```
////////////////////////////////////////////////////////////////////////////
//                                                                        //
//                  DMTF PRINTER MIF DEFINITION V.8.4                     //
//                                                                        //
////////////////////////////////////////////////////////////////////////////
//                                                                        //
// This document specifies the mapping of semantic definitions for common //
// class objects defined by the IETF-DMTF Printer Working Group to the    //
// concrete syntax of the Management Information Format language supported //
// by the DMI Desktop Management Interface.                               //
//                                                                        //
// This specification is based on the "Printer Management Interface Common //
// MIB/MIF Specification, Version 0.4" dated August 14, 1994 which is a   //
// working draft in progress, the "Desktop Management Interface           //
// Specification Version 1.0", dated April 29, 1994 which is a published  //
// specification produced by the Desktop Management Task Force, and the   //
// IETF Standard Printer MIB RFC1759 dated March 1995.                    //
//                                                                        //
// Questions or comments on this draft MIF specification should be made to //
// Harry Lewis, IBM Printing Systems, via the PMI mailing list.           //
////////////////////////////////////////////////////////////////////////////
//                                                                        //
//                   EXPLANATION OF ENUM REGISTRATION                     //
//                                                                        //
////////////////////////////////////////////////////////////////////////////
//Enumerations (enums) are sets of symbolic values defined for use with   //
//one or more objects.  Some common enumeration sets are assigned a       //
//symbolic data type name (textual convention).  These enumerations are   //
//listed at the beginning of this specification.                          //
//                                                                        //
//                  Registering Additional Enumerated Values              //
//                                                                        //
//This working group has defined several type of enumerations which differ //
//in the method employed to control the addition of new enumerations.     //
//Throughout this document, references to "enumeration (n)", where n can  //
//be 1, 2 or 3 are found in the various tables. The definition of these   //
//enumerations classes follows:                                           //
//                                                                        //
//enumeration (1)  All the values are defined in the Printer MIF.         //
//  Additional enumerated values require a new RFC.                       //
//                                                                        //
//enumeration (2)  An initial set of values are defined in the Printer    //
//  MIF.  Additional enumerated values are registered following review by  //
//  the Printer Working Group. Send requests to pmi@hpbs987.boi.hp.com.   //
//                                                                        //
//enumeration (3)  Same as enum (2) for the Printer MIF. Enumeration (3)  //
//  exists due to a dual registration process in the SNMP MIB.            //
////////////////////////////////////////////////////////////////////////////
//
start component
    name        = "Your Printer Component Name"
    description = "Your Component Description goes here"


////////////////////////////////////////////////////////////////////////
//                                                                    //
//                      GLOBAL ENUMERATIONS                           //
//                                                                    //
// Enumerations are MIF language block definitions that allow strings //
// to be associated with signed 32-bit integers. They are primarily   //
// used by component instrumentation to pass integers through the DMI //
// so that management applications can display the corresponding text //
// string in the users native language. This section defines Named    //
// enumerations specified at the component level. These definitions   //
// are global to the component and may be referenced by name in       //
// attribute definitions that use them.                               //
//                                                                    //
// The character set list (below) will change and grow over time.     //
// See http://www.isi.edu:80/in-notes/iana/assignments/character-sets //
// for the current list of character sets.                            //
////////////////////////////////////////////////////////////////////////


      START ENUM
               name = "AddrUnit"     //Enumeration type 1
               type = INTEGER
                  1 = "Reserved"
                  2 = "Reserved"
                  3 = "Ten Thousandths of Inches"
                  4 = "Micrometers"
      END ENUM
```

```
      START ENUM
               name = "MediaUnit"     //Enumeration type 1
               type = INTEGER
                  1 = "Reserved"
                  2 = "Reserved"
                  3 = "Ten Thousandths of Inches"
                  4 = "Micrometers"
                  8 = "Sheets"
      END ENUM

      START ENUM
               name = "CapacityUnit"   //Enumeration type 1
               type = INTEGER
                  1 = "Reserved"
                  2 = "Reserved"
                  3 = "Ten Thousandths of Inches"
                  4 = "Micrometers"
                  8 = "Sheets"
                 16 = "Feet"
                 17 = "Meters"
      END ENUM

      START ENUM
               name = "PresentOnOff"  //Enumeration type 1
               type = INTEGER
                  1 = "Other"
                  2 = "Reserved"
                  3 = "On"
                  4 = "Off"
                  5 = "Not Present"
      END ENUM

      START ENUM
               name = "CodedCharSet"  //Enumeration type 3
               type = INTEGER
                  1 = "Other"
                  2 = "Reserved"

//STANDARD CHARACTER SETS
//
//Standard coded character sets (in the range 3-999) that do not have
//subset implementations

                  3 = "ASCII"
                       //ASCII
                       //ISO 646-1991 IRV with the dollar sign as the
                       //currency symbol. Note that this set is 7-bit ASCII
                       //with either the 8th bit omitted, or zero; this
                       //set is not 8-bit ASCII which is the same as ISO
                       //8859-1(ISO Latin-1)

                  4 = "ISOLatin1"
                       //Latin Alphabet No. 1
                       //8-bit Latin for Western Europe and Western
                       //Hemisphere. See ISO 8859-1

                  5 = "ISOLatin2"
                       //ISO Latin Alphabet No. 2
                       //8-bit Latin for Eastern Europe See ISO 8859-2

                  6 = "ISOLatin3"
                       //ISO Latin Alphabet No. 3
                       //8-bit Latin for Southern Europe and Western
                       //Hemisphere. See ISO 8859-3

                  7 = "ISOLatin4"
                       //ISO Latin Alphabet No. 4
                       //8-bit Latin for Northern Europe See ISO 8859-4

                  8 = "ISOLatinCyrillic"
                       //ISO Latin/Cyrillic Alphabet
                       //8-bit ASCII plus Cyrillic. See ISO 8859-5

                  9 = "ISOLatinArabic"
                       //ISO Latin/Arabic Alphabet
                       //8-bit ASCII plus Arabic. See ISO 8859-6

                 10 = "ISOLatinGreek"
                       //ISO Latin/Greek Alphabet
                       //8-bit ASCII plus Greek. See ISO 8859-7
```

```
11 = "ISOLatinHebrew"
      //ISO Latin/Hebrew Alphabet
      //8-bit ASCII plus Hebrew. See ISO 8859-8

12 = "ISOLatin5"
      //ISO Latin Alphabet No. 5
      //8-bit Latin for EU Member countries. See ISO
      //8859-9

13 = "ISOLatin6"
      //ISO Latin Alphabet No. 6
      // 8-bit Latin for Scandinavian countries better
      // than Latin4 for those countries. See ISO 8859-10

14 = "ISOTextComm"
      //ISO Latin 8-bit Text Communication
      //Used in ISO ASN.1 T61String. See ISO 6937

15 = "JISX0201"
      //Half Width Katakana
      //One byte only, this is equivalent to JIS/Roman
      //(similar to ASCII) plus eight-bit half-width
      //Katakana. See JIS X 0201-1976

16 = "JISEncoding"
      //JIS Encoding
      //Uses ISO 2022 escape sequences to shift code
      //sets as documented in JIS X 0202-1991
      //PCL Symbol Set id: 17K

17 = "ShiftJIS"
      //Shift JIS
      //Also known as MS Kanji. A Microsoft code that
      //extends csHalfWidthKatakana(15) to include Kanji
      //by adding a second byte when the value of the
      //first byte is in the ranges 81-9F or
      //E0-EF.

18 = "EUCPkdFmtJapanese"
      //Extended UNIX Code Packed Format for Japanese
      //Standardized by OSF, UNIX International, and
      //UNIX Systems Laboratories Pacific.
      //Uses ISO 2022 rules to select
      //code set 0: JIS Roman (a single 7-bit byte set)
      //code set 1: JIS X0208-1990 (a double 8-bit byte
      //set) restricted to A0-FF in both bytes
      //code set 2: Half Width Katakana (a single 7-bit
      //byte set) requiring SS2 as the character prefix
      //code set 3: JIS X0212-1990 (a double 7-bit byte
      //set) restricted to A0-FF in both bytes
      //requiring SS3 as the character prefix

19 = "EUCFixWidJapanese"
      //Extended UNIX Code Fixed Width for Japanese
      //Used in Japan.
      //Each character is 2 octets.
      //code set 0: JIS Roman (a single 7-bit byte set)
      // 1st byte = 00
      // 2nd byte = 20-7E
      //code set 1: JIS X 0208-1990 (a double 7-bit byte
      //set) restricted to A0-FF in both bytes
      //code set 2: Half Width Katakana (a single 7-bit
      //byte set)
      // 1st byte = 00
      // 2nd byte = A0-FF
      //code set 3: JIS X0212-1990 (a double 7-bit byte
      //set) restricted to A0-FF in the first byte
      //and 21-7E in the second byte

20 = "ISO4UnitedKingdom"
      //United Kingdom national std set
      //See registration 4 -  ISO 2375.
      //Registration Authority: ECMA

21 = "ISO11SwedishforNames"
      //Swedish for Names national std set
      //See registration 11 - ISO 2375
      //Registration Authority: ECMA

22 = "ISO15Italian"
```

```
                        //Italian national set
                        //See registration 15 - ISO 2375
                        //Registration Authority: ECMA

                  23 = "ISO17Spanish"
                        //Spanish national set
                        //See registration 17 - ISO 2375
                        //Registration Authority: ECMA

                  24 = "ISO21German"
                        //German national std set
                        //See registration 21 - ISO 2375
                        //Registration Authority: ECMA

                  25 = "ISO60DanishNorwegian"
                        //Danish Norwegian national std set
                        //See registration 60 - ISO 2375
                        // Registration Authority: ECMA

                  26 = "ISO69French"
                        //French - see ISO Reg No 69
                        //See registration 69 - ISO 2375
                        //Registration Authority: ECMA.

//UNICODE CHARACTER SETS

//Unicode and vendor-supplied combinations of ISO collections (in the
//range 1000-1999):

//NOTE: Unicode and ISO 10646 character coded data may be processed and
//stored in either Big Endian (most significant octet first) or Little
//Endian (least significant octet first) order.  Intel x86, VAX, and
//Alpha/AXP architectures are examples of Little Endian processor
//architectures. Furthermore, in environments where either order may
//occur, so-called Unicode BYTE ORDER MARK (BOM) character (which is ISO
//10646 ZERO WIDTH NO BREAK SPACE), coded as FEFF in two octets and
//0000FEFF in four octets is used at he beginning of the data as a
//signature to indicate the order of the following data (See ISO 10646
//Annex F).  Thus either ordering and BOM may occur in print data streams
//sent to the interpreter.

//However, ISO 8824/8825 (ASN.1/BER) used by SNMP is quite clear that Big
//Endian order shall be used and BOM shall NOT be used in transmission in
//the protocol. Transmitting Unicode in Big Endian order in SNMP should
//not prove to be a hardship for Little Endian machines, since SNMP
//ASN.1/BER requires integers to be transmitted in Big Endian order as
//well. So SNMP implementations on Little Endian machines are already
//reversing the order of integers to make them Big Endian for
//transmission via SNMP. Also Unicode characters are usually treated as
//two-octet integers, not short text strings, so that it will be
//straightforward for Little Endian machines to reverse the order of
//Unicode character octets as well before transmitting them and after
//receiving them via the SNMP protocol.

               1000 = "Unicode"
                        //Unicode
                        //Universal Coded Character set.
                        //Any character. See ISO 10646
                        //two-octet representation,
                        //implementation level 3

               1001 = "UCS4"
                        //Four-octet Universal Coded Character Set
                        //Any character. See ISO 10646
                        //four-octet representation,
                        //implementation level 3

               1002 = "UnicodeASCII"
                        //ASCII subset of Unicode
                        //Basic Latin = collection 1
                        //See ISO 10646, Appendix A

               1003 = "UnicodeLatin1"
                        //ISO Latin-1 subset of Unicode
                        //Basic Latin and Latin-1 Supplement
                        //collections 1 and 2
                        //See ISO 10646, Appendix A

               1004 = "UnicodeIBM2039"
                        //IBM Latin-1 SAA Core Coded Character Set Extended
                        //ISO 8859-1
```

```
                        //Presentation Set, GCSGID:2039

                1005 = "UnicodeIBM1261"
                        //IBM Latin-2, -3, -5, Extended
                        //Presentation Set, GCSGID:1261

                1006 = "UnicodeIBM1268"
                        //IBM Latin-4 Extended
                        //Presentation Set, GCSGID:1268

                1007 = "UnicodeIBM1276"
                        //IBM Cyrillic Greek Extended
                        //Presentation Set, GCSGID:1276

                1008 = "UnicodeIBM1264"
                        //IBM Arabic
                        //Presentation Set, GCSGID:1264

                1009 = "UnicodeIBM1265"
                        //IBM Hebrew
                        //Presentation Set, GCSGID: 1265

//VENDOR CHARACTER SETS

//Vendor developed coded character sets (in the range 2000-xxx)

                2000 = "Windows30Latin1"
                        //Windows Latin-1
                        //Extended ISO 8859-1 for Windows 3.0
                        //PCL Symbol Set id:9U

                2001 = "Windows31Latin1"
                        //Windows Latin-1
                        //Extended ISO 8859-1 for Windows 3.1
                        //PCL Symbol Set id:19U

                2002 = "Windows31Latin2"
                        //Windows Latin-2
                        //Extended ISO 8859-2 for Windows 3.1
                        //PCL Symbol Set id:9E

                2003 = "Windows31Latin5"
                        //Windows Latin-5
                        //Extended ISO 8859-5 for Windows 3.1
                        //PCL Symbol Set id:5T

                2004 = "HPRoman8"
                        //HP 8-bit Latin set, ASCII in LH
                        //PCL Symbol Set id:8U

                2005 = "AdobeStandardEncoding"
                        //Adobe Standard Encoding
                        //PCL Symbol Set id: 10J

                2006 = "VenturaUS"
                        //Ventura US
                        //ASCII plus characters typically used in
                        //publishing, like pilcrow, copyright, registered,
                        //trade mark, section, dagger, and double dagger
                        //in the range A0 (hex) to FF (hex).
                        //PCL Symbol Set id:14J

                2007 = "VenturaInternational"
                        //Ventura International
                        //ASCII plus coded characters similar to Roman8
                        //PCL Symbol Set id:13J

                2008 = "DECMCS"
                        //DEC Multinational
                        //Similar to ISO 8859-1
                        //Digital Equipment Corp

                2009 = "PC850Multilingual"
                        //PC Multilingual code page 850
                        //ASCII in the LH
                        //Other Latin characters in the RH
                        //PCL Symbol Set id: 12U

                2010 = "PCp852"
                        //PC Latin-2 code page 852
                        //PCL Symbol Set id: 17U
```

```
                2011 = "PC8CodePage437"
                        //PC Code page 437
                        //US PC code page
                        //PCL Symbol Set id:10U

                2012 = "PC8DanishNorwegian"
                        //PC Danish Norwegian
                        //8-bit PC set for Danish Norwegian
                        //PCL Symbol Set id:11U

                2013 = "PC862LatinHebrew"
                        //PC Latin Hebrew code page 862
                        //PCL Symbol Set id:15H

                2014 = "PC8Turkish"
                        //PC Latin Turkish
                        //PCL Symbol Set id:9T

                2015 = "IBMSymbols"
                        //IBM Symbols
                        //Presentation Set, CPGID:259

                2016 = "IBMThai"
                        //IBM Thai
                        //Presentation Set, CPGID:838

                2017 = "HPLegal"
                        //HP Legal
                        //PCL Symbol Set id:1U

                2018 = "HPPIFont"
                        //HP PI font
                        //PCL Symbol Set id:15U

                2019 = "HPMath8"
                        //HP Mathematics set
                        //HP 8-bit math set
                        //PCL Symbol Set id:8M

                2020 = "HPPSMath"
                        //HP PostScript Math
                        //Similar to AdobeSymbolEncoding
                        //PCL Symbol Set id:5M

                2021 = "HPDesktop"
                        //HP Desktop
                        //PCL Symbol Set id:7J

                2022 = "VenturaMath"
                        //Ventura Math
                        //PCL Symbol Set id:6M

                2023 = "MicrosoftPublishing"
                        //Microsoft Publishing
                        //PCL Symbol Set id:6J

                2024 = "Windows31J"
                        //Windows Japanese
                        //A further extension of csShiftJIS to include
                        //several OEM-specific Kanji extensions. Like
                        //csShiftJIS, it adds a second byte when the value
                        //of the first byte is in the ranges 81-9F or
                        //E0-EF.
                        //PCL Symbol Set id:19K

                2025 = "GB2312"
                        //Chinese for People's Republic of China (PRC)
                        //mixed one byte, two byte set:
                        //20-7E = one byte ASCII
                        //A1-FE = two byte PRC Kanji
                        //See GB 2312-80
                        //PCL Symbol Set Id:18C

                2026 = "Big5"
                        //Chinese for Taiwan
                        // Multi-byte set.
                        // PCL Symbol Set Id:18T
        END ENUM

 ////////////////////////////////////////////////////////////////////////
```

```
//                                                                      //
//                  COMPONENT ID GROUP -Required                        //
//                                                                      //
// Every MIF file must contain a Component ID group with an ID = 1.     //
// This group offers base-level identification of the component and     //
// represents the minimum amount of information that a component        //
// provider should provide when meaningful. An attribute that is not    //
// supported or that has no meaning for a given component should be     //
// given the key word UNSUPPORTED as its value.                         //
//////////////////////////////////////////////////////////////////////////

 start group
     name    = "ComponentId"
     id      = 1
     class   = "DMTF|ComponentID|001"
     description = "This group defines attributes common to all components. "
                   "The group is required in all DMTF components and must "
                   "have Group ID = 1. "
 START ATTRIBUTE
     name    = "Manufacturer"
     id      = 1
     description = "The organization or manufacturer that produced this "
                   "component."
     access  = READ-ONLY
     storage = COMMON
     type    = STRING(64)

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Product"
     id      = 2
     description = "The name of this component or product."
     access  = READ-ONLY
     storage = COMMON
     type    = STRING(64)

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Version"
     id      = 3
     description = "The version string for this component."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = STRING(64)

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Serial Number"
     id      = 4
     description = "The serial number for this component."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = STRING(64)

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Installation"
     id      = 5
     description = "The time and date of the last install of this "
                   "component on this system."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = DATE

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Verify"
     id      = 6
     description = "Verification level for this printer."
     access  = READ-ONLY
     storage = COMMON
     type    = START ENUM
               name = "VerifyType"  //Enumeration type 1
                                    //Note: MIB enum = ptrVerifyType
               type = INTEGER
                  0 = "an error occurred; check status code"
                  1 = "component does not exist"
                  3 = "reserved"
                  4 = "component exists; functionality untested"
                  5 = "component exists; functionality unknown"
                  6 = "component exists; functionality no good"
```

```
                  7 = "component exists; functionality good"
               END ENUM

  END ATTRIBUTE
     end group

 ////////////////////////////////////////////////////////////////////////
 //                                                                    //
 //                  PRINTER INTERFACES TABLE -required                //
 //                                                                    //
 // This table attempts to mimic the attributes in the Interfaces Table //
 // of SNMP MIB-II, for use in the Printer MIF.                        //
 //                                                                    //
 // Compatibility with SNMP is favored even where printer related      //
 // information could have been better optimized in the MIF.           //
 //                                                                    //
 // Note that ENUMs may not follow the standard DMTF convention for    //
 // 0=Other and 1=Unknown. This is because SNMP had previously defined  //
 // these enums as Integers and assigned the values.                   //
 //                                                                    //
 ////////////////////////////////////////////////////////////////////////

  start group
      name    = "Printer Interfaces Table"
      id      = 2
      class   = "DMTF|Printer Interfaces Table|001"
      description = "This group specifies general attributes that apply "
                    "to the interface characteristics of the printer."
      key     = 1
  START ATTRIBUTE
      name    = "Index"
      id      = 1
      description = "A unique value for each interface supported by "
                    "printer.  The value for each device must remain "
                    "constant at least from one initialization of the "
                    "device to the next initialization."

      access  = READ-ONLY
      storage = SPECIFIC
      type    = INTEGER

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Description"
      id      = 2
      description = "A textual string containing information about the "
                    "interface.  This string should include the name of "
                    "the manufacturer, the product name and the version "
                    "of the hardware interface."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = STRING(256)

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Interface Type"
      id      = 3
      description = "Type of Interface" //see http://www.iana.org/iana/assignments/smi-
numbers
      access  = READ-ONLY               //for the current list of registered interfaces
      storage = SPECIFIC
      type    = START ENUM
                name = "InterfaceType"  //Enumeration type 2
                                        //Note: MIB enum = ifType
                type = INTEGER
                   0 = "Reserved"
                   1 = "Other"
                   2 = "Regular1822"
                   3 = "HDH1822"
                   4 = "DDN-x25"
                   5 = "RFC877-x25"
                   6 = "Ethernet-csmacd"
                   7 = "ISO88023-csmacd"
                   8 = "ISO88024-tokenBus"
                   9 = "ISO88025-tokenRing"
                  10 = "ISO88026-man"
                  11 = "StarLan"
                  12 = "Proteon-10Mbit"
                  13 = "Proteon-80Mbit"
                  14 = "Hyperchannel"
                  15 = "FDDI"
```

```
                16 = "LAPB"
                17 = "SDLC"
                18 = "DS1"                  // T-1
                19 = "E1"                   // European equiv. of T-1
                20 = "BasicISDN"
                21 = "PrimaryISDN"
                22 = "PropPointToPointSerial" // proprietary serial
                23 = "PPP"
                24 = "SoftwareLoopback"
                25 = "Eon"                  // CLNP over IP
                26 = "Ethernet-3Mbit"
                27 = "NSIP"                 // XNS over IP
                28 = "SLIP"                 // generic SLIP
                29 = "Ultra"                // ULTRA technologies
                30 = "DS3"                  // T-3
                31 = "SIP"                  // SMDS
                32 = "Frame-relay"
                33 = "rs232"
                34 = "para"                 // Parallel-port
                35 = "arcnet"
                36 = "arcnetPlus"
                37 = "atm"                  // ATM cells
                38 = "miox25"
                39 = "sonet"
                40 = "x25ple"
                41 = "iso8802211c"
                42 = "localTalk"
                43 = "smdsDxi"
                44 = "frameRelayService"  // Frame relay DCE
                45 = "v35"
                46 = "hssi"
                47 = "hippi"
                48 = "modem"
                49 = "aal5"                 // AAL5 over ATM
                50 = "sonetPath"
                51 = "sonetVT"
                52 = "smdsIcip"             // SMDS InterCarrier Interface
                53 = "propVirtual"          // Proprietary virtual/internal
                54 = "propMultiplexor"      // Proprietary multiplexing
                55   "ieee80212"           // 100BaseVG
                56   "fibre-channel"       // Fibre Channel
                57   "hippi"               // HIPPI interfaces
                58   "frameRelayInterconnect" // Interconnet over FR
                59   "aflane8023"          // ATM Emulated LAN for 802.3
                60   "aflane8025"          // ATM Emulated LAN for 802.5
                61   "cctEmul"             // ATM Emulated circuit
                62   "fastEther"           // Fast Etherner (100BaseT)
                63   "isdn"                // ISDN and X.25
                64   "v11"                 // CCITT V.11/X.21
                65   "v36"                 // CCITT V.36
                66   "g703-64k"            // CCITT G703 at 64Kbps
                67   "g703-2mb"            // CCITT G703 at 2Mbps
                68   "qllc"                // SNA QLLC
              END ENUM

END ATTRIBUTE
START ATTRIBUTE
    name    = "MTU"
    id      = 4
    description = "The size of the largest datagram which can be "
                  "sent or received on the interface, specified in "
                  "octets.  For interfaces that are used for "
                  "transmitting network datagrams, this is the size "
                  "of the largest network datagram that can be sent "
                  "on the interface."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER

END ATTRIBUTE
START ATTRIBUTE
    name    = "Speed"
    id      = 5
    description = "An estimate of the interface current bandwidth "
                  "in bits per second. For interfaces which do not "
                  "vary in bandwidth or for those where no accurate "
                  "estimation can be made, this object should contain "
                  "the nominal bandwidth."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
```

```
  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Physical Address"
      id      = 6
      description = "The interface address at the protocol layer "
                    "immediately below (in OSI terms) the network layer in"
                    "the protocol stack.  For interfaces which do not have "
                    "such an address (e.g., a serial line), this object "
                    "should contain an octet string of zero length."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = STRING(64)

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Administrative Status"
      id      = 7
      description = "The desired state of the interface. The "
                    "testing(3) state indicates that no operational "
                    "packets can be passed."
      access  = READ-WRITE
      storage = SPECIFIC
      type    = START ENUM
                name = "AdminStatus"  //Enumeration type 1
                                      //Note: MIB enum = ifAdminStatus
                type = INTEGER
                   0 = "Other"
                   1 = "Up"
                   2 = "Down"
                   3 = "Testing"
                END ENUM

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Operational Status"
      id      = 8
      description = "The current operational state of the interface. The "
                    "testing(3) state indicates that no operational "
                    "packets can be passed."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = START ENUM
                name = "OperStatus"  //Enumeration type 1
                                     //Note: MIB enum = ifOperStatus
                type = INTEGER
                   0 = "Other"
                   1 = "Up"
                   2 = "Down"
                   3 = "Testing"
                END ENUM

  END ATTRIBUTE

START ATTRIBUTE
      name    = "In Octets"
      id      = 10
      description = "The total number of octets received on the interface "
                    "including framing characters."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = COUNTER

  END ATTRIBUTE
START ATTRIBUTE
      name    = "Out Octets"
      id      = 16
      description = "The total number of octets transmitted out of "
                    "the interface including framing characters."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = COUNTER

  END ATTRIBUTE
end group

 ////////////////////////////////////////////////////////////////////////
 //                                                                    //
 //               PRINTER STORAGE TABLE -required                      //
 //                                                                    //
 // This table attempts to mimic attributes in the SNMP                //
```

```
// hrStorage Table for use in the MIF.                                    //
//                                                                        //
// Compatibility with SNMP is favored even where printer related          //
// information could have been better optimized in the MIF.               //
//                                                                        //
// Note that ENUMs may not follow the standard DMTF convention for        //
// 0=Other and 1=Unknown. This is because SNMP had previously defined     //
// these enums as Integers and assigned the values.                       //
//                                                                        //
////////////////////////////////////////////////////////////////////////////

 start group
     name    = "Printer Storage Table"
     id      = 3
     class   = "DMTF|Storage Table|001"
     description = "This group specifies general attributes that apply "
                   "to the storage characteristics of the printer and "
                   "forms a table of logical storage areas on the printer."
                   ""
                   "An entry shall be placed in the storage table for "
                   "each logical area of storage that is allocated and "
                   "has fixed resource limits.  The amount of storage "
                   "represented in an entity is the amount actually "
                   "usable by the requesting entity, and excludes loss "
                   "due to formatting or file system reference "
                   "information."
                   ""
                   "This table is intended to be a useful diagnostic "
                   "for `out of memory' and `out of buffers' types of "
                   "failures.  In addition, it can be a useful "
                   "performance monitoring tool for tracking memory, "
                   "disk, or buffer usage."
     key     = 1
 START ATTRIBUTE
     name    = "Index"
     id      = 1
     description = "A unique value for each storage area in the "
                   "printer.  The value for each device must remain "
                   "constant at least from one re-initialization of the "
                   "agent to the next re-initialization."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = INTEGER

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Storage Type"
     id      = 2
     description = "Type of Storage"
     access  = READ-ONLY
     storage = SPECIFIC
     type    = START ENUM
               name = "StorageType"   //Enumeration type 1
                                      //Note: MIB enum = hrStorageType
               type = INTEGER
                  0 = "Reserved"
                  1 = "Other"
                  2 = "Ram"
                  3 = "VirtualMemory" //Temporary paged or swapped memory
                  4 = "FixedDisk"
                  5 = "RemovableDisk"
                  6 = "FloppyDisk"
                  7 = "CompactDisc"
                  8 = "RamDisk"
               END ENUM

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Description"
     id      = 3
     description = "A description of the type and instance of the "
                   "storage described by this entry in the localization "
                   "specified by General Printer Current Localization."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = STRING(256)

 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Allocation Units"
     id      = 4
```

```
    description = "The size, in bytes, of the data objects allocated "
                  "from this pool.  If this entry is monitoring "
                  "sectors, blocks, buffers, or packets, for example, "
                  "this number will commonly be greater than one. "
                  "Otherwise this number will typically be one."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = GAUGE

END ATTRIBUTE
START ATTRIBUTE
    name    = "Size"
    id      = 5
    description = "The size of the storage represented by this entry, "
                  "expressed in Allocation Units."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = GAUGE

END ATTRIBUTE
START ATTRIBUTE
    name    = "Used"
    id      = 6
    description = "The amount of the storage represented by this entry, "
                  "that is allocated, expressed in Allocation Units."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = GAUGE

END ATTRIBUTE
START ATTRIBUTE
    name    = "Storage Allocation Failures"
    id      = 7
    description = "The number of requests for storage represented by "
                  "this entry that could not be honored due to not "
                  "enough storage."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = COUNTER

END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                PRINTER DEVICE TABLE -required                      //
//                                                                    //
// This table attempts to mimic objects in the Device Group of the    //
// SNMP Host Resource MIB (RFC1514).                                  //
//                                                                    //
// Compatibility with SNMP is favored even where printer related      //
// information could have been better optimized in the MIF.           //
//                                                                    //
// Note that ENUMs may not follow the standard DMTF convention for    //
// 0=Other and 1=Unknown. This is because SNMP had previously defined //
// these enums as Integers and assigned the values.                   //
//                                                                    //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Device Table"
    id      = 4
    class   = "DMTF|Device Table|001"
    description = "This group specifies general attributes that apply "
                  "to the device characteristics of the printer."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value for each device contained by the "
                  "printer.  The value for each device must remain "
                  "constant at least from one re-initialization of the "
                  "agent to the next re-initialization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER

END ATTRIBUTE
START ATTRIBUTE
    name    = "Device Type"
    id      = 2
```

```
    description = "Type of Device "

                  "If this value is Processor (3) then an entry exists "
                  "in the Processor Table which corresponds to this device."

                  "If this value is Network (4) then an entry exists "
                  "in the Network Table which corresponds to this device."

                  "If this value is Printer (5) then an entry exists "
                  "in the Printer Table which corresponds to this device."

                  "If this value is Disk Storage (6) then an entry exists"
                  "in the Disk Storage Table which corresponds to this "
                  "device."

    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "DeviceType"   //Enumeration type 1
                                    //Note: MIB enum = hrDeviceType
              type = INTEGER
                 0 = "Reserved"
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Processor"
                 4 = "Network"
                 5 = "Printer"
                 6 = "DiskStorage"
                 7 = "Reserved"
                 8 = "Reserved"
                 9 = "Reserved"
                10 = "Video"
                11 = "Audio"
                12 = "Coprocessor"
                13 = "Keyboard"
                14 = "Modem"
                15 = "ParallelPort"
                16 = "Pointing"
                17 = "SerialPort"
                18 = "Tape"
                19 = "Clock"
                20 = "VolatileMemory"
                21 = "NonVolatileMemory"
              END ENUM

END ATTRIBUTE
START ATTRIBUTE
    name    = "Description"
    id      = 3
    description = "A description of this device, including the "
                  "the manufacturer, revision, and serial number "
                  "in the localization  specified by General Printer "
                  "Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(64)

END ATTRIBUTE
START ATTRIBUTE
    name    = "ID"
    id      = 4
    description = "The Product ID for this device in the "
                  "localization  specified by General Printer "
                  "Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(64)

END ATTRIBUTE
START ATTRIBUTE
    name    = "Status"
    id      = 5
    description = "The current operational state of the device "
                  "described by this row of the table. A value "
                  "unknown(1) indicates that the current state of the "
                  "device is unknown. Running(2) indicates that the "
                  "device is up and running and that no unusual error "
                  "conditions are known. The warning(3) state "
                  "indicates an "
                  "unusual error condition but the device is "
                  "still 'operational'. A value of "
```

```
                    "testing(4), indicates that the device is not "
                    "available for use because it is in the testing "
                    "state. The state of down(5) is used only when the "
                    " device is not "
                    "available for any use."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = START ENUM
                name = "DeviceStatus"   //Enumeration type 1
                                        //Note: MIB enum = hrDeviceStatus
                type = INTEGER
                   0 = "Reserved"
                   1 = "Unknown"
                   2 = "Running"
                   3 = "Warning"
                   4 = "Testing"
                   5 = "Down"
                   6 = "Standby"        //Note: Should be added to MIB.
                END ENUM

  END ATTRIBUTE
START ATTRIBUTE
      name    = "Processor Firmware ID"  //Ignored unless DeviceType=Processor
      id      = 7
      description = "The Product ID of the firmware associated with the "
                    "Processor, in the Localization specified by General "
                    "Printer Localization"
      access  = READ-ONLY
      storage = SPECIFIC
      type    = STRING(64)

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Processor Load"
      id      = 8
      description = "The average, over the last minute, of the "
                    "percentage of time that this processor was not "
                    "idle."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = INTEGER

  END ATTRIBUTE
START ATTRIBUTE
      name    = "Printer Status"
      id      = 10
      description = "The current status of this printer device. When "
                    "in the idle(3), printing(4), or warmup(5) state, "
                    "the corresponding Device Status should be "
                    "running(2) or warning(3).  When in the unknown(2) "
                    "state, the corresponding Device Status should be "
                    "unknown(1)."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = START ENUM
                name = "PrinterStatus"   //Enumeration type 1
                                         //Note: MIB enum = hrPrinterStatus
                type = INTEGER
                   0 = "Reserved"
                   1 = "Other"
                   2 = "Unknown"
                   3 = "Idle"
                   4 = "Printing"
                   5 = "Warmup"
                   6 = "Offline"         //Note: Should be added to MIB
                   7 = "NotApplicable"   //Note: Should be added to MIB
                END ENUM

  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Printer Detected Error State" //Ignored unless DeviceYype=Printer
      id      = 11
      description = "This object represents any error conditions "
                    "detected by the printer.  The error conditions are "
                    "encoded as bits in an octet string, with the "
                    "following definitions:"
                    ""
                    "_Condition;         Bit #;    Device Status; "
                    ""
                    "_lowPaper;          0;        warning(3); "
                    "_noPaper;           1;        down(5); "
```

```
                    "_lowToner;          2;        warning(3); "
                    "_noToner;           3;        down(5); "
                    "_doorOpen;          4;        down(5); "
                    "_jammed;            5;        down(5); "
                    "_offline;           6;        down(5); "
                    "_serviceRequested;  7;        warning(3); "
                    ""
                "If multiple conditions are concurrently detected and "
                "Device Status would not otherwise be unknown(1) or "
                "testing(4), then Device Status shall correspond to the "
                "worst state of those indicated, where down(5) is worse "
                "than warning(3) which is which is worse than running(2)."
                ""
                "Bits are numbered starting with the most significant "
                "bit of the first byte being bit 0, the least significant "
                "bit of the first byte being bit 7, the most significant "
                "bit of the second byte being bit 8, and so on. A one bit "
                "encodes that the condition was detected, while a zero bit "
                "encodes that the condition was not detected."
                ""
                "This object is useful for alerting an operator to "
                "specific warning or error conditions that may "
                "occur, especially those requiring human "
                "intervention."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = OCTETSTRING

  END ATTRIBUTE
end group

 ////////////////////////////////////////////////////////////////////////
 //                                                                    //
 //                  PRINTER GENERAL GROUP - required                  //
 //                                                                    //
 // This group specifies general attributes that apply to the overall  //
 // printer. In the common IETF-DMTF printer model, this is one of the //
 // four required attribute groups comprising the General Printer      //
 // sub-unit. In the DMTF MIF, it is simply a required group.          //
 //                                                                    //
 ////////////////////////////////////////////////////////////////////////

  start group
      name    = "Printer General"
      id      = 5
      class   = "DMTF|General|001"
      description = "This group specifies general attributes that "
                    "apply to the overall printer and its configuration."
  START ATTRIBUTE
      name    = "Configuration Changes"
      id      = 1
      description = "A count of the configuration changes for this "
                    "printer.  This value is incremented each time a "
                    "configuration change is made to this printer "
                    "component. This value may be compared against a "
                    "previous read value to determine if any configuration "
                    "changes have been made to the printer."
                    ""
                    "Management applications may cache infrequently "
                    "changed configuration information about sub-units "
                    "on the printer. This object should be incremented "
                    "whenever the agent wishes such applications to "
                    "invalidate that cache and re-download all of this "
                    "configuration information, thereby signaling a "
                    "change of the printer configuration. "
                    ""
                    "Configuration changes represent changes in "
                    "capabilities. These changes involve modifications "
                    "which may affect the set of jobs that be printed "
                    "by a system, increasing or decreasing the likelihood "
                    "of successful printing. Examples might include "
                    "the addition or removal of input devices, output "
                    "devices, media paths and interpreters among other "
                    "items"
                    ""
                    "For example, if an input tray that contained paper of "
                    "different dimensions was added, this counter would be "
                    "incremented."
                    ""
                    "As an additional example, this counter would not be "
                    "incremented when an input tray is removed or the "
```

```
                  "level of an input device is changed."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = COUNTER

 END ATTRIBUTE
  START ATTRIBUTE
    name    = "Current Localization"
    id      = 2
    description = "This value is an index into the printer localization "
                  "table specifying the current language, country code "
                  "and character set to be used in the DESCRIPTION "
                  "string values for components, groups, and attributes. "
                  "If there are no strings under the control of this "
                  "object that must be localized, the value should be "
                  "set to zero."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER

 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Reset"
    id      = 3
    description = "Setting this value to Power Cycle Reset, Reset to "
                  "NVRAM or Reset To Factory Defaults will result in "
                  "the resetting of the printer. When read, this "
                  "object will always have the value Not Resetting. "
                  "Setting the value to Not Resetting will have no "
                  "effect on the printer."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "ResetType" //Enumeration type 3
              type = INTEGER
                 3 = "Not Resetting"
                 4 = "Power Cycle Reset - cold start"
                 5 = "Reset to NVRM - warm start"
                 6 = "Reset to Factory Defaults - resets NVRAM"
              END ENUM
 END ATTRIBUTE

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                     PRINTER RESPONSIBLE PARTY - optional           //
//                                                                    //
// These attributes are optional. They extend the general printer     //
// to include information about current operator and service person.  //
// An attribute that is not supported or that has no meaning for this //
// input device, should give the key word UNSUPPORTED as its value.   //
//                                                                    //
// Optional group interleaved with Mandatory attributes for           //
// consistency with SNMP Printer MIB                                  //
////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
    name    = "Printer Current Operator"
    id      = 4
    description = "The name of the operator or person responsible for "
                  "this printer. This string may include additional "
                  "information such as phone number."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(127)
  END ATTRIBUTE
 START ATTRIBUTE
    name    = "Printer Service Person"
    id      = 5
    description = "The name of the last person responsible for "
                  "servicing this printer. This string may include "
                  "additional information such as phone number."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(127)
  END ATTRIBUTE

////////////////////////////////////////////////////////////////////////
//                                                                    //
//              PRINTER DEVICE DEFAULT INDEXES - required             //
//                                                                    //
// These attributes specify the default Input, Output, Marker, and    //
```

```
// Media Paths that will be used in the printer.                        //
// The value of the Index parameter specified in this object is         //
// an index to a specific Input, Output, Marker or Media Path entry in  //
// the appropriate table.                                               //
//////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
     name    = "Input Default Index"
     id      = 6
     description = "The value of the Index corresponding to the default "
                   "Input device in the Input Table. This value selects "
                   "the default source of input media."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Output Default Index"
     id      = 7
     description = "The value of the Index corresponding to the default "
                   "Output device in the Output Table. This value "
                   "selects the default destination of print media."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Marker Default Index"
     id      = 8
     description = "The value of the Index corresponding to the default "
                   "Marker device in the Marker Table. This value "
                   "selects the default marker device."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Media Path Default Index"
     id      = 9
     description = "The value of the Media Path Index corresponding to "
                   "the default media path; that is, the selection of "
                   "the default media path."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE

//////////////////////////////////////////////////////////////////////////
//                                                                      //
//                         PRINTER CONSOLE - required                   //
//                                                                      //
// The MIF  allows 1 Console per printer.                          //
//////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
     name    = "Console Localization"
     id      = 10
     description = "An index into the localization table giving the "
                   "language, country, and character set to be used "
                   "for the console."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Console Number Of Display Lines"
     id      = 11
     description = "The number of lines on the printer's physical "
                   "display. This value is zero if there are no lines "
                   "on the physical display or if there is no physical "
                   "display."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Console Number Of Display Characters"
     id      = 12
     description = "The number of characters per line displayed on the "
                   "physical display."
     access  = READ-ONLY
```

```
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Console Disable"
    id      = 13
    description = "A lock to provide one-at-a-time access:"
                  "If the value is (3 - operatorConsoleEnabled) then"
                  "input is accepted from the operator console. If"
                  "the value is (4 - operatorConsoleDisabled) then"
                  "input is not accepted from the operator console."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "DisableState"   //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 3 = "operatorConsoleEnabled"
                 4 = "operatorConsoleDisabled"
              END ENUM
 END ATTRIBUTE

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                 PRINTER INTERFACE DEFAULTS - optional              //
//                                                                    //
// These attributes are optional. They extend the general printer     //
// to include information about the number of interfaces and the      //
// default interface for this device.                                 //
////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
    name    = "Number of Interfaces"
    id      = 14
    description = "The number of network interfaces (regardless of "
                  "their current state) present on this Printer."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Interface Default Index"
    id      = 15
    description = "The value of the Index corresponding to the default "
                  "Interface in the Interface Table. This value selects "
                  "the default Interface for the printer."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
  END ATTRIBUTE

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                 PRINTER STORAGE DEFAULTS - optional                //
//                                                                    //
// These attributes are optional. They extend the general printer     //
// to include information about the primary storage in the printer.   //
////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
    name    = "Memory Size"
    id      = 16
    description = "The amount of physical main memory contained by the "
                  "printer in K-Bytes."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                      PRINTER COVER TABLE -required                 //
//                                                                    //
// This table specifies general attributes that apply to the doors    //
// and interlocks of the printer. There is a group entry in the cover //
// table for each door or interlock. Although these values may change //
// due to a major reconfiguration of the device (e.g. the addition of //
// of equipment with additional doors or interlocks), the values are  //
// expected to remain stable across successive power cycles.          //
//                                                                    //
```

```
// In the common IETF-DMTF printer model, the cover table is one of    //
// the four required attribute groups comprising the General Printer   //
// sub-unit. In the DMTF MIF, it is simply a required table.           //
/////////////////////////////////////////////////////////////////////////

 start group
     name    = "Printer Cover Table"
     id      = 6
     class   = "DMTF|Cover Table|001"
     description = "This group specifies general attributes that apply "
                   "to the doors and interlocks of the printer."
     key     = 1
 START ATTRIBUTE
     name    = "Cover Index"
     id      = 1
     description = "A unique value used by the printer to identify this "
                   "cover. Although these values may change due to a "
                   "major reconfiguration of the device ( e.g. the "
                   "addition of new covers to the printer), values are "
                   "expected to remain stable across successive printer "
                   "printer power cycles."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Description"
     id      = 2
     description = "The manufacturer provided cover name in the "
                   "localization specified by General Printer Current "
                   "Localization."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = STRING(256)
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Status"
     id      = 3
     description = "The current status of this cover."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = START ENUM
               name = "CoverStatus" //Enumeration type 2
               type = INTEGER
                  1 = "Other"
                  2 = "Unknown"
                  3 = "Cover Open"
                  4 = "Cover Closed"
                  5 = "Interlock Open"
                  6 = "Interlock Closed"
               END ENUM
 END ATTRIBUTE
     end group

/////////////////////////////////////////////////////////////////////////
//                                                                     //
//                 PRINTER LOCALIZATION TABLE - required               //
//                                                                     //
// The localization table identifies the natural language, country and //
// character set in which character strings are expressed. One or more //
// localizations may be supported by a printer. The available          //
// localizations are defined by entries in this table.                 //
//                                                                     //
// In the common IETF-DMTF printer model, this table is one of         //
// the four required attribute groups comprising the General Printer   //
// sub-unit. In the DMTF MIF, it is simply a required table.           //
/////////////////////////////////////////////////////////////////////////

 start group
     name    = "Printer Localization Table"
     id      = 7
     class   = "DMTF|Localization Table|001"
     description = "This table identifies the natural language, country "
                   "and character sets supported by the printer."
     key     = 1
 START ATTRIBUTE
     name    = "Index"
     id      = 1
     description = "A unique value used to identify a specific entry "
                   "in the localization table. Although these values "
                   "may change due to a major reconfiguration of the "
```

```
                    "device (e. g. the addition of new Character Sets "
                    "to the printer), values are expected to remain "
                    "stable across successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Language"
    id      = 2
    description = "A two character language code defined by ISO 3166. "
                  "Examples are EN, FR and DE."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = OCTETSTRING(2)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Country"
    id      = 3
    description = "A two character country code defined by ISO 639. "
                  "Examples are US, GB, CA, and DE."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = OCTETSTRING(2)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Localization Character Set"
    id      = 4
    description = "The coded character set used for this localization "
                   "Must be 1 or greater."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "CodedCharSet"
END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                        PRINTER INPUT TABLE                         //
//                                                                    //
// A printer may have multiple input devices associated with it. For  //
// example, a printer can have two input source trays. The input      //
// devices associated with a printer are identified in this table.    //
// Each entry in the table is an input device definition with an      //
// ordered set of attributes. Input devices typically have a location, //
// a type, an identifier, a set of constraints on possible media sizes //
// and potentially other media characteristics, and may be capable of //
// indicating current status or capacity. Only those attributes       //
// applicable to the input device need be specified.                  //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Input Table"
    id      = 8
    class   = "DMTF|Input Table|001"
    description = "A list of input devices capable of providing "
                  "printing media resources to this printer including "
                  "information regarding their identity, possible and "
                  "current configuration, and status."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by this printer to identify an  "
                  "associated input device. Although these values may  "
                  "change due to a major reconfiguration of the "
                  "printer (e.g. the addition of new input devices to "
                  "the printer), values are expected to remain stable "
                  "across successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Type"
    id      = 2
    description = "The type of technology (discriminated primarily "
                  "according to feeder mechanism type) employed by "
                  "input device."
    access  = READ-ONLY
    storage = SPECIFIC
```

```
    type    = START ENUM
              name = "InputType"   //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Sheet Feed Auto Removable Tray"
                 4 = "Sheet Feed Auto Non-Removable Tray"
                 5 = "Sheet Feed Manual"
                 6 = "Continuous Roll"
                 7 = "Continuous Fan Fold"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Dimension Unit"
    id      = 3
    description = "The unit of measure for specifying dimensional "
                  "values for this input device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "MediaUnit"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Declared Media Dimension Feed Direction"
    id      = 4
    description = "This object provides the value of the declared  "
                  "dimension in the feed direction of the media that "
                  "is placed or will be placed in this input device. "
                  "The feed direction is the direction in which the "
                  "media is fed on this device. The dimension is "
                  "measured in Input Dim Units. If this device can "
                  "reliably sense this value, the value is sensed and "
                  "is read-only access. Otherwise the value is read-"
                  "write access and may be written by management or "
                  "control panel applications. The value (-1) means "
                  "other and specifically indicates that this device "
                  "places no restrictions on this parameter. The value "
                  "(-2) indicates unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Declared Media Dimension Cross Feed Direction"
    id      = 5
    description = "This object provides the value of the declared  "
                  "dimension in the cross feed direction of the media "
                  "that is placed or will be placed in this device. "
                  "The cross feed direction is ninety degrees relative "
                  "to the feed direction on this device. The dimension "
                  "is measured in Input Dimension Units. If this device "
                  "can reliably sense this value, the value is sensed "
                  "and is read-only access. Otherwise the value is read "
                  "-write access and may be written by management or "
                  "control panel applications. The value (-1) means "
                  "other and specifically indicates that this device "
                  "places no restrictions on this parameter. The value "
                  "(-2) indicates unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Chosen Media Dimension Feed Direction"
    id      = 6
    description = "This object provides the value of the granted "
                  "dimension in the feed direction of the media that "
                  "is placed or will be placed in this input device. "
                  "Feed dimension measurements are taken parallel "
                  "relative to the feed direction of the device and "
                  "measured in Input Dimension Units. If the printer "
                  "supports the declared dimension, the granted "
                  "dimension is the same as the declared dimension. If "
                  "not, the granted dimension is set to the closest "
                  "dimension that the printer supports when the "
                  "declared dimension is set. The value (-1) means "
                  "other and specifically indicates that this device "
                  "places no restrictions on this parameter. The value "
                  "(-2) indicates unknown."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
```

```
END ATTRIBUTE
START ATTRIBUTE
    name    = "Chosen Media Dimension Cross Feed Direction"
    id      = 7
    description = "This object provides the value of the granted "
                  "dimension in the cross feed direction of the media "
                  "that is placed or will be placed in this device. "
                  "The cross feed direction is ninety degrees relative "
                  "to the feed direction on this device. The dimension "
                  "is measured in Input Dimension Units. If the printer "
                  "supports the declared dimension the granted dimension "
                  "is the same as the declared dimension. If not the "
                  "granted dimension is set to the closet dimension "
                  "that the printer supports when the declared dimension "
                  "is set. The value (-1) means other and specifically "
                  "indicates that this device places no restrictions "
                  "on this parameter. The value (-2) indicates unknown."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Capacity Units"
    id      = 8
    description = "The unit of measure used for measuring capacity "
                  "values for this device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "CapacityUnit"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Capacity"
    id      = 9
    description = "The maximum capacity of the input device in Input "
                  "Capacity Units. There is no convention "
                  "associated with the media itself so this value is "
                  "claimed capacity. If the input device can reliably "
                  "sense this value, the value is sensed by the printer "
                  "and is read-only: otherwise the value may be written "
                  "by a management or control console application.  The "
                  "value (-1) means other and specifically indicates "
                  "that the input device places no restrictions on this "
                  "parameter. The value (-2) means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Current Level"
    id      = 10
    description = "The current capacity of the input device in Input "
                  "Capacity Units. If the input device can "
                  "reliably sense this value, the value is sensed by "
                  "the printer and is read-only; otherwise the value "
                  "may be written by a management or control console "
                  "application.  The value (-1) means other and "
                  "specifically indicates that this devices places no "
                  "restrictions on this parameter. The value (-2) "
                  "means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
             // Capacity Attribute Relationships //
 //
 //               INPUT MEASUREMENT
 //
 //     _______ |                    |
 //      ^      |                    |
 //      |      |                    |                  |
 //      |      |_ _ _ _ _ _ _ _ _ _ _| _______________  |direction
 //      |      |                    |      ^            v
 // MaxCapacity |                    |      |
 //      |      | Sheets left in tray | CurrentLevel
 //      |      |                    |      |
 //      v      |                    |      v
 //     _______ +____________________+ _______

START ATTRIBUTE
    name    = "Status"
    id      = 11
```

```
    description = "This value indicates the current status of this "
                  "input device."
                  ""
                  "SubUnitStatus is an integer sum of 5 "
                  "distinct values: Availability, Non-Critical, "
                  "Critical, On-line, and Transitioning. These "
                  "values are:"
                  ""
                  "_Availability;                    value; "
                  ""
                  " _Available and Idle;               0;       000'b'; "
                  " _Available and Standby;            2;       010'b'; "
                  " _Available and Active;             4;       100'b'; "
                  " _Available and Busy;               6;       110'b'; "
                  " _Unavailable and OnRequest;        1;       001'b'; "
                  " _Unavailable because Broken;       3;       011'b'; "
                  " _Unknown;                          5;       101'b'; "
                  ""
                  "_Non-Critical; "
                  ""
                  " _No Non-Critical Alerts;           0; "
                  " _Non-Critical Alerts;              8; "
                  ""
                  "_Critical; "
                  ""
                  " _No Critical Alerts;               0; "
                  " _Critical Alerts;                  16; "
                  ""
                  "_On-Line; "
                  ""
                  " _Intended state is On-Line;        0; "
                  " _Intended state is Off-Line;       32; "
                  ""
                  "_Transitioning; "
                  ""
                  " _At intended state;                0; "
                  " _Transitioning to intended state; 64; "
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Media Name"
    id      = 12
    description = "The name of the current media contained in this "
                  "input device. Examples are ISO-A4-White or Legal "
                  "Tender Bond Paper. See ISO standard name "
                  "references for recommended values."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE

//          INPUT TYPE EXTENDED  -optional attributes
//
// The following attributes are optional parameters that augment the
// the type attribute for this input device. An attribute that is not
// supported or that has no meaning for this input device, should give
// the key word UNSUPPORTED as its value.

 START ATTRIBUTE
    name    = "Name"
    id      = 13
    description = "The name assigned to this input device."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Vendor Name"
    id      = 14
    description = "The vendor name of this input device."
                  "component."
    access  = READ-ONLY
    storage = COMMON
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Model"
    id      = 15
    description = "The model name of this input device."
```

```
    access  = READ-ONLY
    storage = COMMON
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Version"
    id      = 16
    description = "The version string for this input device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Serial Number"
    id      = 17
    description = "The serial number assigned to this input device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Description"
    id      = 18
    description = "A free form text description of this input device "
                  "in the localization specified by General Current "
                  "Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = String (255)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Security"
    id      = 19
    description = "Indicates if this device has some security "
                  "associated with it."
    access  = READ-WRITE
    storage = COMMON
    type    = "PresentOnOff"
 END ATTRIBUTE

//          INPUT MEDIA EXTENDED  -optional attributes
//
// The following attributes are optional parameters that augment the
// the media attribute for this input device.

// The input media extended attributes support identification of media
// installed or available for use on a printing device. Medium resources
// are identified by name. and include a collection of characteristic
// attributes that may further be used for selection or management of
// them.

// An attribute that is not supported or that has no meaning for this
// input media, should give the key word UNSUPPORTED as its value.

 START ATTRIBUTE
    name    = "Media Weight"
    id      = 20
    description = "The weight of the media associated with this Input "
                  "device in grams / per meter squared. The value (-1) "
                  "means other and specifically indicates that the "
                  "device places no restriction on this parameter. The "
                  "value (-2) means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Media Type"
    id      = 21
    description = "The name of the type of the type of medium "
                  "associated with this input device. Valid values are "
                  "standardized strings from ISO 10175 (DPA) and ISO "
                  "10180  (SPDL) which are: stationary, transparency, "
                  "envelope, envelope-plain, envelope window, "
                  "continuous-long, continuous-short, tab-stock, "
                  "labels, multi-layer."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
```

```
    name    = "Media Color"
    id      = 22
    description = "The name of color of the medium associated with "
                  "this input device. Valid values are standardized "
                  "strings from ISO 10175 (DPA) and ISO 10180 (SPDL) "
                  "which are: other, unknown, white, pink, yellow, "
                  "buff, goldenrod, blue, green, transparent."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Media Form Parts"
    id      = 23
    description = "The number of parts associated with the media "
                  "associated with this input device if the media "
                  "is a multi-part form. The value (-1) means other "
                  "and specifically indicates the device places "
                  "no restrictions on this parameter. The value (-2) "
                  "means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
   end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                      PRINTER OUTPUT TABLE                          //
//                                                                    //
// A printer may have multiple output devices associated with it. For //
// example, a printer can have two output trays. The output           //
// devices associated with a printer are identified in this table.    //
// Each entry in the table is an output device definition with an     //
// ordered set of attributes. Output devices typically have a location,//
// a type, an identifier, a set of constraints on possible media sizes //
// and potentially other media characteristics, and may be capable of //
// indicating current status or capacity. Only those attributes       //
// applicable to the output device need be specified.                 //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Output Table"
    id      = 9
    class   = "DMTF|Output Table|001"
    description = "A list of output devices capable of receiving "
                  "media delivered from the printing process including "
                  "information regarding their identity, possible and "
                  "current configuration, and status."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by this printer to identify an  "
                  "associated output device. Although these values may "
                  "change due to a major reconfiguration of the "
                  "printer (e.g. the addition of new output devices to "
                  "the printer), values are expected to remain stable "
                  "across successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Type"
    id      = 2
    description = "The type of technology employed by this output "
                  "device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "OutputType"   //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Removable Bin"
                 4 = "Unremovable Bin"
                 5 = "Continuous Roll Device"
                 6 = "Mailbox"
                 7 = "Continuous Fan Fold"
              END ENUM
```

```
END ATTRIBUTE
START ATTRIBUTE
    name    = "Capacity Unit"
    id      = 3
    description = "The unit of measure for specifying capacity "
                  "values for this device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "CapacityUnit"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Capacity"
    id      = 4
    description = "The maximum capacity of this device in Output "
                  "Capacity Units. There is no convention "
                  "associated with the media itself so this value is "
                  "claimed capacity. If the device can reliably "
                  "sense this value, the value is sensed by the printer "
                  "and is read-only: otherwise the value may be written "
                  "by a management or control console application.  The "
                  "value (-1) means other and specifically indicates "
                  "that the device places no restrictions on this "
                  "parameter. The value (-2) means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Remaining Capacity"
    id      = 5
    description = "The remaining capacity of the possible capacity "
                  "in Capacity Units. If the output device can "
                  "reliably sense this value, the value is sensed by "
                  "the printer and is read-only; otherwise the value "
                  "may be written by a management or control console "
                  "application.  The value (-1) means other and "
                  "specifically indicates that this devices places no "
                  "restrictions on this parameter. The value (-2) "
                  "means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
            // Capacity Attribute Relationships //
 //
 //
 //                OUTPUT MEASUREMENT
 //
 //     _______ |                       | _______
 //      ^      |                       |      ^
 //      |      |                       |      |
 //      |      |                       | RemainingCapacity
 // MaxCapacity |                       |      |
 //      |      |                       |      v                ^
 //      |      |_ _ _ _ _ _ _ _ _ _ _ _| ____________________  |direction
 //      |      |                       |                       |
 //      |      |  Sheets in output     |
 //      v      |                       |
 //     _______ +_______________________+
 //
START ATTRIBUTE
    name    = "Status"
    id      = 6
    description = "This value indicates the current status of this "
                  "output device."
                  ""
                  "SubUnitStatus is an integer sum of 5 "
                  "distinct values: Availability, Non-Critical, "
                  "Critical, On-line, and Transitioning. These "
                  "values are:"
                  ""
                  "_Availability;                   value; "
                  ""
                  " _Available and Idle;              0;       000'b'; "
                  " _Available and Standby;           2;       010'b'; "
                  " _Available and Active;            4;       100'b'; "
                  " _Available and Busy;              6;       110'b'; "
                  " _Unavailable and OnRequest;       1;       001'b'; "
                  " _Unavailable because Broken;      3;       011'b'; "
                  " _Unknown;                         5;       101'b'; "
                  ""
```

```
                    "_Non-Critical; "
                    ""
                    " _No Non-Critical Alerts;          0; "
                    " _Non-Critical Alerts;             8; "
                    ""
                    "_Critical; "
                    ""
                    " _No Critical Alerts;              0; "
                    " _Critical Alerts;                 16; "
                    ""
                    "_On-Line; "
                    ""
                    " _Intended state is On-Line;       0; "
                    " _Intended state is Off-Line;      32; "
                    ""
                    "_Transitioning; "
                    ""
                    " _At intended state;               0; "
                    " _Transitioning to intended state; 64; "
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE

//          OUTPUT TYPE EXTENDED  -optional attributes

// The following attributes are optional parameters that augment the
// the type attribute for this output device. An attribute that is not
// supported or that has no meaning for this output device, should give
// the key word UNSUPPORTED as its value.

 START ATTRIBUTE
    name    = "Name"
    id      = 7
    description = "The name assigned to this output device."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Vendor Name"
    id      = 8
    description = "The vendor name of this output device."
                  "component."
    access  = READ-ONLY
    storage = COMMON
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Model"
    id      = 9
    description = "The model name of this output device."
    access  = READ-ONLY
    storage = COMMON
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Version"
    id      = 10
    description = "The version string for this output device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Serial Number"
    id      = 11
    description = "The serial number assigned to this output device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Description"
    id      = 12
    description = "A free form text description of this output device "
                  "in the localization specified by General Current "
                  "Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = String (255)
```

```
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Security"
     id      = 13
     description = "Indicates if this device has some security "
                   "associated with it."
     access  = READ-WRITE
     storage = COMMON
     type    = "PresentOnOff"
 END ATTRIBUTE

//          OUTPUT DIMENSIONS EXTENDED  -optional attributes

// The following attributes are optional parameters that augment the
// the dimensions for this output device.

 START ATTRIBUTE
     name    = "Dimension Unit"
     id      = 14
     description = "The unit of measure for specifying dimensional "
                   "values for this output device."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = "MediaUnit"
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Maximum Dimension Feed Direction"
     id      = 15
     description = "This object provides the value of the maximum "
                   "dimension in the feed direction of the media that "
                   "is placed or will be placed in this output device. "
                   "Feed dimension measurements are taken parallel "
                   "relative to the feed direction of the device and "
                   "measured in Output Dim Units. If the printer "
                   "can reliably sense this value, the value is sensed "
                   "by the printer and is read-only; otherwise the "
                   "value may be written (set) by a management "
                   "application."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Maximum Dimension Cross Feed Direction"
     id      = 16
     description = "The maximum dimensions supported by this output "
                   "device for measurements taken ninety degrees "
                   "relative to the feed direction associated with "
                   "this device in Output Dim Units. If this value "
                   "can be reliably sensed by this device, the value "
                   "is sensed by the printer and is read-only; "
                   "otherwise the value may be written (set) by a "
                   "management application."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Minimum Dimension Feed Direction"
     id      = 17
     description = "This object provides the value of the minimum "
                   "dimension in the feed direction of the media that "
                   "is placed or will be placed in this output device. "
                   "Feed dimension measurements are taken parallel "
                   "relative to the feed direction of the device and "
                   "measured in Output Dim Units. If the printer "
                   "can reliably sense this value, the value is sensed "
                   "by the printer and is read-only; otherwise the "
                   "value may be written (set) by a management "
                   "application."
     access  = READ-WRITE
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Minimum Dimension Cross Feed Direction"
     id      = 18
     description = "The minimum dimensions supported by this output "
                   "device for measurements taken ninety degrees "
                   "relative to the feed direction associated with "
                   "this device in Output Dim Units. If this value "
```

```
                    "can be reliably sensed by this device, the value "
                    "is sensed by the printer and is read-only; "
                    "otherwise the value may be written (set) by a "
                    "management application."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE

//              OUTPUT FEATURES  -optional attributes

// The following attributes are optional parameters that augment the
// the output device table.

 START ATTRIBUTE
    name    = "Stacking Order"
    id      = 19
    description = "The current state of the stacking order for this "
                  "output device. First To Last means that as pages are "
                  "output, the front of the next page is placed  "
                  "against the back of the previous page. Last to "
                  "First means as pages are output, the back of the "
                  "next page is placed against the front of the "
                  "previous page."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "StackingOrder"  //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "First To Last"
                 4 = "Last to First"
              END ENUM
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Page Delivery Orientation"
    id      = 20
    description = "The reading surface that will be up when pages are "
                  "delivered to the output device. Values are Face Up "
                  "and Face Down."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "PageDeliveryOrientation"  //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Face Up"
                 4 = "Face Down"
              END ENUM
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Bursting"
    id      = 21
    description = "This object indicates that the output unit supports "
                  "bursting, and if so, whether the feature is "
                  "enabled. Bursting is the process by which "
                  "continuous media is separated into individual "
                  "sheets, typically by bursting along perforations."
    access  = READ-WRITE
    storage = COMMON
    type    = "PresentOnOff"
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Decollating"
    id      = 22
    description = "This object indicates that the output device "
                  "supports decollating, and if so, whether the "
                  "feature is enabled. Decollating is the process "
                  "by which the parts of a multi-part form are "
                  "separated and sorted into separate stacks for "
                  "each part."
    access  = READ-WRITE
    storage = COMMON
    type    = "PresentOnOff"
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Page Collated"
    id      = 23
    description = "This object indicates that the output device "
```

```
                  "supports page collation, and if so, whether the "
                  "feature is enabled."
    access  = READ-WRITE
    storage = COMMON
    type    = "PresentOnOff"
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Offset Stacking"
    id      = 24
    description = "This object indicates that the output device "
                  "supports offset stacking and if so "
                  "whether the feature is enabled."
    access  = READ-WRITE
    storage = COMMON
    type    = "PresentOnOff"
 END ATTRIBUTE
   end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                         PRINTER MARKER TABLE                       //
//                                                                    //
// Printer Marker is the mechanism that produces marks on the print   //
// media. A printer can contain one or more marking mechanisms. Some  //
// examples of multiple marker devices are: a printer with separate   //
// markers for normal and magnetic ink, or an imagesetter that can    //
// output to both a proofing device and final film. Each marker device//
// is represented by and entry in the Printer Marker Table. Each      //
// marker can have its own associated characteristics such as marking //
// technology and resolution.                                         //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Marker Table"
    id      = 10
    class   = "DMTF|Marker Table|001"
    description = "A list of marker devices associated with this "
                  "printer capable of producing marks on the print "
                  "media."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by this printer to identify an  "
                  "associated marker device. Although these values may "
                  "change due to a major reconfiguration of the "
                  "printer (e.g. the addition of new marker devices to "
                  "the printer), values are expected to remain stable "
                  "across successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Marking Technology"
    id      = 2
    description = "The type of technology employed by this marker "
                  "device."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "MarkingTech"   //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Electrophotographic LED"
                 4 = "Electrophotographic Laser"
                 5 = "Electrophotographic Other"
                 6 = "Impact Moving Head Dot Matrix 9 Pin"
                 7 = "Impact Moving Head Dot Matrix 24 Pin"
                 8 = "Impact Moving Head Dot Matrix Other"
                 9 = "Impact Moving Head Fully Formed"
                10 = "Impact Band"
                11 = "Impact Other"
                12 = "Inkjet Aqueous"
                13 = "Inkjet Solid"
                14 = "Inkjet Other"
                15 = "Pen"
                16 = "Thermal Transfer"
                17 = "Thermal Sensitive"
                18 = "Thermal Diffusion"
```

```
                19 = "Thermal Other"
                20 = "Electroerosion"
                21 = "Electrostatic"
                22 = "Photographic Microfiche"
                23 = "Photographic Image Setter"
                24 = "Photographic Other"
                25 = "Ion Deposition"
                26 = "E Beam"
                27 = "Typesetter"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Counter Unit"
    id      = 3
    description = "The unit that will be used by the printer when "
                  "reporting counter values for this marker device."
                  "The time units of measure are provided for a device "
                  "like a strip recorder that does not or can not "
                  "track the physical dimension of the media and does "
                  "not use characters, lines or sheets."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "CounterUnit"  //Enumeration type 1
              type = INTEGER
                 1 = "Reserved"
                 2 = "Reserved"
                 3 = "Ten Thousandths Of Inches"
                 4 = "Micrometers"
                 5 = "Characters"
                 6 = "Lines"
                 7 = "Impressions"
                 8 = "Sheets"
                 9 = "Dot Rows"
                11 = "Hours"
                16 = "Feet"
                17 = "Meters"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE

    name    = "Life Count"
    id      = 4
    description = "The number of units counted "
                  "during the life of the printer using the units "
                  "specified by Counter Unit."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = COUNTER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Power On Count"
    id      = 5
    description = "The number of units counted "
                  "since the printer was most recently powered on using "
                  "the units of measure specified by Counter Unit."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = COUNTER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Process Colorants"
    id      = 6
    description = "The number of process colors supported by this "
                  "marker. A process color of 1 implies monochrome. "
                  "The value of this object and the value of the "
                  "Spot Colorant object can not both be 0."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER    //Must be 0 or greater
END ATTRIBUTE
START ATTRIBUTE
    name    = "Spot Colorants"
    id      = 7
    description = "The number of spot colors supported by this marker. "
                  "The value of this object and the value of the "
                  "Process colorant object can not both be 0."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER    //Must be 0 or greater
END ATTRIBUTE
```

```
START ATTRIBUTE
    name    = "Addressability Unit"
    id      = 8
    description = "The unit of measure of distance."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "AddrUnit"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Addressability Feed Direction"
    id      = 9
    description = "The number of addressable marking positions in the "
                  "feed direction per 1000 units of measure specified "
                  "by Addressable Unit. A value of (-1) implies "
                  " 'other' or 'infinite' while a value of (-2) "
                  "implies 'unknown'."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Addressability Cross Feed Direction"
    id      = 10
    description = "The number of addressable marking positions in the "
                  "cross feed direction per 1000 units of measure "
                  "specified by Addressable Unit. A value of (-1)  "
                  "implies 'other' or 'infinite' while a value of (-2) "
                  "implies 'unknown'."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "North Margin"
    id      = 11
    description = "The margin, in units identified by Addressable "
                  "Unit, from the leading edge of the medium as the "
                  "medium flows through the marking engine with the "
                  "side to be image facing the observer. The leading "
                  "edge is the North edge and the other edges are "
                  "defined by the normal compass layout of directions "
                  "with the compass facing the observer. Printing "
                  "within the area bounded by all four margins is "
                  "guaranteed for all interpreters. The value (-2) "
                  "means unknown."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "South Margin"
    id      = 12
    description = "The margin from the South edge (see North Margin) "
                  "of the medium in units identified by Addressable "
                  "Unit. Printing within the area bounded by all four "
                  "margins is guaranteed for all interpreters. The "
                  "value (-2) means unknown."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "West Margin"
    id      = 13
    description = "The margin from the West edge (see North Margin) "
                  "of the medium in units identified by Addressable "
                  "Unit. Printing within the area bounded by all four "
                  "margins is guaranteed for all interpreters. The "
                  "value (-2) means unknown."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "East Margin"
    id      = 14
    description = "The margin from the East edge (see North Margin) "
                  "of the medium in units identified by Addressable "
                  "Unit. Printing within the area bounded by all four "
                  "margins is guaranteed for all interpreters. The "
                  "value (-2) means unknown."
```

```
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Status"
    id      = 15
    description = "This value indicates the current status of this "
                  "marker device. "
                  ""
                  "SubUnitStatus is an integer sum of 5 "
                  "distinct values: Availability, Non-Critical, "
                  "Critical, On-line, and Transitioning. These "
                  "values are: "
                  ""
                  "_Availability;                   value; "
                  ""
                  " _Available and Idle;              0;       000'b'; "
                  " _Available and Standby;           2;       010'b'; "
                  " _Available and Active;            4;       100'b'; "
                  " _Available and Busy;              6;       110'b'; "
                  " _Unavailable and OnRequest;       1;       001'b'; "
                  " _Unavailable because Broken;      3;       011'b'; "
                  " _Unknown;                         5;       101'b'; "
                  ""
                  "_Non-Critical; "
                  ""
                  " _No Non-Critical Alerts;          0; "
                  " _Non-Critical Alerts;             8; "
                  ""
                  "_Critical; "
                  ""
                  " _No Critical Alerts;              0; "
                  " _Critical Alerts;                 16; "
                  ""
                  "_On-Line; "
                  ""
                  " _Intended state is On-Line;       0; "
                  " _Intended state is Off-Line;      32; "
                  ""
                  "_Transitioning; "
                  ""
                  " _At intended state;               0; "
                  " _Transitioning to intended state; 64;"
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                   PRINTER MARKER SUPPLIES TABLE                    //
//                                                                    //
// A marker can have one or more supplies associated with it. For     //
// example a marker may use both toner and fuser oil supplies.        //
// A marker may also have more then one supply source for a given type //
// of supply e.g. multiple supply sources of toner. Each unique source //
// of supply for a marker device is an entry in the marker supply table//
// Each supply entry can have its own characteristics associated with  //
// it such as colorant and current supply level.                      //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Marker Supplies Table"
    id      = 11
    class   = "DMTF|Marker Supplies Table|001"
    description = "A list of marker devices, with their associated "
                  "supplies and supplies characteristics."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by the printer to identify this "
                  "marker supply container/receptacle. Although these "
                  "values may change due to a major reconfiguration of "
                  "the printer (e.g. the addition of new marker "
                  "supplies to the printer), values are expected to "
                  "to remain stable across successive printer power "
                  "cycles."
    access  = READ-ONLY
```

```
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Marker Index"
    id      = 2
    description = "The value of the Marker Index corresponding to the "
                  "marker device with which this marker supply entity "
                  "is associated."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Colorant Index"
    id      = 3
    description = "The value of the Colorant Index corresponding to "
                  "the colorant with which this marker supply entity "
                  "is associated. This value shall be 0 if there is no "
                  "Colorant Table."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Class"
    id      = 4
    description = "This value indicates whether this supply entity "
                  "represents a supply container that is consumed or a "
                  "receptacle that is filled."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "MkrSupplyClass" //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 2 = "Reserved"
                 3 = "Supply That is Consumed"
                 4 = "Receptacle That is Filled"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Type"
    id      = 5
    description = "The type of this supply."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "MarkingTech"   //Enumeration type 3
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Toner"
                 4 = "Waste Toner"
                 5 = "Ink"
                 6 = "Ink Cartridge"
                 7 = "Ink Ribbon"
                 8 = "Waste Ink"
                 9 = "OPC"
                10 = "Developer"
                11 = "Fuser Oil"
                12 = "Solid Wax"
                13 = "Ribbon Wax"
                14 = "Waste Wax"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Description"
    id      = 6
    description = "The description of this supply/receptacle in the "
                  "localization specified by General Current "
                  "Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(256)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Supply Unit"
    id      = 7
    description = "Unit of measure of this marker supply container "
                  "or receptacle."
```

```
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "MkrSupplyUnit"      //Enumeration type 1
              type = INTEGER
                 1 = "Reserved"
                 2 = "Reserved"
                 3 = "Ten Thousandths Of Inches"
                 4 = "Micrometers"
                 7 = "Impressions"
                 8 = "Sheets"
                11 = "Hours"
                12 = "Thousandths Of Ounces"
                13 = "Tenths Of Grams"
                14 = "Hundredths of Fluid Ounces"
                15 = "Tenths Of Milliliters"
                16 = "Feet"
                17 = "Meters"
              END ENUM
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Maximum Capacity"
    id      = 8
    description = "The maximum capacity of this supply container/ "
                  "receptacle expressed in Supply Units. If this "
                  "supply container/receptacle can reliably sense this "
                  "value, the value is sensed by the printer and is "
                  "read-only; otherwise the value may be written by "
                  "by a control panel or management application. The "
                  "value (-1) means other and places no restrictions "
                  "on this parameter. The value (-2) means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Current Level"
    id      = 9
    description = "The current level if this supply is a container; "
                  "the remaining space if this supply is a receptacle. "
                  "If this supply container receptacle can reliably "
                  "sense this value, the value is sensed by the "
                  "printer and is read-only; otherwise the value may "
                  "be written by a control panel or management "
                  "application. The value (-1) means other and "
                  "places no restrictions on this parameter. The "
                  "value (-2) means unknown."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                 PRINTER MARKER COLORANT TABLE                      //
//                                                                    //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Marker Colorant Table"
    id      = 12
    class   = "DMTF|Marker Colorant Table|001"
    description = "A table of all the colorants available on the "
                  "printer."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by the printer to identify this "
                  "colorant. Although these values may change due to a "
                  "major reconfiguration of the device (e.g. the "
                  "addition of new colorants to the printer), values "
                  "are expected to remain stable across successive "
                  "printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Marker Index"
```

```
    id      = 2
    description = "The value of the Marker Index corresponding to the "
                  "marker device with which this colorant entry "
                  "is associated."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Role"
    id      = 3
    description = "The role played by this colorant."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "ColorantRole"       //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Process"
                 4 = "Spot"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Value"
    id      = 4
    description = "The name of the color of this colorant using "
                  "standardized string names from ISO 10175 (DPA) "
                  "and ISO 10180 (SPDL) which are:                "
                  "  _other;                                      "
                  "  _unknown;                                    "
                  "  _white;                                      "
                  "  _red;                                        "
                  "  _green;                                      "
                  "  _blue;                                       "
                  "  _cyan;                                       "
                  "  _magenta;                                    "
                  "  _yellow;                                     "
                  "  _black;                                      "
                  "Implementers may add additional string values. "
                  "The ISO 9070 naming conventions are recommended "
                  "in order to avoid potential name clashes."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Tonality"
    id      = 5
    description = "The distinct levels of tonality realizable by a "
                  "marking device when using this colorant. This value "
                  "does not include the number of levels of tonal "
                  "difference that an interpreter can obtain by "
                  "techniques such as half toning. This value must be "
                  "at least 2."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                     PRINTER MEDIA PATH GROUP                       //
//                                                                    //
// The media paths encompass the mechanisms in the printer that move  //
// the media through the printer and connect all other media related  //
// devices: input, outputs, markers and finishers. A printer contains //
// one or more media paths defined in the Media Path Table. This group //
// defines the attributes that apply to all paths in the table.       //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Media Path Table"
    id      = 13
    class   = "DMTF|Media Path Table|001"
    description = "This object defines attributes that apply to all of "
                  "the media paths defined in the Media Path Table. "
    Key     = 1
 START ATTRIBUTE
    name    = "Index"
```

```
    id      = 1
    description = "A unique value used by the printer to identify this "
                  "media path. Although these values may change due to "
                  "a major reconfiguration of the device (e.g. the "
                  "addition of new media paths to the printer), values "
                  "are expected to remain stable across successive "
                  "printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Speed Print Unit"
    id      = 2
    description = "The unit of measure used in specifying the speed "
                  "of all Media Paths in the printer, i.e., the "
                  "numerator of the units of measure of the media path "
                  "speed."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "SpeedPrintUnit"     //Enumeration type 1
              type = INTEGER
                 1 = "Reserved"
                 2 = "Reserved"
                 3 = "Ten Thousandths of Inches per Hour"
                 4 = "Micrometers per Hour"
                 5 = "Characters per Hour"
                 6 = "Lines per Hour"
                 7 = "Impressions per Hour"
                 8 = "Sheets per Hour"
                 9 = "Dot Rows per Hour"
                16 = "Feet per Hour"
                17 = "Meters per Hour"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Media Size Unit"
    id      = 3
    description = "The unit of measure of media size for use in "
                  "in specifying dimensional values for all media "
                  "paths in the printer."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = "MediaUnit"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Speed"
    id      = 4
    description = "The maximum printing speed of this media path "
                  "expressed in media speed units (units of Max Speed "
                  "Print Unit per Max Speed Time Unit). A value (-1) "
                  "implies Other."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER

END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Media Feed Direction"
    id      = 5
    description = "The maximum physical media size in the feed "
                  "direction of this media path expressed in units of "
                  "measure specified by Media Size Unit. A value (-1) "
                  "implies 'unlimited'. A value (-2) implies 'unknown'."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Maximum Media Cross Feed Direction"
    id      = 6
    description = "The maximum physical media size across the feed "
                  "direction of this media path expressed in units of "
                  "measure specified by Media Size Unit. A value (-1) "
                  "implies other."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
```

```
    name    = "Minimum Media Feed Direction"
    id      = 7
    description = "The minimum physical media size in the feed "
                  "direction of this media path expressed in units of "
                  "measure specified by Media Size Unit. A value (-1) "
                  "implies other."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Minimum Media Cross Feed Direction"
    id      = 8
    description = "The minimum physical media size across the feed "
                  "direction of this media path expressed in units of "
                  "measure specified by Media Size Unit. A value (-1) "
                  "implies other."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Type"
    id      = 9
    description = "The type of media path for this media path."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "MediaPathType"        //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Long Edge Binding Duplex"
                 4 = "Short Edge Binding Duplex"
                 5 = "Simplex"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Description"
    id      = 10
    description = "The manufacturer provided description of this media "
                  "path in the localization specified by General "
                  "Current Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(256)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Status"
    id      = 11
    description = "This value indicates the current status of this "
                  "media path. "
                  ""
                  "SubUnitStatus is an integer sum of 5 "
                  "distinct values: Availability, Non-Critical, "
                  "Critical, On-line, and Transitioning. These "
                  "values are: "
                  ""
                  "_Availability;                   value; "
                  ""
                  " _Available and Idle;              0;       000'b'; "
                  " _Available and Standby;           2;       010'b'; "
                  " _Available and Active;            4;       100'b'; "
                  " _Available and Busy;              6;       110'b'; "
                  " _Unavailable and OnRequest;       1;       001'b'; "
                  " _Unavailable because Broken;      3;       011'b'; "
                  " _Unknown;                         5;       101'b'; "
                  ""
                  "_Non-Critical; "
                  ""
                  " _No Non-Critical Alerts;          0; "
                  " _Non-Critical Alerts;             8; "
                  ""
                  "_Critical; "
                  ""
                  " _No Critical Alerts;              0; "
                  " _Critical Alerts;                 16; "
                  ""
                  "_On-Line; "
                  ""
                  " _Intended state is On-Line;       0; "
```

```
                    " _Intended state is Off-Line;      32; "
                    ""
                    "_Transitioning; "
                    ""
                    " _At intended state;               0; "
                    " _Transitioning to intended state; 64; "
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
    end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                       PRINTER CHANNEL TABLE                        //
//                                                                    //
// Channels are independent sources of print data. Here, print data is //
// the term used for information that is to be used to construct print //
// and may have both data and control aspects. The output of a channel //
// is in a form suitable for input to one of the interpreters as a     //
// stream that may be independently enabled (allowing print data to    //
// flow) or disabled (stopping the flow of print data). A printer may  //
// have one or more channels.                                         //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Channel Table"
    id      = 14
    class   = "DMTF|Channel Table|001"
    description = "The Channel Table represents the set of input data "
                  "sources which can provide print data to one or "
                  "of the interpreters available on the printer."
    Key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by the printer to identify this "
                  "data channel. Although these values may change due "
                  "to a major reconfiguration of the device (e.g. the "
                  "addition of new data channels to the printer), "
                  "values are expected to remain stable across "
                  "successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Type"
    id      = 2
    description = "The type of print data channel. This object "
                  "provides the linkage to Channel-Type specific "
                  "groups that may (conceptually) extend the Channel "
                  "Table with additional details about that channel."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "ChannelType"   //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 3 = "Serial Port"
                 4 = "Parallel Port"
                 5 = "IEEE1248 Port"
                 6 = "SCSI Port"
                 7 = "AppletalkPAP"
                 8 = "LPD Server"
                 9 = "Netware RPrinter"
                10 = "Netware PServer"
                11 = "Port9100"
                12 = "App Socket"
                13 = "FTP"
                14 = "TFTP"
                15 = "DLC LLC Port"
                16 = "IBM 3270"
                17 = "IBM 5250"
                18 = "FAX"
                19 = "IEEE 1394"
                20 = "Transport 1"
                21 = "CPAP"
                22 = "DCE Remote Proc Call"
                23 = "ONC Remote Proc Call"
                24 = "OLE"
```

```
                25 = "Named Pipe"
                26 = "PC Print"
                27 = "Server Message Block"
                28 = "PSM"
                29 = "DLL Protocol Call"
                30 = "VxD Protocol Call"
                31 = "System Object Manager"
                32 = "DEC LAT"
                33 = "NPAP"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Protocol Version"
    id      = 3
    description = "The version of the protocol used on this channel. "
                  "The format used for version numbering depends on "
                  "Channel Type."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Current Job Control Language Index"
    id      = 4
    description = "The value of Interpreter Index corresponding to the "
                  "Control Language interpreter for this channel. "
                  "This interpreter defines the syntax used for "
                  "control functions, such as querying or changing "
                  "environment variables and identifying job "
                  "boundaries (e.g. PJL, PostScript, NPAP, IPDS)."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Default Page Description Language Index"
    id      = 5
    description = "The value of Interpreter Index corresponding to the "
                  "Page Description Language interpreter for this "
                  "channel. This interpreter defines the default "
                  "page description language interpreter to be used "
                  "for the print data unless the Control language is "
                  "used to select a specific interpreter (e.g., PCL, "
                  "PostScript, IPDS, auto-sense)."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "State"
    id      = 6
    description = "The state of this print channel. The value "
                  "determines whether control information "
                  "and print data is allowed through this channel or "
                  "not."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "ChannelState"         //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 3 = "No Data Accepted"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Interface Index"
    id      = 7
    description = "The value of Interface Index (in the Interface Table) "
                  "When one or more row of the table is relevant, "
                  "this is the index of the row representing the top "
                  "layer in the interface hierarchy. A value of zero "
                  "indicates that no interface is associated with this "
                  "channel."
   access  = READ-WRITE
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Status"
    id      = 8
    description = "This value indicates the current status of this "
```

```
                    "channel. "
                    ""
                    "SubUnitStatus is an integer sum of 5 "
                    "distinct values: Availability, Non-Critical, "
                    "Critical, On-line, and Transitioning. These "
                    "values are: "
                    ""
                    "_Availability;                   value; "
                    ""
                    " _Available and Idle;              0;       000'b'; "
                    " _Available and Standby;           2;       010'b'; "
                    " _Available and Active;            4;       100'b'; "
                    " _Available and Busy;              6;       110'b'; "
                    " _Unavailable and OnRequest;       1;       001'b'; "
                    " _Unavailable because Broken;      3;       011'b'; "
                    " _Unknown;                         5;       101'b'; "
                    ""
                    "_Non-Critical; "
                    ""
                    " _No Non-Critical Alerts;          0; "
                    " _Non-Critical Alerts;             8; "
                    ""
                    "_Critical; "
                    ""
                    " _No Critical Alerts;              0; "
                    " _Critical Alerts;                 16; "
                    ""
                    "_On-Line; "
                    ""
                    " _Intended state is On-Line;       0; "
                    " _Intended state is Off-Line;      32; "
                    ""
                    "_Transitioning; "
                    ""
                    " _At intended state;               0; "
                    " _Transitioning to intended state; 64;"
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
   end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                     PRINTER INTERPRETER TABLE                      //
//                                                                    //
// The         //
// interpreter table has one entry per interpreter, including         //
// both Page Description and Control Language interpreters.           //
//                                                                    //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Interpreter Table"
    id      = 15
    class   = "DMTF|Interpreter Table|001"
    description = "The Interpreter Table represents the set of "
                  "interpreters available on the printer."
    Key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value for each PDL or control language for "
                  "which there exists an interpreter or emulator in "
                  "the printer. The value is used to identify this "
                  "interpreter. Although these values may change due "
                  "to a major reconfiguration of the device (e.g. the "
                  "addition of new interpreters to the printer), "
                  "values are expected to remain stable across "
                  "successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Language Family"
    id      = 2
    description = "The family name of a Page Description Language "
                  "(PDL) or control language which this interpreter in "
                  "in the printer can interpret or emulate."
    access  = READ-ONLY
```

```
      storage = SPECIFIC
      type    = START ENUM
                name = "IntLangFam"    //Enumeration type 2
                type = INTEGER         //See http://www.isi.edu:80/in-
notes/iana/assignments/
                  1 = "Other"          //printer-language-numbers for interpreter
definitions.
                  3 = "PCL"
                  4 = "HPGL"
                  5 = "PJL"
                  6 = "PS"
                  7 = "IPDS"
                  8 = "PPDS"
                  9 = "Escape P"
                 10 = "Epson"
                 11 = "DDIF"
                 12 = "Interpress"
                 13 = "ISO 6429"
                 14 = "Line Data"
                 15 = "MODCA"
                 16 = "ReGIS"
                 17 = "SCS"
                 18 = "SPDL"
                 19 = "Tek4014"
                 20 = "PDS"
                 21 = "IGP"
                 22 = "Code V"
                 23 = "DSC DSE"
                 24 = "WPS"
                 25 = "Ln03"
                 26 = "CCITT"
                 27 = "QUIC"
                 28 = "CPAP"
                 29 = "DEC PPL"
                 30 = "Simple Text"
                 31 = "IEEE 1284.1"
                 32 = "DOC"
                 33 = "imPRESS"
                 34 = "PIN WRITER"
                 35 = "NPDL"
                 36 = "NEC201PL"
                 37 = "Automatic"
                 38 = "PAGES"
                 39 = "LIPS"
                 40 = "TIFF"
                 41 = "Diagnostic"
                 42 = "PSprinter"
                 43 = "CaPSL"
                 44 = "EXCL"
                 45 = "LCDS"
                 46 = "XES"
                 47 = "PCLXL"
                 48 = "ART"
                END ENUM
  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Language Level"
      id      = 3
      description = "The level of the language which this interpreter "
                    "is interpreting or emulating. This might contain a "
                    "value like 5e for an interpreter which is "
                    "interpreting level 5e of the PCL language. It might "
                    "contain 2 for an interpreter which is emulating "
                    "level 2 of the PostScript language. Similarly it "
                    "might contain 2 for an interpreter which is "
                    "emulating level 2 of the HPGL language."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = STRING(63)
  END ATTRIBUTE
  START ATTRIBUTE
      name    = "Language Version"
      id      = 4
      description = "The date or version of the language which this "
                    "interpreter is interpreting or emulating. "
                    "Channel Type."
      access  = READ-ONLY
      storage = SPECIFIC
      type    = STRING(63)
  END ATTRIBUTE
  START ATTRIBUTE
```

```
    name    = "Description"
    id      = 5
    description = "A string to identify this interpreter in the "
                  "localization specified by General Current "
                  "Localization as opposed to the language which is "
                  "being interpreted. It is anticipated that this "
                  "string will allow manufacturers to unambiguously "
                  "identify their interpreters."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(256)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Version"
    id      = 6
    description = "The date code, version number or other product "
                  "specific information tied to this interpreter. This "
                  "value is associated with the interpreter, rather "
                  "than the version of the language which is being "
                  "interpreted or emulated."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING(63)
END ATTRIBUTE
START ATTRIBUTE
    name    = "Default Orientation"
    id      = 7
    description = "The current default media orientation for this "
                  "interpreter. May be overridden for a particular job "
                  "by a command in the input datastream."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = START ENUM
              name = "MediaOrientation" //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Portrait"
                 4 = "Landscape"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Addressability Feed Direction"
    id      = 8
    description = "The maximum interpreter addressability in the feed "
                  "direction in  10000 Marker Addressability Units "
                  "(see Marker Addressability Feed Dir) for this "
                  "interpreter. The value (-1) means other and "
                  "specifically indicates that this interpreter "
                  "places no restrictions on this parameter."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Addressability Cross Feed Direction"
    id      = 9
    description = "The maximum interpreter addressability in the cross "
                  "feed direction in 10000 Marker Addressability Units "
                  "(see Marker Addressability XFeed Dir) for this "
                  "interpreter. The value (-1) means other and "
                  "specifically indicates that this interpreter "
                  "places no restrictions on this parameter."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Default Character Set In"
    id      = 10
    description = "The default Character Set for octets encountered "
                  "outside a context in which the PDL establishes the "
                  "interpretation of octets."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = "CodedCharSet"
END ATTRIBUTE
START ATTRIBUTE
    name    = "Default Character Set Out"
    id      = 11
    description = "The default Character Set for data coming from "
```

```
                "this interpreter through the printer's output channel."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = "CodedCharSet"
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Two Way"
    id      = 12
    description = "This value indicates whether or not this "
                "interpreter returns information back across the "
                "data channel to the host."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "TwoWay"      //Enumeration type 1
              type = INTEGER
                 3 = "Yes"
                 4 = "No"
              END ENUM
 END ATTRIBUTE
   end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                PRINTER CONSOLE DISPLAY BUFFER TABLE                //
//                                                                    //
// Many printers have a console on the printer, the operator console, //
// that is used to display and modify the state of the printer. The   //
// console can be as simple as a few indicators and switches or as    //
// or as complicated as full screen displays and keyboards . There    //
// can be at most one console.                                        //
////////////////////////////////////////////////////////////////////////

 start group
    name    = "Printer Console Display Buffer Table"
    id      = 16
    class   = "DMTF|Display Buffer Table|001"
    description = "This table contains one entry for each physical "
                "line on the display. Lines cannot be added or "
                "deleted."
    key     = 1
 START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value for each console line in the "
                "printer. The value is used to identify the console "
                "line. Although these values may change due to a "
                "major reconfiguration of the device (e.g. the "
                "addition of new console lines to the printer). "
                "values are expected to remain stable across "
                "successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
    name    = "Line Text"
    id      = 2
    description = "The content of a line in the logical display buffer "
                "of the operator's console of the printer. When a "
                "write operation occurs, normally a critical "
                "message, to one of the Line Text strings, the agent "
                "should make that line displayable if a physical "
                "display is present. The printer should not "
                "overwrite this line once written until a zero "
                "length string is written to unlock that line. "
                "Printer generated strings shall be in the "
                "localization specified in the Console Localization. "
                "Management Application generated strings should be "
                "localized by the Management Application."
    access  = READ-WRITE
    storage = SPECIFIC
    type    = STRING(256)
 END ATTRIBUTE
   end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                  PRINTER CONSOLE LIGHTS TABLE                      //
//                                                                    //
////////////////////////////////////////////////////////////////////////
```

```
start group
    name    = "Printer Console Lights Table"
    id      = 17
    class   = "DMTF|Console Lights Table|001"
    description = "This table contains one entry for each console "
                  "light."
    key     = 1
START ATTRIBUTE
    name    = "Index"
    id      = 1
    description = "A unique value used by the printer to identify this "
                  "light. Although these values may change due to a "
                  "major reconfiguration of the device (e.g. the "
                  "addition of new console lights to the printer). "
                  "values are expected to remain stable across "
                  "successive printer power cycles."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "On Time"
    id      = 2
    description = "The on time in milliseconds of blinking of this "
                  "light; 0 indicates off always. If both Console On "
                  "Time and Console Off Time are 0, then the light is "
                  "always off."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Off Time"
    id      = 3
    description = "The off time in milliseconds of blinking of this "
                  "light; 0 indicates on always. If both Console On "
                  "Time and Console Off Time are 0, then the light is "
                  "always off."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Color"
    id      = 4
    description = "The color of this light."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "LightColor"  //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "White"
                 4 = "Red"
                 5 = "Green"
                 6 = "Blue"
                 7 = "Cyan"
                 8 = "Magenta"
                 9 = "Yellow"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Description"
    id      = 5
    description = "The vendor description or label of this light in "
                  "the localization specified by Console Localization."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING (255)
END ATTRIBUTE
  end group

////////////////////////////////////////////////////////////////////////
//                                                                    //
//                        PRINTER ALERT TABLE                         //
//                                                                    //
// The alert table lists all the critical and non-critical alerts     //
// currently active in the printer. A critical alert is one that      //
// stops the printer from printing immediately and can not continue   //
```

```
// until the critical alert condition is eliminated. Non-critical      //
// alerts are those items that do not stop printing but may at some    //
// future time. The table contains information on the severity,        //
// component, detail location within the component, alert code and     //
// description of each critical alert that is currently active within  //
// the printer.                                                        //
//////////////////////////////////////////////////////////////////////////

 start group
     name    = "Printer Alert Table"
     id      = 18
     class   = "DMTF|Alert Table|001"
     description = "This table lists all of the critical and "
                   "non-critical alerts currently active in the "
                   "printer."
     key     = 1
 START ATTRIBUTE
     name    = "Index"
     id      = 1
     description = "The index value used to determine which alerts have "
                   "been added or removed from the alert table.  This "
                   "in an incrementing integer starting from zero every "
                   "time the printer is powered on. When the printer "
                   "adds an alert to the table, that alert is assigned "
                   "the next higher integer value from the last item "
                   "entered into the table. If the index value reaches "
                   "its maximum value, the next item entered will cause "
                   "the index value to roll over and start at zero "
                   "again. The first event placed in the alert table "
                   "after power up initialization of the printer shall "
                   "have an index value of 1.  NOTE: The management "
                   "application will read the alert table when a trap "
                   "or event notification occurs or at a periodic rate "
                   "and then parse the table to determine if any new "
                   "entries were added by comparing the last known "
                   "index value with the current highest index value. "
                   "The management application will then update its "
                   "copy of the alert table.  When the printer "
                   "discovers that an alert is no longer active, the "
                   "printer shall remove the row for that alert from "
                   "the table and shall reduce the number of rows in "
                   "the table. The printer may add or delete any number "
                   "of rows from the table at any time."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = INTEGER
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Severity Level"
     id      = 2
     description = "The level of severity of this alert table entry. "
                   "The printer determines the severity level assigned "
                   "to each entry in the table."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = START ENUM
               name = "SeverityLevelAlertCode"  //Enumeration type 1
               type = INTEGER
                  1 = "Other"
                  3 = "Critical"
                  4 = "Warning"
               END ENUM
 END ATTRIBUTE
 START ATTRIBUTE
     name    = "Training Level"
     id      = 3
     description = "The level of training required to handle this alert. "
                   "The training level is an enumeration that is "
                   "determined and assigned by the printer manufacturer "
                   "based on the information or training required to "
                   "handle this alert. The printer will break alerts "
                   "into these different training levels. It is the "
                   "responsibility of the management application in the "
                   "system to determine how a particular alert is "
                   "handled and how and to whom that alert is routed. "
                   "The following are the four training levels of "
                   "alerts: (1) FIELD SERVICE -alerts that typically "
                   "require training and technical knowledge of the "
                   "printer and its devices. An example of a technical "
                   "person would be a manufacturer's Field Service "
                   "representative, or other person formally trained by "
```

```
                  "the manufacturer or similar representative; (2) "
                  "TRAINED -alerts that require an intermediate or "
                  "moderate level of knowledge of the printer and its "
                  "devices. A typical example of an alert that a "
                  "trained operator can handle is replacing toner "
                  "cartridges; (3) UNTRAINED -alerts that can be fixed "
                  "without prior knowledge of the printer and its "
                  "devices either because the action to correct the "
                  "alert is obvious or the printer can help the "
                  "untrained person to fix the problem. Typical "
                  "examples of such alerts is reloading paper trays "
                  "and emptying output bins on a low end printer; (4) "
                  "MANAGEMENT -Alerts that have to do with the overall "
                  "operation and configuration of the printer. "
                  "Examples of management events are configuration "
                  "changes of devices."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "TrainingLevel"        //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Untrained"
                 4 = "Trained"
                 5 = "Field Service"
                 6 = "Management"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Group"
    id      = 4
    description = "The type of device within the printer model that "
                  "this alert is related. Input, Output, and Markers "
                  "are examples of printer model groups."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "AlertGroup"             //Enumeration type 1
              type = INTEGER
                 1 = "Other"
                 3 = "Storage Reference"
                 4 = "Device Reference"
                 5 = "General Printer"
                 6 = "Cover"
                 7 = "Localization"
                 8 = "Input"
                 9 = "Output"
                10 = "Marker"
                11 = "Marker Supplies"
                12 = "Marker Colorant"
                13 = "Media Path"
                14 = "Channel"
                15 = "Interpreter"
                16 = "Console"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Group Index"
    id      = 5
    description = "An index of the row within the principle table in "
                  "the group identified by Alert Group that "
                  "represents the device of the printer that caused "
                  "this alert. The combination of the Group and Group "
                  "Index defines exactly which printer sub-unit caused "
                  "the alert; for example Input #1, Output #2, and "
                  "Marker # 1."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Location"
    id      = 6
    description = "The device location that is defined by the printer "
                  "manufacturer to further refine the location of this "
                  "alert within the designated device. The location is "
                  "used in conjunction with the Group and Group Index "
                  "values: for example, there is an alert at Input #2 "
                  "at location number 7."
    access  = READ-ONLY
```

```
    storage = SPECIFIC
    type    = INTEGER
END ATTRIBUTE
START ATTRIBUTE
    name    = "Alert Code"
    id      = 7
    description = "The code that describes the type of alert for this "
                  "entry. There are different codes for each sub-unit "
                  "type; for example, Media Supply Low and Media "
                  "Supply Empty are alert codes for input devices."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = START ENUM
              name = "AlertCode"             //Enumeration type 2
              type = INTEGER
                 1 = "Other"
                 2 = "Unknown"
                 3 = "Cover Open"            // Common Codes
                 4 = "Cover Closed"
                 5 = "Interlock Open"
                 6 = "Interlock Closed"
                 7 = "Configuration Change"
                 8 = "Jam"
               501 = "Door Open"             // General Printer Codes
               502 = "Door Closed"
               503 = "Power Up"
               504 = "Power Down"
               801 = "Input Media Tray Missing" // Input Codes
               802 = "Input Media Size Change"
               803 = "Input Media Weight Change"
               804 = "Input Media Type Change"
               805 = "Input Media Color Change"
               806 = "Input Media Forms Part Change"
               807 = "Input Media Supply Low"
               808 = "Input Media Supply Empty"
               901 = "Output Media Tray Missing" // Output Codes
               902 = "Output Media Tray Almost Full"
               903 = "Output Media Tray Full"
              1001 = "Marker Fuser Under Temperature" // Marker Codes
              1002 = "Marker Fuser Over Temperature"
              1101 = "Marker Toner Empty" // Marker Supplies Codes
              1102 = "Marker Ink Empty"
              1103 = "Marker Print Ribbon Empty"
              1104 = "Marker Toner Almost Empty"
              1105 = "Marker Ink Almost Empty"
              1106 = "Marker Print Almost Ribbon Empty"
              1107 = "Marker Waste Toner Receptacle Almost Full"
              1108 = "Marker Waste Ink Receptacle Almost Full"
              1109 = "Marker Waste Toner Receptacle Full"
              1110 = "Marker Waste Ink Receptacle Full"
              1111 = "Marker OPC Life Almost Over"
              1112 = "Marker OPC Life Over"
              1113 = "Marker Developer Almost Empty"
              1114 = "Marker Developer Empty"
              1301 = "Media Path Media Tray Missing" // Media Path Codes
              1302 = "Media Path Media Tray Almost Full"
              1303 = "Media Path Media Tray Full"
              1501 = "Interpreter Memory Increase" // Interpreter Codes
              1502 = "Interpreter Memory Decrease"
              1503 = "Interpreter Cartridge Added"
              1504 = "Interpreter Cartridge Deleted"
              1505 = "Interpreter Resource Added"
              1506 = "Interpreter Resource Deleted"
              1507 = "Interpreter Resource Unavailable"
              END ENUM
END ATTRIBUTE
START ATTRIBUTE
    name    = "Description"
    id      = 8
    description = "A description of this alert entry in the "
                  "localization specified by General Current "
                  "Localization. The description is provided by "
                  "the printer to further elaborate on the enumerated "
                  "alert or provide information in the case where the "
                  "code is classified other or unknown. The printer "
                  "is required to return a description string but the "
                  "the string may be a null string."
    access  = READ-ONLY
    storage = SPECIFIC
    type    = STRING (255)
END ATTRIBUTE
```

```
////////////////////////////////////////////////////////////////////////
//                                                                    //
//          ALERT TIME STAMP  -optional                               //
//                                                                    //
// The following attributes are optional parameters that augment the  //
// alert table.                                                       //
//                                                                    //
////////////////////////////////////////////////////////////////////////

 START ATTRIBUTE
     name    = "Time"
     id      = 9
     description = "The time when this alert was generated."
     access  = READ-ONLY
     storage = SPECIFIC
     type    = DATE
 END ATTRIBUTE
   end group
end component
```

•