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| Title | **Syntax and semantics of audio-video sensor capabilities** |
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| Re: |  |
| Abstract | This contribution illustrates the basic JSON schema structure for representing audio-video sensor capabilities in a standardized data format. The semantics and examples of the audio-video sensor capabilities are presented.  |
| Purpose | To start discussion on purpose of the standard |
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# Introduction

This contribution illustrates the basic JSON schema structure for representing audio-video sensor capabilities in a standardized data format. The semantics and examples of the audio-video sensor capabilities are presented.

# Data formats for audio-video sensor capabilities

## Camera sensor capability

### General

This sub-clause specifies the capabilities of a camera sensor.

### Syntax

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| "cameraSensorCapabilityType": { "type": "object", "properties": { "sensorCapabilityBaseType": { "$ref": "#/definitions/sensorCapabilityBaseType" }, "supportedResolutions": { "type": "array", "properties": { "resolution": [{ "width": { "type": "number" }, "height": { "type": "number" } }] } }, "focalLengthRange": { "type": "object", "properties": { "MaxValue": { "type": "number" }, "MinValue": { "type": "number" } }, "apertureRange": { "type": "object", "properties": { "MaxValue": { "type": "number" }, "MinValue": { "type": "number" } }, "shutterSpeedRange": { "type": "object", "properties": { "MaxValue": { "type": "number" }, "MinValue": { "type": "number" } } } } } }} |
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### Semantics

Semantics of the cameraSensorCapability:

| Name | Definition |
| --- | --- |
| CameraSensorCapabilityType | Tool for describing a camera sensor capability. |
| SupportedResolutions | Describes a list of resolutions that the camera can support. |
| Width | Describes a width of resolution that the camera can perceive. |
| Height | Describes a height of resolution that the camera can perceive |
| FocalLengthRange | Describes the range of the focal length that the camera sensor. Its default unit is millimeters (mm). |
| MaxValue | Describes the maximum value that the sensor can perceive. |
| MinValue | Describes the minimum value that the sensor can perceive. |
| ApertureRange | Describes the range of the aperture that the camera sensor. |
| ShutterSpeedRange | Describes the range of the shutter speed that the camera sensor. Its default unit is seconds (sec). |

### Examples

This example shows the description of a camera sensing capability with the following semantics. The sensor has a list of the supported resolutions, 1280 x 720 (width x height) and 1920 x 1080. The maximum focal length of the sensor is 100 (mm) and the minimum focal length is 5 (mm). The maximum aperture of the sensor is F1.4 and the minimum aperture is F8. The maximum shutter speed of the sensor is 1 (sec) and the minimum shutter speed is 0.001 (sec).

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| {"sensorCapabilityBaseType": {},"supportedResolutions": { "resolution": [{ "width": "1280", "height": "720" }, {"width": "1920", "height": "1080"  }]},"focalLengthRange": { "MaxValue": "100", "MinValue": "5"},"apertureRange": { "MaxValue": "1.4", "MinValue": "8"},"shutterSpeedRange": { "MaxValue": "1", "MinValue": "0.001"}} |