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TECHNICAL CORRIGENDUM 1

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Information technology — Coding of multimedia and hypermedia information —

Part 5: **Support for base-level interactive applications**

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Codage de l'information multimédia et hypermédia —

Partie 5: Support pour applications interactives de niveau fondamental

RECTIFICATIF TECHNIQUE 1

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Introduction

This document is a response to public comments to ISO/IEC JTC 1/SC 29/WG 12 from ongoing implementation work with the MHEG-5 standard. The comments contribute to identify several issues of MHEG-5 usage:

- 1) Spelling errors
- 2) Ambiguous specification
- 3) Missing Specification
- 4) Erroneous Specification

These issues have been collected by JTC 1/SC 29/WG 12, and the JTC 1/SC 29/WG 12 MHEG-5 Maintenance Task Force (MTF) was established to deal with the input properly. The work of the MTF concentrates to keep the spirit of MHEG-5 specification and only to "repair" problems in the published MHEG-5 text after deep technical evaluation. Requests for additional functionality have been rejected as long as they do not help to remove problems in the text. Instead, additional specification was added only when missing, and clarification of the intention of the original MHEG-5 text was added where required. In case of ambiguous text a conservative technical solution was preferred.

This document is organized according to the MHEG-5 class hierarchy. The subclauses for each class describe the separate issues, and identify the requested action which solve the issue.

1 Notations

The following notations are used in the following subclauses to describe the changes defined in this technical corrigendum to ISO/IEC 13522-5.

<Name of the class>

1.1 Name of the issue

1.1.1 Description

This subclause describes the problem in ISO/IEC 13522-5 which is addressed in this issue.

1.1.2 Required action

This subclause describes the kind of changes to ISO/IEC 13522-5 which solve the problem described in the previous subclause.

2 Root Class

2.1 Misleading note in Activation behaviour

2.1.1 Description

The first note of the Activation behaviour of the Root class (subclause 8.3) is misleading.

2.1.2 Required action

Remove the first note of the Activation behaviour of the Root class (subclause 8.3).

2.2 Generation of the ContentAvailable event

2.2.1 Description

A clarification for the generation of the ContentAvailable event is needed for objects which have no encoded Content attribute.

2.2.2 Required action

Add the following note to the description of the ContentAvarilable event (subclause 8.2) of the Root class:

"

NOTE Objects which have no encoded Content attribute generate no ContentAvailable event.

"

2.3 Conditions to set the *AvailabilityStatus* to False

2.3.1 Description

The description of the preparation behaviour is not symmetrical to the destruction behaviour (see subclause 8.3, Destruction behaviour).

2.3.2 Required action

Add the following step to the sequence of actions after step 5 in the Root Destruction behaviour, and renumber the original step 6 to step 7:

"

6. Set the *AvailabilityStatus* to False.

"

2.4 Introduction of the *ContentPreparation* behaviour in the *ContentAvailable* event

2.4.1 Description

A new behaviour *ContentPreparation* is introduced in the Root class (subclause 8.3) to clarify the process of content retrieval.

2.4.2 Required action

Change the first paragraph of the description of the *ContentAvailable* event in subclause 8.2 to:

"

This event is generated when the object and its content are available in an optimal state to the engine. This event is generated asynchronously with the *ContentPreparation* behaviour for the object.

"

2.5 Definition of the *ContentPreparation* behaviour

2.5.1 Description

The new behaviour *ContentPreparation* is introduced in the Root class (subclause 8.3) to clarify the process of content retrieval.

2.5.2 Required action

Add the following behaviour to subclause 8.3 to the internal behaviours of the Root class in subclause 8.3:

"

ContentPreparation This behaviour has the basic semantics of loading and processing all requested resources in order to handle or to present this object.

This behaviour performs no action in the Root class.

"

2.6 Clarification of the Preparation behaviour

2.6.1 Description

The new behaviour *ContentPreparation* is introduced in the Root class (subclause 8.3) to clarify the process of content retrieval. For this, the Preparation behaviour of the Root class must be adapted.

2.6.2 Required action

Remove the instruction between step 5 and 6 of the Preparation behaviour of the Root class in subclause 8.3 and change point 6 to:

"

6. Perform the *ContentPreparation* behaviour.

"

3 Group Class

3.1 Ambiguous situations during context changes

3.1.1 Description

The use of elementary actions which change the context (i.e. Launch, Spawn, TransitionTo, Quit) might lead to ambiguous situations if they are used in the OnStartup, OnSpawnCloseDown, OnCloseDown, and OnRestart attributes (see also subclause 4.3 of this document).

3.1.2 Required action

Add the following note to the definition of the OnStartup and OnCloseDown attributes of the Group class (subclause 9.1.2):

"

NOTE - The elementary actions Launch, Spawn, TransitionTo, and Quit shall be ignored during the execution of this attribute.

"

4 Application Class

4.1 Clarification of the description of Spawn in case of limited ApplicationStack

4.1.1 Description

The last sentence of the Spawn elementary action description is not clear.

4.1.2 Required action

Replace the last sentence of the Spawn elementary action description (subclause 10.4) in the Application class with the following text:

"

If it is not implemented, or if the application identifier stack is full, ignore the steps described above and execute the Launch elementary action instead.

"

4.2 Targeting Launch and Spawn elementary actions to the currently active Application

4.2.1 Description

The description of the Spawn elementary action is not sufficient for the case that the target of the elementary action is the currently active Application.

4.2.2 Required action

Add the following note to the description of the Spawn elementary action (subclause 10.4) in the Application class:

"

NOTE - If the target Application is available, ignore the action.

"

4.3 Ambiguous situations during context changes

4.3.1 Description

The use of elementary actions which change the context (i.e. Launch, Spawn, Quit, TransitionTo) might lead to ambiguous situations if they are used in the OnStartup, OnSpawnCloseDown, OnCloseDown, and OnRestart attributes (see also subclause 3.1 of this document)

4.3.2 Required action

Add the following note to the definitions of the OnSpawnCloseDown and OnRestart attributes of the Application class (subclause 10.1.2):

"

NOTE - The elementary actions Launch, Spawn, TransitionTo, and Quit shall be ignored during the execution of this attribute.

"

4.4 Handling of events during context changes

4.4.1 Description

The note in subclause 10.4 for the Launch elementary action is a contradiction to the text in subclause 53.3.

4.4.2 Required action

Remove the note for the Launch elementary action in subclause 10.4.

4.5 Missing specification of the behaviour in case of a failed Quit elementary action

4.5.1 Description

The description of the Quit elementary action does not specify the behaviour in case of a failing Quit elementary action. This is a special case since this elementary action results in retrieval of a object reference from the application stack, which may not be a valid object reference.

4.5.2 Required action

Add the following note to the description of the Quit elementary action (subclause 10.4) in the Application class:

"

NOTE - If the object reference retrieved from the application stack is not a valid object reference and the Quit elementary action fails due to that, it is up to the application domain to define the handling of this situation.

"