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

**ISO/IEC JTC1/SC29/WG11 MPEG2016/M38231  
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**Title**      **Comments on CMAF WD**  
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## **1 Introduction**

MPEG issued the WD on CMAF during its 114th MPEG meeting. This contribution proposes clarification on the current WD.

## **2 Proposed changes**

### **2.1 Document Length**

The purpose of CMAF is to profile MPEG standards. The main part of the standard is the definition of restrictions on these other MPEG standards. In the current document, the restriction definitions start on page 19!!

Proposed change:

- delete section 4
- move section 6 to an informative annex.

The document is in general quite long (73 pages). For instance, the introduction is too long, contains definitions of terms, or contains many sentences that are void, such as:

"Segments contain movie fragments that can be copied directly from one or a set of CMAF conformant ISO Base Media files without modification."

Proposed change: reduce the length of the introduction and reduce the length of the document.

### **2.2 terms, definitions, acronyms**

The term "Required" is defined using the term "required" (note the change of case). This is very confusing. The term is used only 2 times.

Proposed change: Remove this term.

The acronym CVS refers to a very specific type of Coded Video Sequence.

Proposed change: use the term CCVS (Constrained Coded Video Sequence) or (RCVS) Random-accessible CVS.

The definitions of "CMAF Fragment" and "Low Latency Decodable Chunk" are not sufficiently distinct.

Proposed change: Rephrase the definitions to indicate the differences between those terms.

Some definitions are redundant with ISOBMFF, such as sync sample.

Proposed change: Replace definitions by a reference to the associate definition in the ISOBMFF spec.

The term "Video Profile" seems very generic and unnecessary. Additionally, it is used only as a reference to annex A.

Proposed change: remove definition of this term.

The abbreviation "AU" only refers to the "Audio Access Unit"? This is an error. An AU is not limited to Audio.

Proposed change: define AU correctly.

### **2.3 File Brand**

Several sentences are similar:

- "The CMAF container file type brand is 'cmfc'"
- "The brand 'cmfc' shall be listed in compatible\_brands."
- "The primary constraints of the 'cmfc' file type brand are described in Sections 7.3.4 and 7.3.5."
- in 7.5.1, "CMAF Tracks and Files shall include at least the compatible\_brands of 'cmfc' and 'iso9'"
- "Defining the CMAF Container ISOM brand ('cmfc'), that indicates a Track containing that brand conforms to the constraints of a CMAF container, Track, Fragments, and optionally, Common Encryption."

Proposed change: Define the 'cmfc' brand in one place only.

### **2.4 MIME Type**

The Annex defining the MIME type is missing.

### **2.5 smhd**

The restrictions on smhd are present twice: in 7.5.9 and 10.3.5, once with a shall and once with a should.

Proposed change: Delete 7.5.9.

### **2.6 Section 7.3.2**

The section 7.3.2 does not contain any normative statement.

Proposed change: delete the section.

### **2.7 Table 7.3.1**

It would be good to have a distinction between optional and conditionally mandatory.