

draft-levin-mmusic-xml-media-control-00.txt

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Agenda

- Motivation
- Alternative Approaches
- XML Schema Design Considerations
- Formal XML Schema Definition – see the draft
- Examples
- Next Steps

Motivation

- Application Driven Media Control
- Interactive Video Applications

Alternative Approaches

- CODEC Specific RTP/RTCP based primitives
 - "RTP Payload Format for H.261 Video Streams ", RFC 2032
- Use the Same Mechanism as for Packet Loss Recovery
 - “Extended RTP Profile for RTCP-based Feedback (RTP/AVPF)”, draft-ietf-avt-rtcp-feedback-03
- SDP Extensions
 - Rejected: “SDP Syntax for Video Media Control “, draft-even-mmusic-video-media-control-00

XML Schema Design Considerations

- The XML Schema is Conveyed Using a Reliable Protocol
- Ready to Extend beyond Video Primitives
- Ready to Extend Beyond “Command”:
 - cmd / ind / req / rsp
- Correlation with SDP m-lines
 - When Required

The Defined Primitives

- Commands to be Sent to a Remote Encoder
 - Video “Picture Fast Update” Command
 - Video “GOB Fast Update” Command (first_GOB, no_of_GOBs)
 - Video “MB Fast Update” Command (first_GOB, first_MB, no_of_MBs)
- A Command to be Sent to a Remote Decoder
 - Video “Picture Freeze” Command

Example 1: All Defaults

```
<?xml version="1.0" encoding="utf-8" ?>
```

```
<media_control>
```

```
  <vc_primitive>
```

```
    <to_decoder>
```

```
      <picture_freeze>
```

```
    </picture_freeze>
```

```
  </to_decoder>
```

```
</vc_primitive>
```

```
<vc_primitive>
```

```
  <to_encoder>
```

```
    <picture_fast_update>
```

```
  </picture_fast_update>
```

```
</to_encoder>
```

```
</vc_primitive>
```

```
</media_control>
```

Example 2: Use of Parameters

```
<?xml version="1.0" encoding="utf-8" ?>
```

```
<media_control>
```

```
<vc_primitive stream="mid">
```

```
  <to_encoder>
```

```
    <mb_fast_update first_gob="2" first_mb="3"  
    no_of_mbs="4"> </mb_fast_update>
```

```
  </to_encoder>
```

```
    <stream_id>3</stream_id>
```

```
  </vc_primitive>
```

```
</media_control>
```

Example: “General Error”

```
<?xml version="1.0" encoding="utf-8" ?>
```

```
<media_control>
```

```
  <general_error>
```

```
    Parsing error: The original XML segment is:....
```

```
  </general_error>
```

```
</media_control>
```

Next Steps

- Encapsulation in SIP INFO Method
 - “Content-Type” set to “application/xml”
- Definition of a Standard XML Schema for Media Control Protocol
- Definition of a Standard Means for SIP to Carry the Standard Schema