

ISO/IEC 23090-13:2024-01 (E)

Information technology - Coded representation of immersive media - Part 13: Video decoding interface for immersive media

Contents

Page

Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Abbreviated terms.....	2
5 Video decoding engine.....	2
5.1 General.....	2
5.2 Input video decoding interface.....	4
5.3 Output video decoding interface.....	4
5.4 Control interface to the Video Decoding Interface.....	5
5.4.1 Functions.....	5
5.5 Examples of video decoding engine instantiations.....	9
5.5.1 Mapping on OpenMAX™ integration layer (OpenMAX IL).....	9
5.5.2 Mapping on Vulkan® Video.....	9
5.5.3 Informative mapping.....	12
6 VDI systems decoder model.....	13
6.1 Introduction.....	13
6.2 Concepts of the VDI systems decoder model.....	13
6.2.1 General.....	13
6.2.2 Media stream.....	13
6.2.3 Media stream interface.....	13
6.2.4 Input formatter.....	13
6.2.5 Access Units (AU).....	14
6.2.6 Decoding Buffer (DB).....	14
6.2.7 Elementary Streams (ES).....	14
6.2.8 Elementary Stream Interface (ESI).....	14
6.2.9 Decoder.....	14
6.2.10 Composition Units (CU).....	14
6.2.11 Composition Memory (CM).....	14
6.2.12 Compositor.....	14
7 Video decoder interface.....	14
7.1 General.....	14
7.2 Operations on input media streams.....	14
7.2.1 General.....	14
7.2.2 Concepts.....	15
7.2.3 Filtering by video object identifier.....	15
7.2.4 Inserting video objects.....	16
7.2.5 Appending two video objects.....	17
7.2.6 Stacking two video objects.....	18
7.3 Slice-based instantiation for ISO/IEC 23008-2 high efficiency video coding (HEVC).....	19
7.3.1 General.....	19
7.3.2 Media and elementary stream constraints.....	19
7.4 Layer-based instantiation for ISO/IEC 23090-3 versatile video coding (VVC).....	20
7.4.1 General.....	20
7.4.2 Media and elementary stream constraints.....	20

7.5	Slice-based instantiation for ISO/IEC 23094-1 essential video coding (EVC)	22
7.5.1	General	22
7.5.2	Media and elementary streams constraints	23
Annex A	(normative) Control interface IDL definition	25
Annex B	(informative) OpenMAX IL VDI extension header	26
Annex C	(normative) Supplemental enhancement information (SEI) syntax and semantics	27
Annex D	(informative) Example implementations of input formatting operations	33
Annex E	(informative) Brief description of OpenMAX IL functions	38
Annex F	(informative) Mapping on media source extensions (MSE)	41
Bibliography	43