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| Title | **Syntax and semantics of audio-video sensor capabilities** |
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| 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"  }  } |