactivity time to wait before destroying
    CAP mappings for UDP."
```

REFERENCE

```

    "CableHome 1.1 Specification, Packet Handling & Address
    Translation section."
```

```

DEFVAL { 300 } -- 5 minutes
 ::= { cabhCapBase 2 }
```

cabhCapIcmpTimeWait OBJECT-TYPE

```

SYNTAX      Unsigned32
UNITS       "seconds"
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The inactivity time to wait before destroying
    CAP mappings for ICMP."
```

REFERENCE

```

    "CableHome 1.1 Specification, Packet Handling & Address
    Translation section."
```

```

DEFVAL { 300 } -- 5 minutes
 ::= { cabhCapBase 3 }
```

cabhCapPrimaryMode OBJECT-TYPE

```

SYNTAX      INTEGER {
                napt(1),          -- NAT with Port Translation Mode
                nat(2),           -- Traditional NAT Mode
                passthrough(3),   -- Passthrough/Bridging Mode
                disabled(4)       -- Disabled Mode
            }
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The Primary Packet-handling Mode of the Portal Services
    logical element (PS) of a CableHome compliant residential
    gateway device. This object configures operation of the PS
    packet handling functions.

    When the value of this object is napt(1), the PS is
    required to support the Network Address and Port
    Translation (NAPT) process in accordance with the NAPT
    requirements defined in IETF RFC 3022. When operating in
    NAPT Primary Packet Handling Mode, the PS supports the
    translation of multiple LAN-Trans IP addresses and their
    TCP/UDP ports into a single WAN-Data IP address and its
    TCP/UDP ports.

    When the value of this object is nat(2), the PS is required
    to support the Network Address Translation (NAT) process in
    accordance with the NAT requirements defined in IETF RFC
```

3022. When operating in NAT Primary Packet Handling Mode, the PS supports the translation of multiple LAN-Trans IP addresses into the same number of unique WAN-Data IP addresses.

When the value of this object is passthrough(3), the PS is required to act as a transparent bridge in accordance with IEEE 802.1D. When operating in Passthrough Primary Packet Handling Mode, the PS does not translate network addresses, and bridges all traffic between its LAN and WAN interfaces.

When the value of this object is disabled(4), the PS is required to exhibit the following behavior:

- release its WAN-Man IP address lease and any WAN-Data IP address lease(s)
- act as a transparent bridge in accordance with IEEE 802.1D as though the value of cabhCapPrimaryMode is passthrough(3)
- disable the firewall and change the value of cabhSec2FwEnable to disabled(2)
- do not allow the value of cabhSec2FwEnable to be set to enable(1).

The PS MUST return inconsistentValue error if an SNMP manager attempts to set the value of cabhSec2FwEnable to enable(1) when the value of cabhCapPrimaryMode is disabled(4).

- drop any traffic addressed to its Server Router address (cabhCdpServerRouter) or to its well-known LAN IP address 192.168.0.1.

The PS MUST delete dynamically-created row entries from the cabhCapMappingTable, i.e. those with cabhCapMappingMethod = dynamic(2), when the value of cabhCapPrimaryMode changes. The PS MUST NOT delete statically-created row entries from the cabhCapMappingTable where cabhCapMappingMethod = static(1), when the value of cabhCapPrimaryMode changes."

REFERENCE

"CableHome 1.1 Specification, Packet Handling & Address Translation section."

DEFVAL { napt }

::= { cabhCapBase 4 }

cabhCapSetToFactory OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"Reading this object always returns false(2). When the cabhCapSetToFactory object is set to true(1), the PS must take the following actions:

1. Clear all entries in the cabhCapMappingTable and cabhCapPassthroughTable.
2. Reset the following objects to their factory default values:
 - cabhCapTcpTimeWait,
 - cabhCapUdpTimeWait,
 - cabhCapIcmpTimeWait,
 - cabhCapPrimaryMode"

REFERENCE

"CableHome 1.1 Specification, Packet Handling & Address Translation section."

::= { cabhCapBase 5 }

```

cabhCapLastSetToFactory OBJECT-TYPE
    SYNTAX      TimeStamp
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of sysUpTime when cabhCapSetToFactory was
        last set to true. Zero if never reset."
    ::= { cabhCapBase 6 }

-----
--
--      cabhCapMappingTable (CAP Mapping Table)
--
--      The cabhCapMappingTable contains information pertaining to all
--      NAPT and NAT mappings in a CableHome(TM) compliant residential
--      gateway device.
--
-----

cabhCapMappingTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF CabhCapMappingEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This table contains IP address mappings between private
        network addresses, or network addresses and port
        numbers/ICMP Identifiers, assigned to devices on the
        subscriber's home LAN, and network addresses, or network
        addresses and port numbers/ICMP Identifiers on the WAN,
        presumed to be on a separate subnetwork than the private
        IP addresses.  The CAP Mapping Table is used by the
        CableHome Address Portal (CAP) function of the PS to make
        packet forwarding decisions."
    REFERENCE
        "CableHome 1.1 Specification, Packet Handling & Address
        Translation section."
    ::= { cabhCapMap 1 }

cabhCapMappingEntry OBJECT-TYPE
    SYNTAX      CabhCapMappingEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "List of the private IP (LAN) address - to - cable
        operator assigned IP (WAN) address mappings stored
        in the PS and used by the PS to make packet
        forwarding decisions."
    INDEX { cabhCapMappingIndex }
    ::= { cabhCapMappingTable 1 }

CabhCapMappingEntry ::= SEQUENCE {
    cabhCapMappingIndex      INTEGER,
    cabhCapMappingWanAddrType  InetAddressType,
    cabhCapMappingWanAddr     InetAddress,
    cabhCapMappingWanPort     InetPortNumber,
    cabhCapMappingLanAddrType  InetAddressType,
    cabhCapMappingLanAddr     InetAddress,
    cabhCapMappingLanPort     InetPortNumber,
    cabhCapMappingMethod      INTEGER,

```

```

    cabhCapMappingProtocol          INTEGER,
    cabhCapMappingRowStatus        RowStatus,
    cabhCapMappingNumPorts         Unsigned32,
    cabhCapMappingRowDescr        SnmpAdminString,
    cabhCapMappingCreateTime       DateAndTime,
    cabhCapMappingLastUpdateTime   DateAndTime,
    cabhCapMappingDuration         INTEGER
}

cabhCapMappingIndex OBJECT-TYPE
    SYNTAX          INTEGER (1..65535)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The Index into the CAP Mapping Table."
    ::= { cabhCapMappingEntry 1 }

cabhCapMappingWanAddrType OBJECT-TYPE
    SYNTAX          InetAddressType
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The IP address type assigned on the WAN side."
    DEFVAL { ipv4 }
    ::= { cabhCapMappingEntry 2 }

cabhCapMappingWanAddr OBJECT-TYPE
    SYNTAX          InetAddress
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The IP address assigned by the cable operator's address
        (DHCP) server, and comprising the WAN-side IP address
        of the CAP Mapping tuple. This object is populated
        either dynamically by LAN-to-WAN outbound traffic or
        statically by the cable operator."
    ::= { cabhCapMappingEntry 3 }

cabhCapMappingWanPort OBJECT-TYPE
    SYNTAX          InetPortNumber
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The TCP/UDP port number or ICMP Identifier
        on the WAN side. A port number/Identifier of
        0 indicates either a NAT or a DMZ mapping.
        A non-zero port number/Identifier indicates
        a NAPT mapping. If the value of
        cabhCapMappingNumPorts MIB object is non-zero
        this MIB represents a starting TCP/UDP port
        number on the WAN side for which a mapping
        entry is created."
    DEFVAL { 0 }
    ::= { cabhCapMappingEntry 4 }

cabhCapMappingLanAddrType OBJECT-TYPE
    SYNTAX          InetAddressType
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The IP address type assigned on the LAN side."
    DEFVAL { ipv4 }

```

```
 ::= { cabhCapMappingEntry 5 }

cabhCapMappingLanAddr OBJECT-TYPE
    SYNTAX      InetAddress
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The IP address of the LAN-Trans IP Device. This object is
        populated either dynamically as a result of LAN-to-WAN
        outbound traffic or statically by the cable operator."
 ::= { cabhCapMappingEntry 6 }

cabhCapMappingLanPort OBJECT-TYPE
    SYNTAX      InetPortNumber
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The TCP/UDP port number or ICMP Identifier
        on the LAN side. A port number/Identifier
        of 0 indicates either a DMZ mapping or a NAT
        mapping. A non-zero port number/Identifier
        indicates a NAPT mapping. If the value of
        cabhCapMappingNumPorts MIB object is non-zero
        then this MIB represents a starting TCP/UDP port
        number on the LAN side for which a mapping
        entry is created."
    DEFVAL { 0 }
 ::= { cabhCapMappingEntry 7 }

cabhCapMappingMethod OBJECT-TYPE
    SYNTAX      INTEGER {
                    static(1),
                    dynamic(2),
                    upnp(3)
                }
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Indicates how this mapping was created. Static means
        that it was provisioned, and dynamic means that it
        was handled by the PS itself. upnp (3) means that the
        CAP mapping entry was created by some UPnP compliant
        application."
 ::= { cabhCapMappingEntry 8 }

cabhCapMappingProtocol OBJECT-TYPE
    SYNTAX      INTEGER {
                    other(1),    -- any other protocol; e.g. IGMP
                    icmp(2),
                    udp(3),
                    tcp(4),
                    all(255)    -- covers all the protocols
                }
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The protocol for this mapping entry. The value
        of other(1) represents a protocol other
        than ICMP, TCP, and UDP. Thus, when the value
        other(1) is specified for the cabhCapMappingProtocol
        value of a CAP Mapping Table entry,
        TCP, UDP or ICMP packets MUST NOT be forwarded even
        if the WAN and LAN IP address and port tuple
```

of the packet matches with mapping entry.
 The value of all(255) represents all protocol types. Thus,
 when the cabhCapMappingProtocol value
 all(255) is specified for an entry in the CAP Mapping
 Table, traffic of all protocol types MUST be forwarded
 accordingly if the WAN and LAN IP address and port tuple
 in the packet matches the mapping entry."

```
::= { cabhCapMappingEntry 9 }
```

cabhCapMappingRowStatus OBJECT-TYPE

```
SYNTAX      RowStatus
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
```

"The RowStatus interlock for the creation and deletion of a cabhCapMappingTable entry. Changing the value of the IP address or port number columns of the CAP Mapping Table may have an effect on active traffic, so the PS will prevent modification of this table's columns and return an inconsistentValue error when cabhCapMappingRowStatus object is active(1).

The PS must not allow RowStatus to be set to notInService(2) by a manager.

A newly created row cannot be set to active(1) until the corresponding instances of cabhCapMappingWanAddr, cabhCapMappingLanAddr, and cabhCapMappingProtocol have been set.

If the manager attempts to populate a row entry in the table with a non-unique value for the combination of cabhCapMappingWanAddr and range of WAN port(s) (identified by cabhCapMappingWanPort to cabhCapMappingWanPort + cabhCapMappingNumPorts - 1), or a non-unique value for the combination of cabhCapMappingLanAddr and range of LAN port(s) (identified by cabhCapMappingLanPort to cabhCapMappingLanPort + cabhCapMappingNumPorts - 1), the PS MUST prevent the creation of this row and return an inconsistentValue error. This prevents creation of entries with overlapping port ranges in the CAP table.

If the manager attempts to populate a row entry with a zero value for cabhCapMappingWanPort and a non-zero value for cabhCapMappingLanPort or a row entry with a zero value for cabhCapMappingLanPort and a non-zero value for cabhCapMappingWanPort, the PS MUST prevent the creation of this row and return an inconsistentValue error. This prevents creation of invalid NAT or NAPT entries.

If the manager attempts to populate a row entry with non-zero values for both cabhCapMappingWanPort and cabhCapMappingLanPort, but a zero value for cabhCapMappingNumPorts, the PS MUST prevent the creation of this row and return an inconsistentValue error. This prevents creation of NAPT entries.

When Primary Packet-handling Mode is NAPT (cabhCapPrimaryMode is napt(1)), provisioned rows can be set to active(1) regardless of whether the value to which cabhCapMappingWanPort, cabhCapMappingLanPort, and cabhCapMappingNumPorts have been set is zero or nonzero.

When Primary Packet-handling Mode is NAT (cabhCapPrimaryMode is nat(2)), a newly created row can not be set to active(1) if a non-zero value have been set for cabhCapMappingWanPort, cabhCapMappingLanPort and cabhCapMappingNumPorts.

In NAPT Primary Packet-handling mode, a row entry with zero values for cabhCapMappingWanPort, cabhCapMappingLanPort, and cabhCapMappingNumPorts objects represents a DMZ entry."

```
::={ cabhCapMappingEntry 10 }
```

cabhCapMappingNumPorts OBJECT-TYPE

SYNTAX Unsigned32(1..65535)

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This object represents number of ports available for port translation on both LAN and WAN side.

When both cabhCapMappingWanPort and cabhCapMappingLanPort are set to zero, the PS MUST set the value of this MIB to 0 and such a row entry represents either a DMZ entry (when primary packet handling mode is NAPT) or a NAT entry (when primary packet handling mode is NAT).

When a row entry is created with non-zero values for cabhCapMappingWanPort, cabhCapMappingLanPort, and cabhCapMappingNumPorts the PS MUST translate range of ports on the WAN side (identified by cabhCapMappingWanPort to cabhCapMappingWanPort + cabhCapMappingNumPorts-1) to range of ports on the LAN side (identified by cabhCapMappingLanPort to cabhCapMappingLanPort + cabhCapMappingNumPorts-1).

The PS MUST ignore this MIB for a CAP mapping entry with the value of cabhCapMappingProtocol equal to icmp(2)."

```
DEFVAL { 1 }
```

```
::= { cabhCapMappingEntry 11 }
```

cabhCapMappingRowDescr OBJECT-TYPE

SYNTAX SnmpAdminString (SIZE(0..32))

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"A string value that can be used to describe the purpose or attributes of the CAP Mapping entry."

```
DEFVAL { "" }
```

```
::= { cabhCapMappingEntry 12 }
```

cabhCapMappingCreateTime OBJECT-TYPE

SYNTAX DateAndTime

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"This is date and time when the CAP

```

        mapping entry is created."
 ::= { cabhCapMappingEntry 13 }

cabhCapMappingLastUpdateTime OBJECT-TYPE
    SYNTAX      DateAndTime
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "This is date and time when the CAP
        mapping entry is last updated. When
        CAP mapping entry is first created
        The PS MUST populate this MIB with
        the value of cabhCapMappingCreateTime MIB."
 ::= { cabhCapMappingEntry 14 }

cabhCapMappingDuration OBJECT-TYPE
    SYNTAX      Integer32 (-1|0..2147483647)
    UNITS       "seconds"
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "When a value greater than zero
        is assigned to this object, the PS MUST
        remove the CAP entry after the time
        duration, represented by
        this object, elapses starting from
        cabhCapMappingLastUpdateTime.

        When a value of 0 is assigned to this object,
        the PS MUST retain the CAP mapping entry
        until reboot or reset. The PS MUST retain
        a CAP mapping entry with cabhCapMappingDuration
        MIB set to 0 and cabhCapMappingMethod set
        to static(1) across the reboots. The PS MUST
        NOT retain a CAP mapping entry with
        cabhCapMappingDuration MIB set to 0 and
        cabhCapMappingMethod set to upnp(3) across
        the reboots.

        When a value of -1 is assigned for this
        MIB the PS MUST ignore this MIB and
        MUST remove the CAP mapping entries
        based on TCP, UDP and ICMP inactivity
        time-wait depending upon their protocol
        type.

        When the cabhCapMappingMethod object is
        static(1), the default value for this object
        is 0.

        When the cabhCapMappingMethod object is
        dynamic(2), the PS MUST set the value of
        this object to -1.

        When the cabhCapMappingMethod object is
        upnp(3), the default value for this object
        is -1."
 ::= { cabhCapMappingEntry 15 }

```

```

-----
--

```

```

--      cabhCapPassthroughTable (CAP Passthrough Table)
--
--      The cabhCapPassthroughTable contains the hardware addresses
--      for all LAN IP Devices for which the PS will bridge traffic at
--      OSI Layer 2 when the PS's cabhCapPrimaryMode is set to forward
--      traffic at OSI Layer 3 (NAPT/NAT) for all other hardware
--      addresses.
--
=====

cabhCapPassthroughTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF CabhCapPassthroughEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This table contains hardware addresses of LAN IP Devices
        for which the PS will bridge traffic at OSI Layer 2."
    REFERENCE
        "CableHome 1.1 Specification, Packet Handling & Address
        Translation section."
    ::= { cabhCapMap 2 }

cabhCapPassthroughEntry OBJECT-TYPE
    SYNTAX          CabhCapPassthroughEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "List of hardware addresses of LAN IP Devices for which
        the PS will bridge traffic at OSI Layer 2."
    INDEX { cabhCapPassthroughIndex }
    ::= { cabhCapPassthroughTable 1 }

CabhCapPassthroughEntry ::= SEQUENCE {
    cabhCapPassthroughIndex      INTEGER,
    cabhCapPassthroughMacAddr    PhysAddress,
    cabhCapPassthroughRowStatus  RowStatus
}

cabhCapPassthroughIndex OBJECT-TYPE
    SYNTAX          INTEGER (1..65535)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The index into the CAP Passthrough Table."
    ::= { cabhCapPassthroughEntry 1 }

cabhCapPassthroughMacAddr OBJECT-TYPE
    SYNTAX          PhysAddress (SIZE(0..16))
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "Hardware address of the LAN IP Device for which the PS
        MUST bridge traffic at OSI Layer 2."
    ::= { cabhCapPassthroughEntry 2 }

cabhCapPassthroughRowStatus OBJECT-TYPE
    SYNTAX          RowStatus
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
        "The RowStatus interlock for the creation and
        deletion of a cabhCapPassthroughTable entry.
        Any writable object in each row can be modified

```

```

        at any time while the row is active(1).\"
 ::= { cabhCapPassthroughEntry 3 }
--
-- notification group is for future extension.
--

cabhCapNotification    OBJECT IDENTIFIER ::= {
    cabhCapMib 2 0 }
cabhCapConformance    OBJECT IDENTIFIER ::= {
    cabhCapMib 3 }
cabhCapCompliances    OBJECT IDENTIFIER ::= {
    cabhCapConformance 1 }
cabhCapGroups         OBJECT IDENTIFIER ::= {
    cabhCapConformance 2 }

--
-- Notification Group
--

-- compliance statements

cabhCapBasicCompliance MODULE-COMPLIANCE
    STATUS current
    DESCRIPTION
        \"The compliance statement for devices that implement
        the CableHome Portal Services functionality.\"
    MODULE --cabhCapMib

-- unconditionally mandatory groups

MANDATORY-GROUPS {
    cabhCapGroup
}

OBJECT cabhCapMappingProtocol
    SYNTAX INTEGER { icmp(2) }
    WRITE-SYNTAX INTEGER { other(1), udp(3), tcp(4), all(255) }
    DESCRIPTION
        \"icmp(2) applies only to dynamic entries.\"

    ::= { cabhCapCompliances 1 }

cabhCapGroup OBJECT-GROUP
    OBJECTS {
        cabhCapTcpTimeWait,
        cabhCapUdpTimeWait,
        cabhCapIcmpTimeWait,
        cabhCapPrimaryMode,
        cabhCapSetToFactory,
        cabhCapLastSetToFactory,
        cabhCapMappingWanAddrType,
        cabhCapMappingWanAddr,
        cabhCapMappingWanPort,
        cabhCapMappingLanAddrType,
        cabhCapMappingLanAddr,
        cabhCapMappingLanPort,
        cabhCapMappingMethod,
        cabhCapMappingProtocol,
        cabhCapMappingRowStatus,
        cabhCapPassthroughMacAddr,
        cabhCapPassthroughRowStatus,

```

```
cabhCapMappingNumPorts,  
cabhCapMappingRowDescr,  
cabhCapMappingCreateTime,  
cabhCapMappingLastUpdateTime,  
cabhCapMappingDuration  
}  
STATUS          current  
DESCRIPTION  
    "Group of objects for CableHome CAP MIB."  
 ::= { cabhCapGroups 1 }
```

END

5 ACKNOWLEDGEMENTS

The following contributors deserve genuine gratitude for their efforts in the development of the CAP MIB specification.

Roy Spitzer, Consultant to CableLabs
Mike Mannette, Consultant to CableLabs
Randy Dunton of Intel
Dmitrii Loukianov of Intel
Itay Sherman of Texas Instruments
Chris Zacker of Broadcom
Rick Vetter, Consultant to CableLabs
John Bevilacqua of YAS

Appendix I Revision History

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I02-020920:

ECN Number	ECN Date	Summary
CH1-N-02007	6/20/02	Modify the default values of the CAP Mapping Table timeout values for UDP, TCP, and ICMP protocols.
CH1-N-02011	6/20/02	Eight technical/editorial changes.
CH1-N-02017	8/15/02	Four technical/editorial changes.
CH1-N-02019	8/15/02	Four technical/editorial changes.

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I03-030411:

ECN Number	ECN Date	Summary
CH1-N-02054	1/23/03	Provide more descriptive text in the CAP MIB for various tables and for Row Status of various tables.
CH1-N-03014	3/13/03	Clarify description of the cabhCapSetToFactory mib object.

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I04-030801:

ECN Number	ECN Date	Summary
CH1-N-03026	6/5/03	Define a Cap2MappingTable for CableHome 1.1, to support the static port forwarding feature.
CH-MIB-N-03052	7/3/03	Update CAP MIB to incorporate changes needed to align the CableLabs version with the version submitted to the IETF.

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I05-040129:

ECN Number	ECN Date	Summary
CH-MIB-N-03062	10/02/03	Update description related with change to ICMP sequence number.
MIB-CAP-N-03.0084-3	11/26/03	Removal of textual convention, CAP mapping table clarifications, and passthrough table clarifications.
MIB-CAP-N-03.0095-4	12/4/03	Add value of "all" for the protocol MIB in the CAP table.

The following Engineering Change Notices were incorporated into CH-SP-MIB-CAP-I06-040806:

ECN Number	ECN Date	Summary
MIB-CAP-N-04.0130-2	5/13/04	Define new Primary Packet Handling Mode option for CAP MIB: Disabled Mode
MIB-CAP-N-04.0136-3	5/20/04	CAP MIB changes to enable ports ranges and addition of other useful MIBs