SMPTE STANDARD

D-Cinema Operations – Extended Facility List Message

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Foreword

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SMPTE Engineering Documents are drafted in accordance with the rules given in its Standards Operations Manual. This SMPTE Engineering Document was prepared by Technology Committee 21DC.

Intellectual Property

At the time of publication no notice had been received by SMPTE claiming patent rights essential to the implementation of this Engineering Document. However, attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. SMPTE shall not be held responsible for identifying any or all such patent rights.

Introduction

This section is entirely informative and does not form an integral part of this document.

To issue D-Cinema Packages and corresponding Key Delivery Messages, it is necessary to collect information on the devices present at the target exhibition facility, e.g. digital certificates, 3D capabilities, etc. SMPTE ST 430-7:2008, which specifies a Facility List Message (FLM) structure for this purpose, has been superseded in practice by ad-hoc solutions. This document updates SMPTE ST 430-7:2008 to specify an Extended FLM structure, which builds on the latter.

As depicted in Figure 1, each Extended FLM instance contains information on a single facility, which houses multiple auditoriums and devices. Devices can be associated with either the facility as a whole or with each auditorium individually, where they are grouped into playback suites. Multiple components – software, hardware and firmware – can be associated with each device.

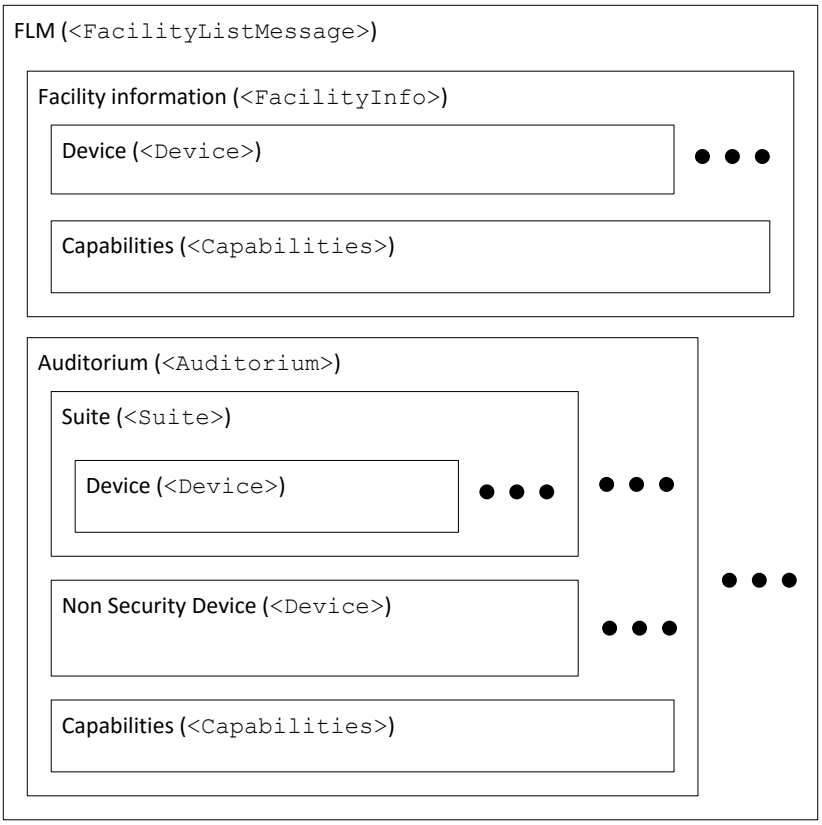

Figure 1: Extended Facility List Message Structure

Specific capabilities, e.g. 3D playback, can be associated with facilities, auditoriums and devices. This allows, for instance, a capability enabled by the combination of multiple devices to be associated with an auditorium. This specification defines a number of capabilities, and allows other specifications to easily define additional capabilities as needed.

1 Scope

This document specifies the Extended Facility List Message structure, which allows information on the equipment deployed at a D-Cinema facility to be exchanged between parties for the purpose of issuing D-Cinema Packages, as specified in SMPTE ST 429-2, and corresponding Key Delivery Messages, as specified in ST 430-1.

2 Conformance Notation

Normative text is text that describes elements of the design that are indispensable or contains the conformance language keywords: "shall", "should", or "may". Informative text is text that is potentially helpful to the user, but not indispensable, and can be removed, changed, or added editorially without affecting interoperability. Informative text does not contain any conformance keywords.

All text in this document is, by default, normative, except: the Introduction, any section explicitly labeled as "Informative" or individual paragraphs that start with "Note:"

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keyword “reserved” indicates a provision that is not defined at this time, shall not be used, and may be defined in the future. The keyword “forbidden” indicates “reserved” and in addition indicates that the provision will never be defined in the future.

A conformant implementation according to this document is one that includes all mandatory provisions ("shall") and, if implemented, all recommended provisions ("should") as described. A conformant implementation need not implement optional provisions ("may") and need not implement them as described.

Unless otherwise specified, the order of precedence of the types of normative information in this document shall be as follows: Normative prose shall be the authoritative definition; Tables shall be next; then formal languages; then figures; and then any other language forms.

3 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this engineering document. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this engineering document are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

Internet Assigned Numbers Authority (1987). Eggert, P. and A. Olson, "Sources for Time Zone and Daylight Saving Time Data" (ftp://ftp.iana.org/tz/code/tz-link.htm)

SMPTE ST 430-1:2009, D-Cinema Operations — Key Delivery Message

SMPTE ST 430-2:2006, D-Cinema Operations — Digital Certificate.

SMPTE ST 428-12:2013, D-Cinema Distribution Master – Common Audio Channels and Soundfield Groups

ITU-T Recommendation E.123 (02/2001), Notation for national and international telephone numbers, e-mail addresses and Web addresses

ISO 3166-1, Codes for the representation of names of countries and their subdivisions – Part 1: Country codes

World Wide Web Consortium (W3C) (2004, October 28). XML Schema Part 1: Structures (Second Edition).

World Wide Web Consortium (W3C) (2004, February 4). Extensible Markup Language (XML) 1.0 (Third Edition).

Internet Engineering Task Force (IETF) (2008, October). RFC 5322 Internet Message Format.

World Wide Web Consortium (W3C) (2002, February 12). XML Signature Syntax and Processing.

4 Overall

4.1 Schema

This specification uses inline XML Schema definitions, as specified in W3C XML Schema Part 1: Structures, to specify XML structures. All definitions shall belong to the XML Schema. These schema definitions shall belong to the XML Schema whose root element is listed in Table 1.

Table 1: XML Schema Root Element Definition

```
<xs:schema elementFormDefault="qualified" xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:flm="http://www.smpte-ra.org/ns/430-16/2017/FLM"
  targetNamespace="http://www.smpte-ra.org/ns/430-16/2017/FLM"
  xmlns:dcml="http://www.smpte-ra.org/schemas/433/2008/dcmlTypes/"
  xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<!-- schema definitions found in this document -->
</xs:schema>
```

In the event of a conflict between schema definitions and the prose, the prose shall take precedence.

Imported namespaces shall correspond to the specifications defined in Table 2.

Table 2: Imported Namespaces

Namespace	Specification
`http://www.smpte-ra.org/schemas/433/2008/dcmlTypes/`	`SMTPE ST 433`
`http://www.w3.org/2000/09/xmldsig#`	`W3C XML Signature Syntax and Processing`

NOTE: The `http://www.w3.org/2000/09/xmldsig#` namespace is imported since its `KeyInfo` element is used in the Facility List Message structure to carry the digital certificate chains associated with a device (see Section 5.9.13). The `Signature` element defined in the same namespace is not used however.

4.2 Instance

A Facility List Message instance is `FacilityListMessage` element, as specified in Table 3.

Table 3: FacilityListMessage element definition

```
  <xs:element name="FacilityListMessage" type="flm:FacilityListMessageType"/>
```

4.3 FLM Document

An FLM Document is an XML document whose root is a Facility List Message instance.

An FLM Document shall use UTF-8 encoding, as specified in W3C Extensible Markup Language (XML).

5 Structure

5.1 General

To avoid duplication between text and schema, the cardinality and default values of elements are specified in the XML schema definitions only.

5.2 FacilityListMessageType

5.2.1 General

The `FacilityListMessageType` type shall be as specified in Table 4.

Table 4: FacilityListMessageType schema definition

```
<xs:complexType name="FacilityListMessageType">
  <xs:sequence>
    <xs:element name="MessageId" type="dcml:UUIDType"/>
    <xs:element name="IssueDate" type="xs:dateTime"/>
    <xs:element name="AnnotationText" type="dcml:UserTextType" minOccurs="0"/>
    <xs:element name="FacilityInfo" type="flm:FacilityInfoType"/>
    <xs:element name="AuditoriumList">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Auditorium" type="flm:AuditoriumType"
                 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
      <xs:unique name="AuditoriumNumberOrNameUnique">
        <xs:selector xpath="flm:Auditorium"/>
        <xs:field xpath="flm:AuditoriumNumberOrName"/>
      </xs:unique>
    </xs:element>
    <xs:element name="Extensions" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:any namespace="##other" processContents="lax"
                 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
  </xs:element>
  </xs:sequence>
</xs:complexType>
```

5.2.2 MessageId

The `MessageId` element shall uniquely identify the Facility List Message instance.

Any two Facility List Message instances may have identical `MessageId` values if and only if the two instances are identical.

5.2.3 IssueDate

The `IssueDate` element shall indicate the time and date at which the Facility List Message was issued.

5.2.4 AnnotationText

The `AnnotationText` element shall be a free-form annotation associated with the Facility List Message instance. It is intended for display to the user.

5.2.5 FacilityInfo

The `FacilityInfo` element shall describe the facility.

5.2.6 AuditoriumList

Each `Auditorium` element within the `AuditoriumList` element shall be associated with a single auditorium within the facility. The auditorium should be for current or anticipated D-Cinema use.

5.2.7 Extensions

Extensions elements containing information intrinsic to the message, and not specifically to the facility and its components, should be added in the `Extensions` element.

Implementations may ignore children element of `Extensions`.

5.3 FacilityInfoType

5.3.1 General

The `FacilityInfoType` type shall be as specified in Table 5.

Table 5: FacilityInfoType Schema Definition

```
<xs:complexType name="FacilityInfoType">
  <xs:sequence>
    <xs:element name="FacilityID" type="xs:anyURI"/>
    <xs:element name="AlternateFacilityIDList" minOccurs="0">
      <xs:complexType>
        <xs:sequence maxOccurs="unbounded">
          <xs:element name="AlternateFacilityID" type="xs:anyURI"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="FacilityName" type="dcml:UserTextType"/>
    <xs:element name="FacilityTimeZone" type="xs:string" minOccurs="0"/>
    <xs:element name="Circuit" type="dcml:UserTextType"/>
    <xs:element name="ContactList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Contact" type="flm:ContactType" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="AddressList" type="flm:AddressListType"> </xs:element>
    <xs:element name="DeviceList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Device" type="flm:DeviceType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
```

```
      <xs:element name="Capabilities" type="flm:FacilityCapabilitiesType"
                  minOccurs="0"/>
      <xs:any namespace="##other" processContents="lax" minOccurs="0"
                  maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
```

Extensions elements containing information intrinsic to the facility and generally applicable to all facilities should be added using the `any` extension point.

Extension elements describing capabilities offered by individual devices should be added to the `Capabilities` element.

Implementations may ignore extension elements.

5.3.2 FacilityID

The `FacilityID` element shall uniquely identify the facility across Facility List Message instances.

5.3.3 AlternateFacilityIDList

Each `AlternateFacilityID` element of the `AlternateFacilityIDList` element shall uniquely identify the facility.

Members of the `AlternateFacilityIDList` element may change across Facility List Message instances targeted at the same facility.

5.3.4 FacilityName

The `FacilityName` element shall be the name of the facility.

5.3.5 FacilityTimeZone

The `FacilityTimeZone` element shall be the time zone of the facility and shall be a TZ name as specified in the IANA Sources for Time Zone and Daylight Saving Time Data.

The `FacilityTimeZone` element should be present.

NOTE: Unless this element is present, the time window of a Key Delivery Message, as specified in SMTPE ST 430-1, targeted to the facility cannot be authored accurately.

5.3.6 Circuit

The `Circuit` element shall be the name of the circuit to which the facility belongs.

5.3.7 ContactList

The `ContactList` element provides information on how to contact personnel at the facility. Each `Contact` element of the `ContactList` element shall be a point of contact associated with the facility. `Contact` element should be listed in order of decreasing preference.

5.3.8 AddressList

Each element of the `AddressList` element shall be an address associated with the facility.

5.3.9 DeviceList

Each `Device` element shall correspond to a device associated with the facility as a whole, i.e. as opposed to a single auditorium.

EXAMPLE: A satellite catcher can be listed as a member of this element.

5.3.10 Capabilities

The `Capabilities` element shall indicate capabilities associated with the facility as a whole.

5.4 FacilityCapabilitiesType

5.4.1 General

The `FacilityCapabilitiesType` shall be as defined Table 6.

Table 6: FacilityCapabilitiesType Schema Definition

```
<xs:complexType name="FacilityCapabilitiesType">
  <xs:sequence>
    <xs:element name="KDMDeliveryMethodList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="DeliveryMethod" type="flm:DeliveryMethodType"
                 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="DCPDeliveryMethodList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="DeliveryMethod" type="flm:DeliveryMethodType"
                 maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"
                 maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

Additional capabilities associated with a facility may be introduced by adding extension elements using the `any` extension point.

Implementations may ignore extension elements they do not recognize.

5.4.2 KDMDeliveryMethodList

Each `DeliveryMethod` element of the `KDMDeliveryMethodList` element shall indicate a method by which a Key Delivery Message may be delivered to the facility

5.4.3 DCPDeliveryMethodList

Each `DeliveryMethod` element of the `DCPDeliveryMethodList` element shall indicate a method by which a D-Cinema Package may be delivered to the facility.

5.5 AuditoriumType

5.5.1 General

The schema for the `AuditoriumType` is shown in Table 7.

Table 7: AuditoriumType Schema Definition

```
<xs:complexType name="AuditoriumType">
  <xs:sequence>
      <xs:element name="AuditoriumNumberOrName" type="xs:string"/>
    <xs:element name="AuditoriumInstallDate" type="xs:date" minOccurs="0"/>
  <xs:element minOccurs="0" name="ScreenWidth">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:positiveInteger">
            <xs:attribute name="units" type="flm:LengthUnitEnum" use="required"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" name="SeatingCapacity" type="xs:positiveInteger"/>
    <xs:element name="SuiteList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Suite" type="flm:SuiteType" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="NonSecurityDeviceList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Device" type="flm:DeviceType" maxOccurs="unbounded"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="Capabilities" type="flm:AuditoriumCapabilitiesType"
                minOccurs="0"/>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"
                maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

Extensions elements containing information intrinsic to the auditoriums and generally applicable to any auditorium should be added using the `any` extension point.

Extension elements describing capabilities offered by auditorium should be added to the `Capabilities` element.

Implementations may ignore extension elements.

5.5.2 AuditoriumNumberOrName

The `AuditoriumNumberOrName` element shall be the unique and persistent number or name of the auditorium across Facility List Message instances.

5.5.3 AuditoriumInstallDate

The `AuditoriumInstallDate` element shall indicate when the auditorium became, or will become, available for D-Cinema service, i.e. consumer viewing of digitally-projected motion picture content.

NOTE: For testing, KDMs can be issued for auditoriums not yet in service.

5.5.4 ScreenWidth

The `ScreenWidth` element shall be the width of the auditorium's screen with masking fully open.

The `units` attribute shall indicate the units of measure of the `ScreenWidth` value.

5.5.5 SeatingCapacity

The `SeatingCapacity` element shall be the seating capacity of the auditorium.

5.5.6 SuiteList

Each `Suite` element of the `SuiteList` element shall correspond to an equipment suite associated with the auditorium.

5.5.7 Capabilities

The `Capabilities` element shall indicate capabilities associated with the auditorium as a whole.

5.6 AuditoriumCapabilitiesType

5.6.1 General

The schema for the `AuditoriumCapabilitiesType` is shown in Table 8.

Table 8: AuditoriumCapabilitiesType Schema Definition

```
<xs:complexType name="AuditoriumCapabilitiesType">
  <xs:sequence>
    <xs:element name="Supports35MM" type="xs:boolean" minOccurs="0"/>
    <xs:element name="ScreenAspectRatio" type="flm:ScreenAspectRatioType"
                minOccurs="0"/>
    <xs:element name="AdjustableScreenMask" type="flm:AdjustableScreenMaskType"
                minOccurs="0"/>
    <xs:element name="AudioFormatList" minOccurs="0">
      <xs:complexType>
        <xs:sequence>
          <xs:element name="AudioFormat" minOccurs="1" maxOccurs="unbounded"
            type="flm:ScopedStringType"> </xs:element>
        </xs:sequence>
      </xs:complexType>
</xs:element>
     <xs:element name="LargeFormat" minOccurs="0">
       <xs:complexType>
         <xs:sequence>
           <xs:element name="Kind" type="flm:ScopedStringType"/>
           <xs:element name="InstallDate" type="xs:date" minOccurs="0"/>
         </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="Digital3DSystem" minOccurs="0"
                type="flm:Digital3DSystemType"> </xs:element>
    <xs:element minOccurs="0" name="ClosedCaptionSystem">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" name="Kind" type="flm:ScopedStringType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" name="VisuallyImpairedNarrationSystem">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" name="Kind" type="flm:ScopedStringType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" name="HearingImpairedSystem">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" name="Kind" type="flm:ScopedStringType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"
                maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

Additional capabilities associated with an auditorium may be introduced by adding extension elements using the `any` extension point. Implementations may ignore extension elements.

5.6.2 Supports35MM

The `Supports35MM` element shall indicate whether the auditorium is capable of any form of film playback.

5.6.3 ScreenAspectRatio

The `ScreenAspectRatio` element shall specify the aspect ratio of the auditorium screen with masking fully retracted.

The `ScreenAspectRatioType` and `ScreenAspectRatioEnum` types shall be as specified in Table 14.

Table 9: ScreenAspectRatioType and ScreenAspectRatioEnum Schema Definitions

```
<xs:complexType name="ScreenAspectRatioType">
  <xs:simpleContent>
    <xs:extension base="flm:ScreenAspectRatioEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="ScreenAspectRatioEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="1.85"/>
    <xs:enumeration value="2.39"/>
    <xs:enumeration value="1.66"/>
    <xs:enumeration value="1.37"/>
    <xs:enumeration value="Other"/>
  </xs:restriction>
</xs:simpleType>
```

When the scope attribute is present, the meaning of the value of the `ScreenAspectRatioType` instance is not specified in this document.

In all circumstance, whether the `scope` attribute is present or absent, the value of `ScreenAspectRatioType` should be appropriate for display to a user.

Table 10 shall define the semantics of `ScreenAspectRatioEnum` enumerated values.

Table 10: ScreenAspectRatioEnum values

1.85	The aspect ratio is 1.85:1
2.39	The aspect ratio is 2.39:1
1.66	The aspect ratio is 1.66:1
1.37	The aspect ratio is 1.37:1
Other	The aspect ratio has a value other than those specified above

5.6.4 AdjustableScreenMask

The `AdjustableScreenMask` element shall indicate the screen masking system available to the auditorium screen.

The `AdjustableScreenMaskType` and `AdjustableScreenMaskEnum` types shall be as specified in Table 11.

Table 11: AdjustableScreenMaskType and AdjustableScreenMaskEnum schema definitions

```
<xs:complexType name="AdjustableScreenMaskType">
  <xs:simpleContent>
    <xs:extension base="flm:AdjustableScreenMaskEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="AdjustableScreenMaskEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="Top"/>
    <xs:enumeration value="Side"/>
    <xs:enumeration value="Bottom"/>
    <xs:enumeration value="FloatingScope"/>
    <xs:enumeration value="FloatingFlat"/>
    <xs:enumeration value="SideBottom"/>
    <xs:enumeration value="SideTop"/>
    <xs:enumeration value="TopBottom"/>
    <xs:enumeration value="All"/>
    <xs:enumeration value="Fixed"/>
  </xs:restriction>
</xs:simpleType>
```

When the `scope` attribute is present, the meaning of the value of the `AdjustableScreenMaskType` element is not specified herein.

In all circumstances, whether the `scope` attribute is present or absent, the value of the `AdjustableScreenMaskType` element should be appropriate for display to a user.

Table 12 shall define the semantics of `AdjustableScreenMaskEnum` enumerated values.

Table 12: AdjustableScreenMask values

Top	Masking operates from the top of the screen
Side	Masking operates from the sides of the screen
Bottom	Masking operates from the bottom of the screen
FloatingScope	No screen adjustable masking available, masking is set to scope
FloatingFlat	No screen adjustable masking available, masking is set to flat
SideBottom	Masking operates from the sides and bottom of the screen
SideTop	Masking operates from the sides and the top of the screen
TopBottom	Masking operates from the top and bottom of the screen
All	Masking operates from the top, bottom, and both sides of the screen
Fixed	No adjustable screen masking available

5.6.5 AudioFormatList

Each `AudioFormat` element of the `AudioFormatList` element shall correspond to an audio format supported by the auditorium.

Table 13: AudioFormat Values

Scope attribute	Value	Meaning
http://www.smpte-ra.org/ns/430-16/2017/FLM#AudioFormat	51 71 SDS 61 M	As specified in SMPTE ST 428-12

Table 13 lists values that may be used for the `AudioFormat` element.

5.6.6 LargeFormat

5.6.6.1 General

The `LargeFormat` element shall be present if the auditorium offers large format capabilities.

5.6.6.2 Kind

The `Kind` element shall indicate the kind of large format capability is offered by the auditorium.

5.6.6.3 InstallDate

The `InstallDate` element shall indicate when the large format capability became, or will become, available for D-Cinema service, i.e. consumer viewing of digitally-projected motion picture content.

5.6.7 Digital3Dsystem

The `Digital3DSystem` element shall indicate the 3D playback capabilities of the auditorium.

5.6.8 ClosedCaptionSystem

The `ClosedCaptionSystem` element shall specify the closed caption system capability of the auditorium.

If present, the `Kind` element shall indicate the kind of closed caption system.

5.6.9 VisuallyImpairedNarrationSystem

The `VisuallyImpairedNarrationSystem` element shall indicate the VI-N audio channel playback capability of the auditorium.

If present, the `Kind` element shall indicate the kind of VI-N audio channel playback.

5.6.10 HearingImpairedSystem

The `HearingImpairedSystem` element shall indicate the HI audio channel playback capability of the auditorium.

If present, the `Kind` element shall indicate the kind of HI audio channel playback.

5.7 SuiteType

The `SuiteType` type shall be as specified in Table 14.

Table 14. SuiteType Schema Definition.

```
<xs:complexType name="SuiteType">
  <xs:sequence>
    <xs:element name="Device" type="flm:DeviceType" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

The `SuiteType` shall describe a collection of devices (each represented by a single `Device` element), with collection containing:

- a single security manager to which a KDM can be addressed, and
- the devices intended to be included in the Authenticated Device List of this KDM.

NOTE: A single complete D-Cinema presentation can involve more than one Suite.

Each element of type `SuiteType` shall contain exactly one `Device` element with a `DeviceTypeID` value of `"SM"` and `scope` attribute equal to `"http://www.smpte-ra.org/schemas/433/2008/dcmlTypes/#device-type-tokens"`.

5.8 NonSecurityDeviceList

The `NonSecurityDeviceList` is a collection of `Device` elements, each corresponding to a single device that is neither a security nor is intended in the Authenticated Device List of a KDM. Such devices can, for instance, include Motion, Automation, sound processor devices.

5.9 DeviceType

5.9.1 General

The `DeviceType` type shall be as specified in Table 15.

Table 15: DeviceType Schema Definition

```
<xs:complexType name="DeviceType">
  <xs:sequence>
    <xs:element name="DeviceTypeID" type="dcml:deviceTypeType"/>
    <xs:element name="DeviceIdentifier" type="dcml:deviceIdentifierPolyType"/>
    <xs:element name="DeviceSerial" type="xs:string" minOccurs="0"/>
    <xs:element name="Manufacturer" type="flm:ScopedStringType"/>
    <xs:element name="ModelNumber" type="xs:string"/>
    <xs:element name="InstallDate" minOccurs="0">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:date">
            <xs:attribute default="true" name="actual" type="xs:boolean"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="IsActive" type="xs:boolean"/>
    <xs:element name="Integrator" type="flm:ScopedStringType" minOccurs="0"/>
    <xs:element name="VPFFinanceEntity" type="flm:ScopedStringType" minOccurs="0"/>
    <xs:element name="VPFStartDate" type="xs:date" minOccurs="0"/>
    <xs:element name="ComponentList" minOccurs="0">
      <xs:complexType>
        <xs:sequence maxOccurs="unbounded">
          <xs:element name="Component" type="flm:ComponentType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="KeyInfoList" minOccurs="0">
      <xs:complexType>
        <xs:sequence maxOccurs="unbounded">
```

```
            <xs:element ref="ds:KeyInfo"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="Capabilities" type="flm:DeviceCapabilitiesType">
                  </xs:element>
      <xs:any namespace="##other" processContents="lax" minOccurs="0"
                  maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
```

Extensions elements containing information intrinsic to the device and generally applicable to any device should be added using the `any` extension point.

Extension elements describing capabilities offered by the device should be added to the `Capabilities` element.

Implementations may ignore extension elements.

5.9.2 DeviceTypeID

The `DeviceTypeID` element shall identify the device type.

5.9.3 DeviceIdentifier

The `DeviceIdentifier` element shall uniquely and persistently identify the device across Facility List Message instances.

5.9.4 DeviceSerial

The `DeviceSerial` element shall be the serial number of the device as labeled.

5.9.5 Manufacturer

The combination of the value of the `Manufacturer` element and its `scope` attribute shall uniquely and persistently identify the manufacturer of the device.

5.9.6 ModelNumber

The `ModelNumber` element shall be the model number of the device.

5.9.7 InstallDate

The `InstallDate` element shall be the date when the device was, or will be, installed.

If the `actual` attribute of the `InstallDate` element is false, then the date is an estimate.

5.9.8 IsActive

The `IsActive` element shall indicate whether the device is available.

5.9.9 Integrator

The `Integrator` element shall be the name of the entity that installed, and maintains the device and data with the device.

5.9.10 VPFFinanceEntity

The `VPFFinanceEntity` element shall be the name of the Virtual Print Fee entity that funded the device.

NOTE: `VPFFinanceEntity` is syntactically optional and can be ignored or omitted by parties that do not wish to use it.

5.9.11 VPFStartDate

The `VPFStartDate` element shall be the start date of the Virtual Print Fee that funded the device.

NOTE: `VPFStartDate` is syntactically optional and can be ignored or omitted by parties that do not wish to use it.

5.9.12 ComponentList

Each `Component` element shall correspond to a software, firmware or hardware component of the device.

5.9.13 KeyInfoList

The `KeyInfoList` shall contain the one or more complete certificate chains associated with the device. Each `KeyInfo` element shall contain one or more `X509Data` elements, each corresponding to a single certificate, as specified in SMPTE ST 430-2.

5.9.14 Capabilities

The `Capabilities` element shall indicate capabilities of the device.

5.10 DeviceCapabilitiesType

5.10.1 General

The `DeviceCapabilitiesType` type shall be as specified in Table 16.

Table 16: DeviceCapabilitiesType Schema Definition

```
  <xs:complexType name="DeviceCapabilitiesType">
  <xs:sequence>
    <xs:element name="Resolution" type="flm:ResolutionType" minOccurs="0"/>
    <xs:element name="WatermarkingList" minOccurs="0">
      <xs:complexType>
        <xs:sequence maxOccurs="unbounded">
          <xs:element name="Watermarking" type="flm:WatermarkingType"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"
                maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

Additional capabilities associated with a device may be introduced by adding extension elements using the `any` extension point.

Implementations may ignore extension elements they do not recognize.

5.10.2 WatermarkingList

Each `Watermarking` element of the `WatermarkingList` element shall indicate a watermarking algorithm implemented by the device.

5.10.3 Resolution

The `Resolution` element shall be the projected resolution of the device.

The `ResolutionType` and `ResolutionEnum` types shall be as specified in Table 17.

Table 17: ResolutionType and ResolutionEnum Schema Definitions

```
<xs:complexType name="ResolutionType">
  <xs:simpleContent>
    <xs:extension base="flm:ResolutionEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="ResolutionEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="2K"/>
    <xs:enumeration value="4K"/>
  </xs:restriction>
</xs:simpleType>
```

When the `scope` attribute is present, the value of the `ResolutionType` instance is not specified, but should be appropriate for display to a user.

Table 18 shall define the semantics of `ResolutionEnum` enumerated values.

Table 18: ResolutionEnum Values

2K	2K format as specified in SMPTE ST 428-1
4K	4K format as specified in SMPTE ST 428-1

5.11 AddressListType

5.11.1 General

The `AddressListType` type shall be as defined in Table 19.

Table 19: AddressListType Schema Definition

```
<xs:complexType name="AddressListType">
  <xs:sequence>
    <xs:element name="Physical" type="flm:AddressType" minOccurs="0"/>
    <xs:element name="Shipping" type="flm:AddressType" minOccurs="0"/>
    <xs:element name="Billing" type="flm:AddressType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

5.11.2 Physical

The `Physical` element shall correspond to the address of a physical location.

5.11.3 Shipping

The `Shipping` element shall correspond to a shipping address.

5.11.4 Billing

The `Billing` element shall correspond to a billing address.

5.12 ContactType

5.12.1 General

The `ContactType` type shall be as specified in Table 20.

Table 20: ContactType Schema Definition

```
<xs:complexType name="ContactType">
  <xs:sequence>
    <xs:element name="Name" type="dcml:UserTextType"/>
    <xs:element name="CountryCode" type="flm:ISO3166CountyCode" minOccurs="0"/>
    <xs:element name="Phone1" type="xs:string" minOccurs="0"/>
    <xs:element name="Phone2" type="xs:string" minOccurs="0"/>
    <xs:element name="Email" type="flm:EmailAddressType" minOccurs="0"/>
    <xs:element name="Type" type="xs:string" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

5.12.2 Name

The `Name` element shall be the given and family name of the contact.

5.12.3 CountryCode

The `CountryCode` element shall be the country of residence of the contact, and shall be a two-letter country code as specified in ISO 3166.

5.12.4 Phone1

The `Phone1` element shall be the primary phone number for the contact using international notation as specified in ITU-T Recommendation E.123.

5.12.5 Phone2

The `Phone2` element shall be an alternate phone number for the contact using international notation as specified in ITU-T Recommendation E.123.

5.12.6 Email

The `Email` element shall be the email address for the contact.

5.12.7 Type

The `Type` element shall be the type of contact, e.g. Projectionist.

5.13 Digital3DsystemType

5.13.1 General

The `Digital3DSystemType` type shall be as specified in Table 21.

Table 21: Digital3DSystemType Schema Definition

```
<xs:complexType name="Digital3DSystemType">
  <xs:sequence>
    <xs:element name="IsActive" type="xs:boolean"/>
    <xs:element name="Digital3DConfiguration" minOccurs="0"
                type="flm:ScopedStringType"> </xs:element>
    <xs:element name="InstallDate" type="xs:date" minOccurs="0"/>
    <xs:element name="ScreenType" type="flm:ScreenTypeType" minOccurs="0"/>
    <xs:element name="ScreenLuminance" minOccurs="0">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:decimal">
            <xs:attribute name="units" type="flm:LuminanceUnitEnum"
                 use="required"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

5.13.2 IsActive

The `isActive` element shall indicate whether the 3D system is operational.

5.13.3 Digital3Dconfiguration

The `Digital3DConfiguration` element shall indicate the 3D system kind.

5.13.4 InstallDate

The `InstallDate` element shall be the date when the 3D system was, or will be, installed.

5.13.5 ScreenType

The `ScreenType` element shall be the kind of screen installed.

The `ScreenTypeType` and `ScreenTypeEnum` shall be as specified in Table 22.

Table 22: ScreenTypeType and ScreenTypeEnum schema definitions

```
<xs:complexType name="ScreenTypeType">
  <xs:simpleContent>
    <xs:extension base="flm:ScreenTypeEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="ScreenTypeEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="Silver"/>
    <xs:enumeration value="White"/>
```

```
      <xs:enumeration value="Other"/>
    </xs:restriction>
  </xs:simpleType>
```

When the `scope` attribute is present, the value of the `ScreenTypeType` instance is not specified, but should be appropriate for display to a user.

Table 23 shall define the semantics of `ScreenTypeEnum` enumerated values.

Table 23: ScreenTypeEnum Values

Silver	Silver screen
White	Matte white screen
Other	Other screen type

5.13.6 ScreenLuminance

The `ScreenLuminance` element shall be the projected luminance during a 3D presentation.

The `units` attribute shall indicate the units of measure used for the `ScreenLuminance` value.

5.14 DeliveryMethodType

5.14.1 General

The `DeliveryMethodType` type shall be as specified in Table 24.

Table 24: DeliveryMethodType Schema Definition

```
<xs:complexType name="DeliveryMethodType">
  <xs:sequence>
    <xs:element name="Email" type="flm:EmailType" minOccurs="0"
                maxOccurs="unbounded"/>
    <xs:element name="Modem" type="flm:ModemType" minOccurs="0"
                maxOccurs="unbounded"/>
    <xs:element name="Network" type="flm:NetworkType" minOccurs="0"
                maxOccurs="unbounded"/>
    <xs:element name="Physical" type="flm:PhysicalType" minOccurs="0"
                maxOccurs="unbounded"/>
    <xs:element name="Satellite" type="flm:SatelliteDeliveryType" minOccurs="0"
                maxOccurs="unbounded"/>
     <xs:element name="TKR" type="xs:boolean" minOccurs="0"/>
    <xs:any namespace="##other" processContents="lax" minOccurs="0"
                maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

The delivery protocol associated with each method described in the parent section is outside the scope of this specification.

Additional delivery methods may be introduced by adding extension elements using the `any` extension point.

Implementations may ignore extension elements.

5.14.2 Email

The `Email` element shall indicate delivery through an email address.

5.14.3 Modem

The `Modem` element shall indicate delivery using a modem connected to a phone line.

This element is deprecated. It should not be present and may be removed from future versions of this specification.

5.14.4 Network

The `Network` element shall indicate delivery to a URL.

5.14.5 Physical

The `Physical` element shall indicate delivery to a physical location.

5.14.6 Satellite

The `Satellite` element shall indicate delivery using a satellite system.

5.14.7 TKR

The `TKR` element shall indicate delivery using the Theatre Key Retrieval (TKR) method – see ISDCF Document 8 - Theater Key Retrieval Theatrical Key.

5.15 AddressType

5.15.1 General

The `AddressType` type shall be as specified in Table 25.

Table 25: AddressType Schema Definition

```
<xs:complexType name="AddressType">
  <xs:sequence>
    <xs:element name="Addressee" type="xs:string" minOccurs="0"/>
    <xs:element name="StreetAddress" type="dcml:UserTextType"/>
    <xs:element name="StreetAddress2" type="dcml:UserTextType" minOccurs="0"/>
    <xs:element name="City" type="xs:string"/>
    <xs:element name="Province" type="xs:string"/>
    <xs:element name="PostalCode" type="xs:string" minOccurs="0"/>
    <xs:element name="Country" type="flm:ISO3166CountyCode"/>
  </xs:sequence>
</xs:complexType>
```

5.15.2 Addressee

The `Addressee` element shall be the name of the entity to which the address corresponds.

5.15.3 StreetAddress

The `StreetAddress` element shall be the first line of the street address.

5.15.4 StreetAddress2

The `StreetAddress2` element shall be the first line of the street address.

5.15.5 City

The `City` element shall be the city of the address.

5.15.6 Province

The `Province` element shall be the province, state or local equivalent of the address.

5.15.7 PostalCode

The `PostalCode` element shall be the postal code or ZIP code of the address if applicable.

5.15.8 Country

The `Country` element shall be the country of the address.

5.16 EmailType

5.16.1 General

The `EmailType` type shall be as specified in Table 26.

Table 26: EmailType Schema Definition

```
<xs:complexType name="EmailType">
  <xs:sequence>
    <xs:element name="EmailName" type="xs:string" minOccurs="0"/>
    <xs:element name="EmailAddress" type="flm:EmailAddressType"/>
  </xs:sequence>
</xs:complexType>
```

5.16.2 EmailName

The `EmailName` element shall be the name associated with the email address, and should be a display-name as specified in RFC 5322.

5.16.3 EmailAddress

The `EmailAddress` element shall be an `addr-spec` as specified in RFC 5322.

5.17 PhysicalType

5.17.1 General

The `PhysicalType` type shall be as specified in Table 27.

Table 27: PhysicalType Schema Definition

```
<xs:complexType name="PhysicalType">
  <xs:sequence>
    <xs:element name="MediaType" type="xs:string"/>
```

```
      <xs:element name="Detail" type="xs:string" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
```

5.17.2 MediaType

The `MediaType` element shall describe the nature of the delivery medium.

5.17.3 Detail

The `Detail` element shall provide additional human-readable instructions regarding the delivery method.

5.18 ModemType

The `ModemType` type shall be as specified in Table 28.

Table 28: ModemType Schema Definition

```
<xs:complexType name="ModemType">
  <xs:sequence>
    <xs:element name="PhoneNumber" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

The `PhoneNumber` element shall be the phone number of the modem using international notation as specified in ITU-T Recommendation E.123.

5.19 NetworkType

The `NetworkType` type shall be as specified in Table 29.

Table 29: NetworkType Schema Definition

```
<xs:complexType name="NetworkType">
  <xs:sequence>
    <xs:element name="URL" type="xs:anyURI"/>
  </xs:sequence>
</xs:complexType>
```

The `URL` element shall be the delivery address.

5.20 SatelliteDeliveryType

The `SatelliteDeliveryType` type shall be as specified in Table 30.

Table 30: SatelliteDeliveryType Schema Definition

```
<xs:complexType name="SatelliteDeliveryType">
  <xs:sequence>
    <xs:element name="Provider" type="xs:anyURI"/>
  </xs:sequence>
</xs:complexType>
```

The `Provider` element shall uniquely identify the provider of the satellite service.

5.21 ComponentType

5.21.1 General

The `ComponentType` type shall be as specified in Table 31.

Table 31: ComponentType Schema Definition

```
<xs:complexType name="ComponentType">
  <xs:sequence>
    <xs:element name="ComponentKind" minOccurs="0" type="flm:ComponentKindType"/>
    <xs:element name="ComponentManufacturer" type="flm:ScopedStringType"
                minOccurs="0"/>
    <xs:element name="Description" type="xs:string"/>
    <xs:element name="Version" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

5.21.2 ComponentKind

The `ComponentKind` element shall indicate the type of the component.

The `ComponentKindType and ComponentKindEnum` types shall be as specified in Table 32.

Table 32: ComponentKindType and ComponentKindEnum Schema Definitions

```
<xs:complexType name="ComponentKindType">
  <xs:simpleContent>
    <xs:extension base="flm:ComponentKindEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="ComponentKindEnum">
  <xs:restriction base="xs:token">
           <xs:enumeration value="Firmware"/>
          <xs:enumeration value="Software"/>
          <xs:enumeration value="Hardware"/>
  </xs:restriction>
</xs:simpleType>
```

When the `scope` attribute is present, the value of the `ComponentKindType` instance is not specified, but should be appropriate for display to a user.

Table 33 shall define the semantics of `ComponentKindEnum` enumerated values.

Table 33: ComponentKindEnum Values

Firmware	Software component associated with a hardware component
Software	Software component
Hardware	Hardware component

5.21.3 ComponentManufacturer

The `ComponentManufacturer` element shall be the name of the vendor of the component.

5.21.4 Description

The `Description` element shall be a human-readable description of the component.

5.21.5 Version

The `Version` element shall identify the version of the component, e.g. `"20.01r"`.

5.22 WatermarkingType

5.22.1 General

The `WatermarkingType` type shall be as specified in Table 34.

Table 34: WatermarkingType Schema Definition

```
<xs:complexType name="WatermarkingType">
  <xs:sequence>
    <xs:element name="WatermarkManufacturer" type="flm:ScopedStringType"/>
    <xs:element name="WatermarkKind" minOccurs="0" type="flm:WatermarkKindType">
                </xs:element>
    <xs:element name="WatermarkModel" type="xs:string" minOccurs="0"/>
    <xs:element name="WatermarkVersion" type="xs:string" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

5.22.2 WatermarkManufacturer

The `WatermarkManufacturer` element shall be the name of the watermark component provider.

5.22.3 WatermarkKind

The `WatermarkKind` element shall be the kind of watermark component.

The `WatermarkingKindType` and `WatermarkingKindEnum` types shall be as specified in Table 35.

Table 35: WatermarkKindType and WatermarkKindEnum Schema Definitions

```
<xs:complexType name="WatermarkKindType">
  <xs:simpleContent>
    <xs:extension base="flm:WatermarkKindEnum">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="WatermarkKindEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="Picture"/>
    <xs:enumeration value="Audio"/>
  </xs:restriction>
</xs:simpleType>
```

When the `scope` attribute is present, the value of the `WatermarkKindType` instance is not specified, but should be appropriate for display to a user.

Table 36 shall define the semantics of `WatermarkKindEnum` enumerated values.

Table 36: WatermarkKindEnum Values

Picture	Forensic marking in connection with keys of KeyType equal to "MDIK" (see ST 430-1)
Audio	Forensic marking in connection with keys of KeyType equal to "MDAK" (see ST 430-1)

5.22.4 WatermarkModel

The `WatermarkModel` element shall be the model of the watermark component as reported by its manufacturer.

5.22.5 WatermarkVersion

The `WatermarkVersion` element shall be the version of the watermark component as reported by its manufacturer.

5.23 ScopedStringType

The `ScopedStringType` type shall be as specified in Table 37.

Table 37: ScopedString Schema Definition

```
<xs:complexType name="ScopedStringType">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="scope" type="xs:anyURI"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
```

The value of a `ScopedStringType` instance should always be appropriate for display to a user.

When the scope attribute is absent, the value of a `ScopedStringType` instance is free form.

When the `scope` attribute is present, the semantics of the `ScopedStringType` instance value is determined by the specification that defined the value of the `scope` attribute.

NOTE: In contrast to `UserTextType` whose choice of contents is left entirely to the author, the contents of a `ScopedStringType` instance is intended to be limited to the values permitted by the controlled vocabulary identified by the value of the `scope` attribute.

5.24 EmailAddressType

The schema for the `EmailAddressType` is shown in Table 38.

Table 38: EmailAddressType Schema Definition

```
<xs:simpleType name="EmailAddressType">
  <xs:restriction base="xs:string">
    <xs:pattern
      value="[A-Za-z0-9!#$%&amp;'*+/=?\^_`{|}~-]+(\.[A-Za-z0-
                9!#$%&amp;'*+/=?\^_`{|}~-]+)*@([A-Za-z0-9]([A-Za-z0-9-]*[A-Za-z0-
                9])?\.)+[A-Za-z0-9]([A-Za-z0-9-]*[A-Za-z0-9])?"
    />
  </xs:restriction>
```

```
  </xs:simpleType>
```

The EmailAddressType may be used to represent an addr-spec as specified in IETF RFC 5322.

5.25 ISO3166CountryCode

The EmailAddressType type shall be as specified in Table 39.

Table 39: ISO3166CountyCode Schema Definition

```
<xs:simpleType name="ISO3166CountyCode">
  <xs:restriction base="xs:string">
    <xs:length value="2"/>
  </xs:restriction>
</xs:simpleType>
```

The ISO3166CountyCode may be used to represent a two-letter country code as specified in ISO 3166.

5.26 LuminanceUnitEnum

The LuminanceUnitEnum type shall be as specified in Table 40. It signals a unit of measure for luminance.

Table 40: LuminanceUnitEnum Schema Definition

```
<xs:simpleType name="LuminanceUnitEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="foot-lambert"/>
    <xs:enumeration value="candela-per-square-metre"/>
  </xs:restriction>
</xs:simpleType>
```

Table 41 shall define the semantics of LuminanceUnitEnum enumerated values.

Table 41: LuminanceUnitEnum Values

candela-per-square-metre	SI unit of luminance
foot-lambert	3.426 candela per square meter

5.27 LengthUnitEnum

The LengthUnitEnum type shall be as specified in Table 42. It signals units of measure for lengths.

Table 42: LengthUnitEnum Schema Definition

```
<xs:simpleType name="LengthUnitEnum">
  <xs:restriction base="xs:token">
    <xs:enumeration value="meter"/>
    <xs:enumeration value="foot"/>
    <xs:enumeration value="inch"/>
    <xs:enumeration value="centimeter"/>
  </xs:restriction>
</xs:simpleType>
```

Table 43 shall define the semantics of LengthUnitEnum enumerated values.

Table 43: LengthUnitEnum Values

meter	SI unit of length
foot	0.3048 meter
centimeter	1/100 of a meter
inch	1/12 of a foot

Annex A Consolidated Schema (Informative)

This specification is accompanied by the following element, which is an XML schema document as specified in the XML Schema Part 1: Structures.

st430-16a-2017.xsd

This element collects the XML schema definitions defined in this specification. It is informative and, in case of conflict, this specification takes precedence.

Annex B Example Instance (Informative)

This specification is accompanied by the following element, which is an XML document that contains a sample Facility List Message instance, as specified in Section 4.3.

st430-16b-2017.xml

This element is for illustration only, and is neither intended to capture current or future practice, nor exercise all normative language contained in this specification.

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Bibliography

DRAFT ISDCF Document 8 - Theater Key Retrieval Theatrical Key (http://isdcf.com/papers/ISDCF-Doc8-TheaterKeyRetrieval-TKR-v03.pdf)

SMPTE ST 430-7:2008, D-Cinema Operations — Facility List Message