

CLUE datamodel & protocol

IETF 90

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Outline

- Data model draft updates & open issues
- Protocol draft updates & open issues

draft-ietf-clue-data-model-06

- PRE-WGLC
- Diff with draft-ietf-clue-data-model-05
 - Christian Groves’s comments
 - <http://www.ietf.org/mail-archive/web/clue/current/msg03931.html>
 - No more “proposals”, specifications instead
 - <maxCaptures> aligned with the framework draft
 - Removed mediaType attributes where not needed (scene entries, global scene entries, simultaneous sets)
 - Minors

To appear in dm-07

- Encoding group reference not mandatory for all captures
 - Hansen,
<http://www.ietf.org/mail-archive/web/clue/current/msg03963.html>
 - When a capture does not provide any reference, it means it cannot be instantiated
 - Useful for “informational” captures
 - “captures that can't be directly configured, but are instead just informational for MCCs”
- Update the encoding group text to state that it is not mediaType-specific
 - The schema does not need updates
- Correction of editorial nits
 - Kyzivat,
<http://www.ietf.org/mail-archive/web/clue/current/msg03973.html>
- Intended status: “Standards Track” instead of “Informational”

Open issues

- Definition of **Clue Participant**
 - “An entity able to use the CLUE protocol within a telepresence session. It can be an Endpoint or a MCU able to use the CLUE protocol.”
- Restoring `<micPattern>` (**microphone sensitivity pattern**) to improve the description of audio captures
- Minors
 - mm for millimeter scale

```
<!-- AUDIO CAPTURE TYPE -->
<xs:complexType name="audioCaptureType">
  <xs:complexContent>
    <xs:extension base="tns:mediaCaptureType">
      <xs:sequence>
        <xs:element name="audioChannelFormat"
          type="audioChannelFormatType" minOccurs="0"/>
        <xs:element name="micPattern" type="tns:micPatternType"
          minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

<!-- MIC PATTERN TYPE -->
<xs:simpleType name="micPatternType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="uni"/>
    <xs:enumeration value="shotgun"/>
    <xs:enumeration value="omni"/>
    <xs:enumeration value="figure8"/>
    <xs:enumeration value="cardioid"/>
    <xs:enumeration value="hyper-cardioid"/>
  </xs:restriction>
</xs:simpleType>
```

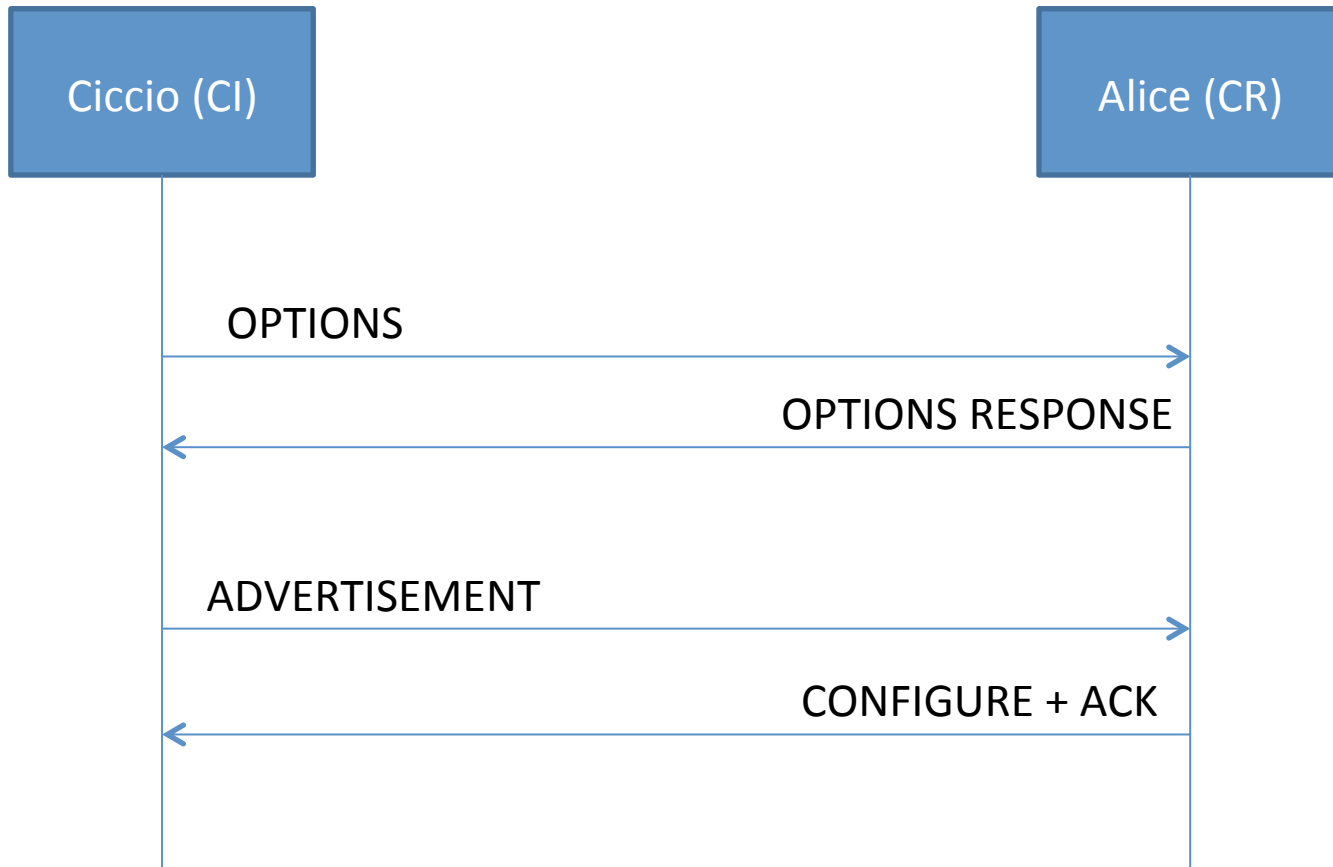
draft-ietf-clue-protocol-01

- To appear v-02
 - Examples must be updated to be compliant with the new data model version
- Open issues
 - Consensus needed about how to express protocol version
 - v="M.m"
 - [CG]: *Do we need a separate READV response message to carry the CLUE data?*
 - [Yes]
 - *Couldn't the READV simply trigger the MP to send an ADV?*
 - [No]

Homework

- Call flow
- Ciccio (Channel Initiator)
 - 3 cameras, 1 mic (3 video + 1 audio captures)
 - Supported versions: 3.0, 2.20, 1.10
 - Supported options: ext1
- Alice (Channel Receiver)
 - 3 displays
 - Supported versions: 2.10, 1.10
 - Supported options: ext1, ext 3, ext4
 - Configure each advertised capture

Homework



Options from Ciccio

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<options xmlns="urn:ietf:params:xml:ns:clue-message"
         xmlns:ns2="urn:ietf:params:xml:ns:clue-info"
         xmlns:ns3="urn:ietf:params:xml:ns:vccard-4.0" protocol="CLUE" v="3.0">
  <clueId>Ciccio</clueId>
  <sequenceNr>10</sequenceNr>
  <mediaProvider>true</mediaProvider>
  <mediaConsumer>true</mediaConsumer>
  <supportedVersions>
    <version>1.10</version>
    <version>2.20</version>
  </supportedVersions>
  <supportedOptions>
    <option>
      <name>ext1</name>
      <schemaRef>http://comics.unina.it/ext1\_schema\_ref</schemaRef>
    </option>
  </supportedOptions>
</options>
```

Options Response from Alice

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<optionsResponse xmlns="urn:ietf:params:xml:ns:clue-message"
  xmlns:ns2="urn:ietf:params:xml:ns:clue-info"
  xmlns:ns3="urn:ietf:params:xml:ns:vcard-4.0" protocol="CLUE" v="2.10">
  <clueId>Alice</clueId>
  <sequenceNr>56</sequenceNr>
  <responseCode>200</responseCode>
  <reasonString>OK</reasonString>
  <mediaProvider>true</mediaProvider>
  <mediaConsumer>true</mediaConsumer>
  <commonOptions>
    <option>
      <name>ext1</name>
      <schemaRef>http://comics.unina.it/ext1_schema_ref</schemaRef>
    </option>
  </commonOptions>
</optionsResponse>
```

ADV from Ciccio (1)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<advertisement [---] protocol="CLUE" v="2.10">
  <clueId>Ciccio</clueId>
  <sequenceNr>11</sequenceNr>
  <mediaCaptures>
    <ns2:mediaCapture [---] xsi:type="ns2:audioCaptureType" captureID="AC0">
      <ns2:capturedMedia>audio</ns2:capturedMedia>
      <ns2:captureSceneIDREF>CS1</ns2:captureSceneIDREF>
      <ns2:encGroupIDREF>EG1</ns2:encGroupIDREF>
    [---]
    <ns2:capturedPeople>
      <ns2:personIDREF>ciccio</ns2:personIDREF>
    </ns2:capturedPeople>
    [---]
    <ns2:mediaCapture [---] xsi:type="ns2:videoCaptureType" captureID="VC1">
      <ns2:capturedMedia>video</ns2:capturedMedia>
      <ns2:captureSceneIDREF>CS1</ns2:captureSceneIDREF>
      <ns2:encGroupIDREF>EG1</ns2:encGroupIDREF>
    [---]
    <ns2:description lang="en">central camera video capture</ns2:description>
    [---]
  </mediaCaptures>
```

ADV from Ciccio (2)

```
[---]
<encodingGroups>
  <ns2:encodingGroup encodingGroupID="EG1">
    <ns2:maxGroupBandwidth>600000</ns2:maxGroupBandwidth>
    <ns2:encodingIDList>
      <ns2:encID>ENC1</ns2:encID>
      <ns2:encID>ENC2</ns2:encID>
      <ns2:encID>ENC3</ns2:encID>
      <ns2:encID>ENC4</ns2:encID>
    </ns2:encodingIDList>
  </ns2:encodingGroup>
</encodingGroups>
<captureScenes>
  <ns2:captureScene scale="unknown" sceneID="CS1">
    <ns2:sceneEntries>
      <ns2:sceneEntry sceneEntryID="SE1">
        <ns2:mediaCaptureIDs>
          <ns2:captureIDREF>VC0</ns2:captureIDREF>
          <ns2:captureIDREF>VC1</ns2:captureIDREF>
          <ns2:captureIDREF>VC2</ns2:captureIDREF>
        </ns2:mediaCaptureIDs>
      </ns2:sceneEntry>
      <ns2:sceneEntry sceneEntryID="SE4">
        <ns2:mediaCaptureIDs>
          <ns2:captureIDREF>AC0</ns2:captureIDREF>
        </ns2:mediaCaptureIDs>
      </ns2:sceneEntry>
    </ns2:sceneEntries>
  </ns2:captureScene>
</captureScenes>
```

ADV from Ciccio (3)

```
[---]
<simultaneousSets>
  <ns2:simultaneousSet setID="SS1">
    <ns2:sceneEntryIDREF>SE1</ns2:sceneEntryIDREF>
  </ns2:simultaneousSet>
  <ns2:simultaneousSet setID="SS2">
    <ns2:captureIDREF>AC0</ns2:captureIDREF>
  </ns2:simultaneousSet>
</simultaneousSets>
<people>
  <ns2:person personID="ciccio">
    <ns2:personInfo>
      <ns3:fn>
        <ns3:text>Ciccio</ns3:text>
      </ns3:fn>
    </ns2:personInfo>
    <ns2:personType>chairman</ns2:personType>
    <ns2:personType>timekeeper</ns2:personType>
  </ns2:person>
</people>
</advertisement>
```

CONF + ACK from Alice

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<configure [---] protocol="CLUE" v="2.10">
  <clueId>Alice</clueId>
  <sequenceNr>57</sequenceNr>
  <advSequenceNr>11</advSequenceNr>
  <ack>true</ack>
  <captureEncodings>
    <ns2:captureEncoding ID="CE1">
      <ns2:captureID>VC1</ns2:captureID>
      <ns2:encodingID>ENC1</ns2:encodingID>
    </ns2:captureEncoding>
    <ns2:captureEncoding ID="CE0">
      <ns2:captureID>VC0</ns2:captureID>
      <ns2:encodingID>ENC2</ns2:encodingID>
    </ns2:captureEncoding>
    <ns2:captureEncoding ID="CE2">
      <ns2:captureID>VC2</ns2:captureID>
      <ns2:encodingID>ENC3</ns2:encodingID>
    </ns2:captureEncoding>
    <ns2:captureEncoding ID="CE3">
      <ns2:captureID>AC0</ns2:captureID>
      <ns2:encodingID>ENC4</ns2:encodingID>
    </ns2:captureEncoding>
  </captureEncodings>
</configure>
```