INTERNATIONAL ORGANISATION FOR STANDARDISATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC JTC1/SC29/WG11
CODING OF MOVING PICTURES AND AUDIO

ISO/IEC JTC1/SC29/WG11 MPEG2014/ m35085
October 2014, Strasbourg, France

Source **Canon Research Centre France, Telecom ParisTech**
Status **For discussion**
Title **Conformance work for Spatial Relationship Description – 23009-1 AMD2**
Author Franck Denoual, Frédéric Mazé, Eric Nassor (Canon Research Centre France), Cyril Concolato, Jean Le Feuvre (Telecom ParisTech)

1 Introduction

At the 108th meeting, MPEG issued PDAM for amendment 2 of MPEG-DASH Part 1. This new amendment contains several new features including the Spatial Relationship Description. At MPEG#109, conformance rules and first test vectors implementing the SRD feature were provided. This input document provides an update of the test vectors when using tiled HEVC video sequences (the validation rules remain unchanged).

2 Validation rules for SRD feature

The table below lists the validation rules for the SRD feature (unchanged from MPEG#109).

	Clause in 23009-1 AMD2	Rule	Conformance Check Implementation
1	H.1	An EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to "urn:mpeg:dash:srd:2014" shall be the child element of an AdaptationSet or a SubRepresentation element.	
2	H.1	If a Period contains one or more EssentialProperty with @schemeIdUri equal to "urn:mpeg:dash:srd:2014" then the MPD shall be still valid if every element having the EssentialProperty as a child element were to be discarded.	
3	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to "urn:mpeg:dash:srd:2014" is present, then the @value attribute must contain at least the mandatory comma separated parameters, i.e. `source_id, x, y, w, h`.	
4	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to "urn:mpeg:dash:srd:2014" is	

		present, then each parameter value has to match the expected type format i.e. non-negative integer in decimal representation.
5	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to “urn:mpeg:dash:srd:2014” is present and the @value attribute contains the optional parameter `W` then the optional parameter `H` shall be present too.
6	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to “urn:mpeg:dash:srd:2014” is present and the @value attribute contains the optional parameter `H` then the optional parameter `W` shall be present too.
7	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to “urn:mpeg:dash:srd:2014” is present and the @value attribute contains the optional parameter `W` then the optional parameter `H` shall be present too.
8	H.2	If an EssentialProperty or SupplementalProperty descriptor with @schemeIdUri equal to “urn:mpeg:dash:srd:2014” is present and the @value attribute contains the optional parameter `spatial_set_id` then the optional parameters `W` and `H` shall be present too.
9	H.2	For a given `source_id` of the @value attribute, at least one of the EssentialProperty in the containing Period shall specify the optional parameters `W` and `H`.
10	H.2	For a given `source_id` of the @value attribute, if two SRD elements (indistinctively EssentialProperty or SupplementalProperty) explicitly specify a different pair of values for the optional parameters (`W,H`) then all the remaining SRD element shall explicitly specify a pair of values for (`W,H`) too.
11	H.2	For a given `source_id` of the @value attribute, the values of `x`, `w` and `W` shall be such that, for each descriptor, the sum of `x` and `w` is smaller or equal to `W`.
12	H.2	For a given `source_id` of the @value attribute, the values of `y`, `h` and `H` shall be such that, for each descriptor, the sum of `y` and `h` is smaller or equal to `H`.

3 Test vectors

Through this contribution, we provide new Test Vectors conforming to ISOBMFF on-demand profile and illustrating SRD scenarios with independent HEVC tiles.

	Features	comment
1	Test Vector(1) SRD description in AdaptationSet These Test Vectors are inspired by the scenario 1 described in 23009-3 2nd edition AMD1. 1 segment file for the full video and 1 segment file for a spatial part.	
2	Test Vector(1) SRD description in AdaptationSet These Test Vectors are inspired by the scenario 3 described in 23009-3 2nd edition AMD1. 4 segment files, one per spatial part. The SRD parameters in the MPD are expressed in an arbitrary unit.	
3	Test Vector(3) 2 Layered video organization These Test Vectors are inspired by the scenario 5 described in 23009-3 2nd edition AMD1. 4 segment files are for each spatial part and 1 segment file is for non-SRD video. Each layer is represented by an HEVC stream (no scalability) MPD describes the mandatory parameters by arbitrary values and optional values.	

These test vectors will be available at this address: http://download.tsi.telecom-paristech.fr/gpac/DASH_CONFORMANCE/TelecomParisTech/SRD/