1 Introduction

While checking the correctness of sample groups defined in L-HEVC file format, we have found a potential bug in Part-12 on sample group description section. This contribution addresses the issue.

2 Sample Group Description bug

2.1 Issue

The specification says in 8.9.3.1:

“Quantity: Zero or more, with one for each Sample to Group Box.”

This is wrong for two reasons:

- there could be several SampleToGroupBox with the same grouping_type but different grouping_type_parameter, all related to the same sample group description of the given grouping_type
- the SampleGroupDescriptionBox can have a default description entry, therefore no SampleToGroup is necessary

It further states: “The associated SampleToGroup shall indicate the same value for the grouping type.”

There is however not a single associated SampleToGroup, but zero or more. Moreover, this sentence is strange since by definition the SampleToGroup is associated to the SampleGroupDescription because it has the same grouping_type ...

2.2 Proposed correction

Replace:

“Quantity: Zero or more, with one for each Sample to Group Box.”

with
“Quantity: Zero or more, with at most one instance per grouping_type value”

And remove the sentence

“The associated SampleToGroup shall indicate the same value for the grouping type.”

Questionning on “shall be considered as default” when SampleToGroup is not present?

Add the following note:

Note: for a Sample Group Description with a given grouping_type, there may be more than one SampleToGroup with the same grouping_type if and only if these SampleToGroup have different grouping_type_parameter; there may also be zero SampleToGroup with the given grouping_type if no samples are mapped to the Sample Group Description, or if all samples are mapped to the default entry in the Sample Group Description.

3 Conclusion

We suggest including the proposed fixes in the defect report on part 12, and start issuing a COR on Part-12 with any relevant/mature items listed in the defect report.