CLUE data model

CLUE IETF 89 meeting
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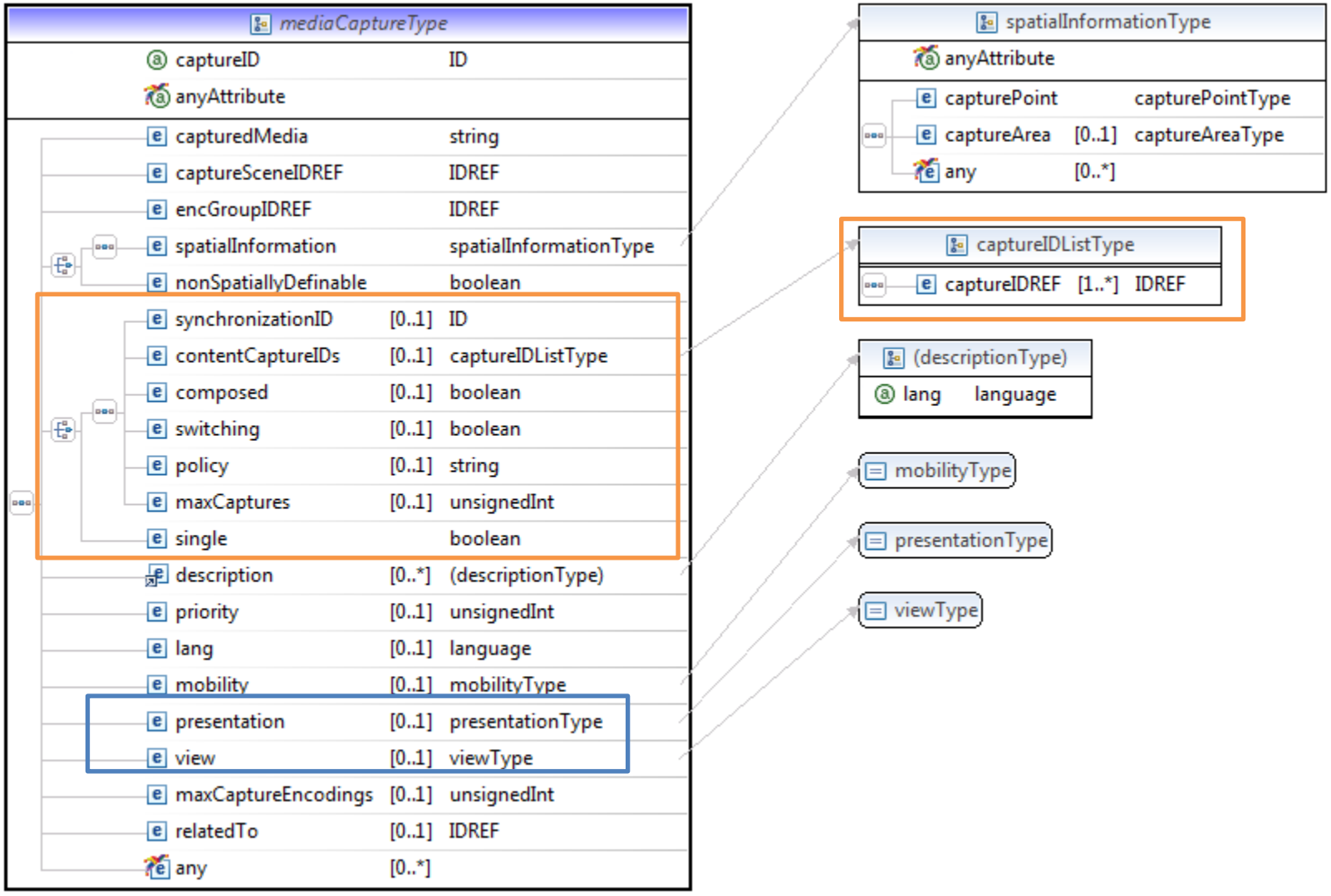
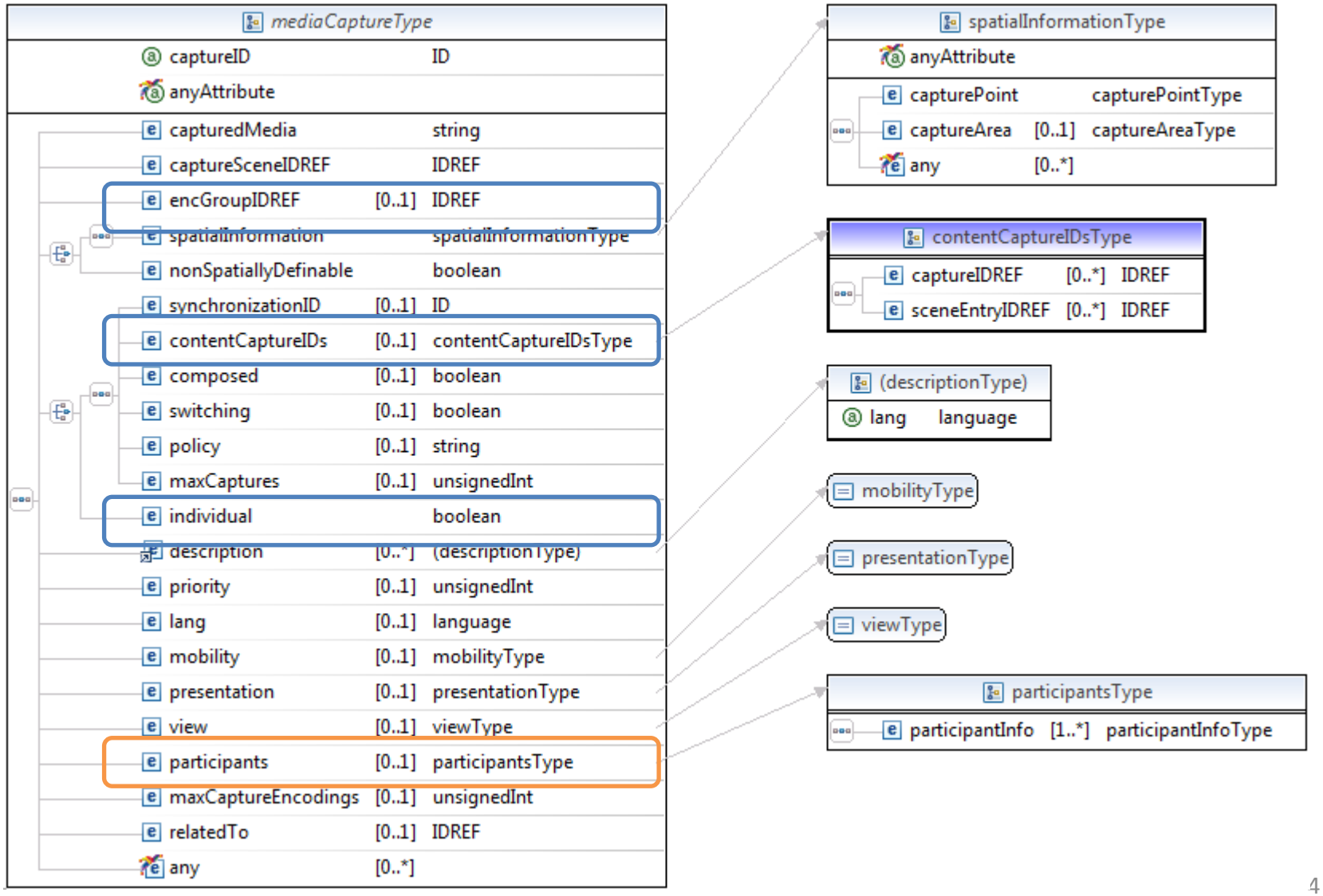
Outline

- Current data model version: -03
  - V -04 is to appear
- Alignments with framework -14
  - MCC, view and presentation attributes
    - Discussed during the interim meeting
  - Participants' information
  - Encodings removal
  - Minor changes
- News
  - Global Capture Entries model
  - Content listing in MCC
  - Content selection in MCC
- Open issues

Media capture type -03



Media Capture Type -04

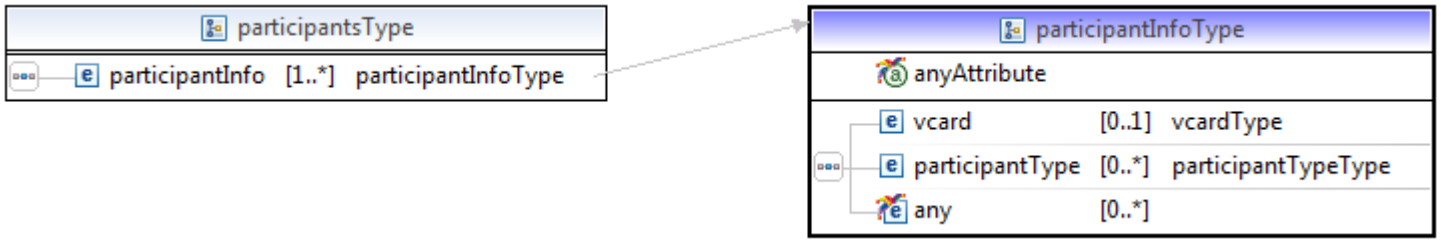


Participant information & Participant type

- New media capture attributes from framework-14
- **Participant information**
  - contains the vcards of the participants appearing in a capture
- **Participant type**
  - contains the roles of the participants appearing in a capture
  - Multiple roles can be associated with one participant
- Issues
  - In case of multiple participants, we have the list of the vcards and the list of the roles…
    - it is not possibile to determine “who” has “what” role
  - Nice to link participant information with participant type when both present

Participant information & Participant type: proposal of implementation

- A new XML tag within the description of a media capture
  - “<participants>”
  - The set of information about the “captured” participants
- For each captured participant, a child element,
  - “<participantInfo>”
- including:
  1. The participant’s vcard
     - RFC6531, xCard: vCard XML Representation
     - xcard.xsd from draft-ietf-ecrit-additional-data-20.txt
  2. The participant’s type
  3. <any>



Participant information & Participant type

- Pros
  - The <participantInfo> allows for the association of an individual vcard with the (multiple) participant type(s)
- Cons
  - When a “group” vcard is available, then only one <participantInfo> entry appears
    - it is not possibile to determine “who” has “what” role, again
  - Redundancy when there are multiple captures capturing the same set of participants

Example

- Endpoint-style Provider example (framework -14, sec 7.3)
- Three cameras, one participant in front of each camera
- The media provider is able to forward the participants' vcards
- One capture scene, 4 scene entries:

1. (VC0, VC1, VC2) - left, center and right camera Video Captures
2. (VC4) - Video Capture zoomed out view of all people in the room
3. (AC0) - main audio from the room
4. (VC3) - Video Capture associated with loudest room segment

Participant info in the example

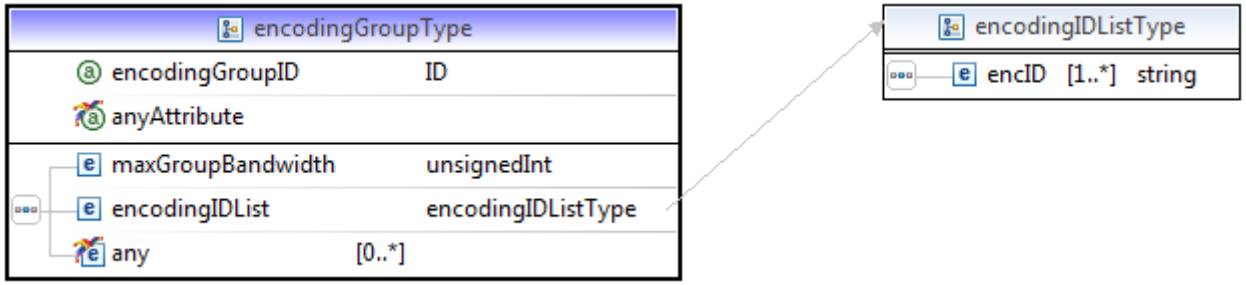
- AC0 (audio from the room)– Alice, Bob, Ciccio
- VC0 (left camera)– Alice
- VC1 (central camera)– Bob
- VC2 (right camera)– Ciccio
- VC4 (zoomed-out room view)– Alice, Bob, Ciccio
- VC3 (loudest segment)– (MCC) no participant info
  - it refers to content captures VC0, VC1 and VC2
- ➔ information about each participant is repeated three times

To be discussed

- Media captures should contain only references to participant information
- Where to put <participants> in the data model hierarchy?
  1. As a separate field in the advertisement body?
     - Same layer as <mediaCaptures>, <captureScenes>, …
     - Allows for multiple scenes about the same (sub)set of participants
     - Redundancy is minimized
  2. As a child element of each <captureScene>?
     - Meaningful when capture scenes represent separated physical regions
     - Some repetition can appear

Encodings & encoding groups

- <encodings> removed
- <encodingGroups> left within the clue information set



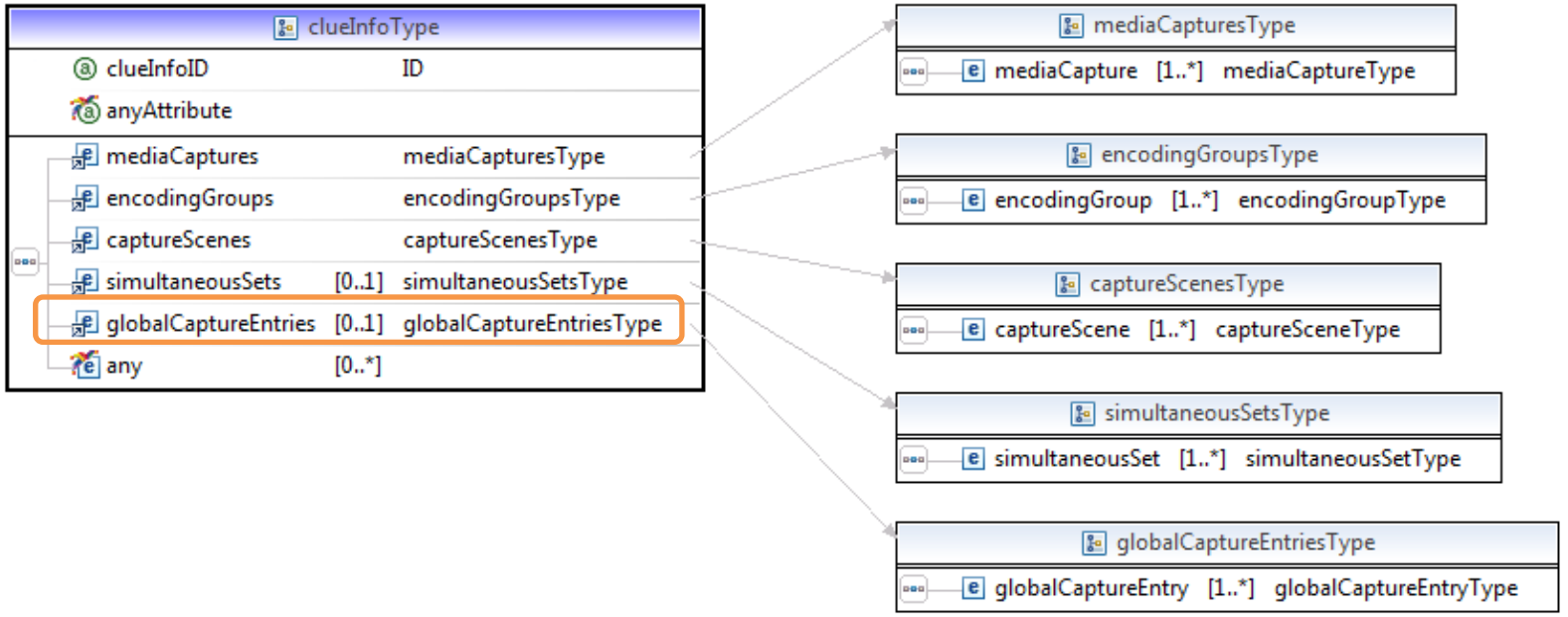
  - <encID> contains the SDP identifier of the encoding

Media Captures with no <encGroupIDREF>

- <encGroupIDREF> is no longer mandatory
  - From fw-14:
    - “The captures referenced by the MCC do not need to be assigned to an encoding group”
- Following considerations:
  - Captures with no <encGroupIDREF> cannot be istantiated into capture encodings
    - Useful when the MP needs to provide the description of some captures (*), but it does not want to provide them
      - (*) e.g. for describing the content of a MCC
  - The Media Consumer will not be able to request them

Global Capture Entries

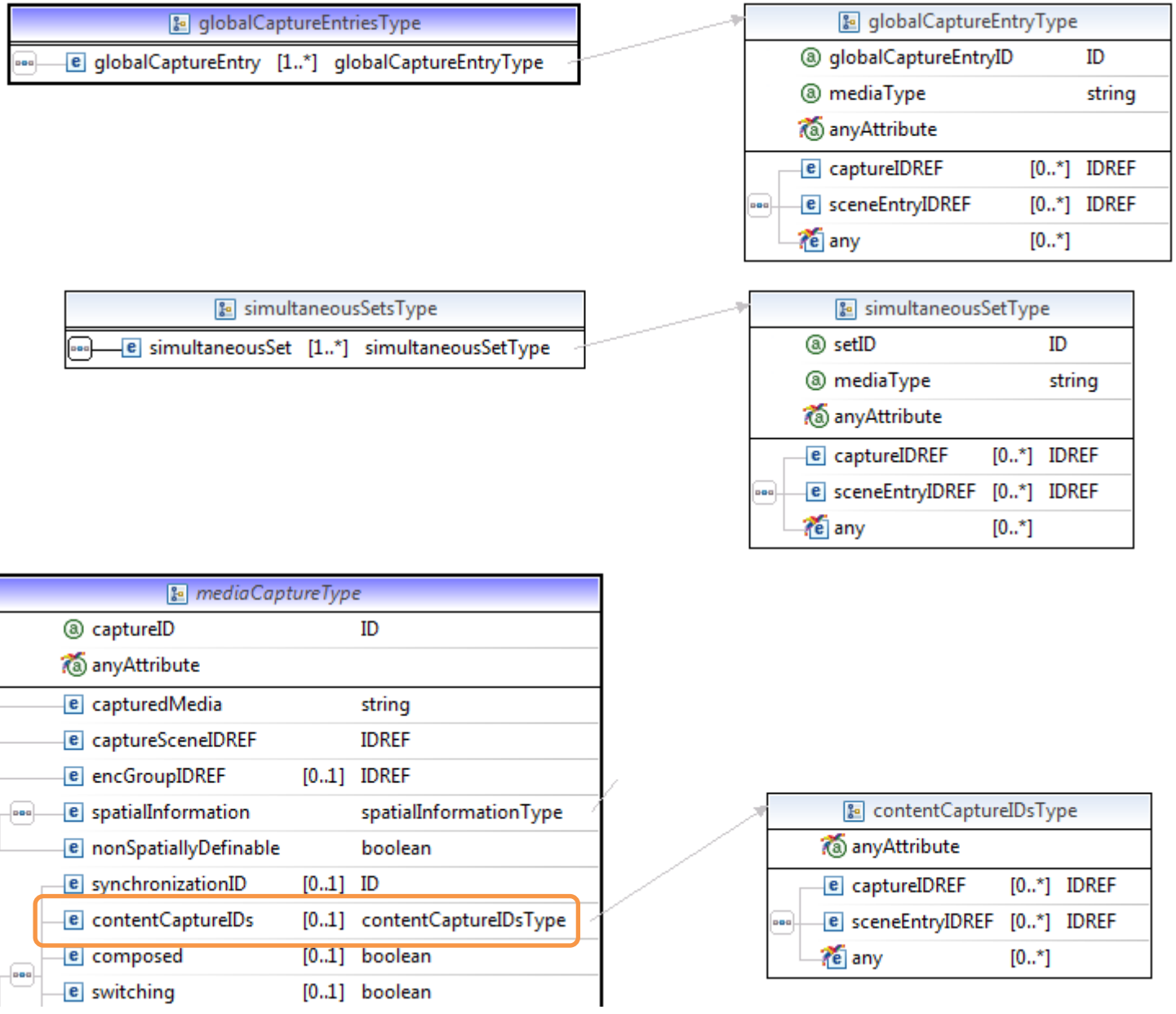
- Recommended, cross-scene, alternative set of captures and scene entries
  - announced within the advertisement



Content listing

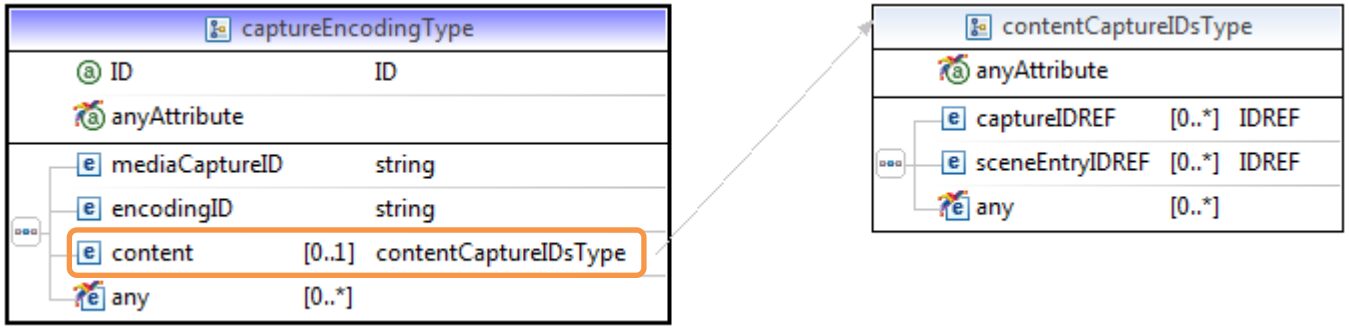
- Which captures are included into … ?
  - Multiple Content Captures
  - Global Capture Entries
  - Simultaneous Sets
- The content can be specified in terms of:
  1. A list of (homogeneous) media capture identifiers
  2. A list of (homogeneous) capture Scene Entry identifiers

Content listing



Content selection in MCCs

- The consumer should be able to specify the subset of desired captures within a MCC by means of the configure message
- ➔ <captureEncoding> has been updated



Content selection in MCCs

- Only a subset of the identifiers that have been previously listed in the MCC content can be used
- The number of the selected captures must be lower than or equal to the maxCaptures value
  - If in the MCC is specified the exact number of captures, the number of selected capture must match that number

Open issues

- Formalizing switching [and composition] policies both semantically and syntactically
- How to link an audio capture to the corresponding video one?