## 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/ m35084 October 2014, Strasbourg, France

Source Canon Research Center France, Telecom ParisTech

**Status** For discussion

Title Conformance work for Associated Representations – 23009-1 AMD2

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## 1 Introduction

At the 108<sup>th</sup> meeting, MPEG issued PDAM for amendment 2 of MPEG-DASH part 1. This new amendment contains several new features including the associated Representations though Representation@associationId and Representation@associationType. This input document provides the necessary modifications of the conformance software as well as new test vectors implementing the associationId and associationType features.

## 2 Validation rules for Associated Representations feature

	Clause in <b>23009-1</b> AMD2	Rule	Conformance Check Implementation
1	Modification of 5.3.5.2 (Table 7)	whitespace separated list of values (both associationId and associationType)	
2	Modification of 5.3.5.2 (Table 7)	Check that representation(s) indicated in Representation@associationId is(are) present	
3	Modification of 5.3.5.2 (Table 7)	This attribute (associationType) shall not be present when @associationId is not present	
4	Modification of 5.3.5.2 (Table 7)	This attribute (associationType) must have as many values as the number of identifiers declared in the @associationId attribute	
5	Modification of 5.3.5.2 (Table 7)	Values taken by this attribute are 4 character codes defined in ISOBMFF for track reference types  Note: The use of a value in the @associationType of a representation is conformant if a ISOBMFF file constructed with that representation and its associated representation as tracks with a track reference equal to the associationType value is conformant.	

## 3 Test vectors

The following Test Vectors conform to ISO BMF on-demand profile.

	Features	comment
1	Test Vector(1a): one Representation with associationId alone	
	Test Vector(1b) (error case): one Representation with associationId alone but no corresponding Representation	
2	Test Vector(2): one Representation with associationId with multiple values.	
3	Test Vector(3a): one Representation with associationId and associationType each having one value	
	Test Vector (3b) (error case): associationType without associationId.	
4	Test Vector(4a): one Representation with associationId and associationType each having multiple values (same number)	
	Test Vector(4b) (error case): one Representation with associationId and associationType each having multiple values (different number => not valid)	
5	Test Vector(5) (error case): the test vector of 4a but with one referenced Representation that is missing	
6	Test Vector(6) (error case): an associationType with a string-value longer than 4	

These test vectors can be found at (TBD).