



DPC: 25/30499082 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Responsible committee: IST/37 Coding of picture, audio, multimedia and hypermedia information

Interested committees:

Title: Draft BS ISO/IEC 23090-14/Amd 1 Information technology — Coded representation of immersive media. Part 14: Scene description - Amendment 1: Information technology — Coded representation of immersive media.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT Amendment

ISO/IEC 23090-14:XXXX/ DAM 1

Information technology — Coded representation of immersive media —

Part 14: Scene description

AMENDMENT 1: Support of MPEG-I audio, scene understanding and other extensions

ICS: 35.040.40

ISO/IEC JTC 1/SC 29

Secretariat: JISC

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This document is circulated as received from the committee secretariat.

Reference number
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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
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Information technology — Coded representation of immersive media —

Part 14: Scene description

AMENDMENT 1: Support of MPEG-I audio, scene understanding and other extensions

Modify clause 8 with the following content

In clause 8.1.1 change

AR anchoring allows for anchoring of a scene or some root nodes of a scene into the user's physical environment to provide an AR experience. AR anchoring is supported at the scene level and at the node level, as well as an extension through the definition of the MPEG_anchor extension.

To

AR anchoring allows for anchoring of a scene or some root nodes of a scene into the user's physical environment to provide an AR experience. AR anchoring is supported at the scene level and at the node level, as well as an extension through the definition of the MPEG_anchor extension.

Once anchored, the elements of the scene may interact with the physical environment. The anchoring extension also specifies how the representation of this environment may be provided to manage these interactions and to reach expected AR experience.

In clause 8.1.2, change table 28 to

Table 28 — Definition of the Anchor object

Name	Type	Usage	Default	Description
trackable	integer	M		Index of the trackable in the trackables array that will be used for this anchor.
requiresAnchoring	boolean	M		Indicates if AR anchoring is required for the rendering of the associated nodes. If TRUE, the application shall skip the virtual assets attached to this anchor until the pose of this anchor in the real world is known. if FALSE, the application shall process the virtual assets attached to this anchor
minimumRequiredSpace	vec3	0	(0,0,0)	Space required to anchor the AR asset (width, height, depth in meters). This space corresponds to an axis-aligned bounding box, placed at the origin of the trackable space. Width is aligned with x axis, height with y axis and depth with z axis, expressed in trackable local space. This value shall be compared to the bounding box of the real-world available space associated with the trackable as estimated by the XR runtime.
aligned	enumeration	0	NOT_USED	The aligned flag may take one of the following values: NOT_USED=0, ALIGNED_NOTSCALED=1, ALIGNED_SCALED=2. If ALIGNED_SCALED is set, the bounding box of the virtual assets attached to that anchor is aligned and scaled to match the bounding box of the real-world available space associated with the trackable as estimated by the XR runtime.
actions	array(number)	0	N/A	Indices of the actions in the actions array of the interactivity extension to be executed once the pose of this anchor is determined. An example is a setTransform action to place the virtual assets attached to that anchor.
light	integer	0	N/A	Reference to an item in the lights array of the MPEG_lights_texture_based extension.
recommendedSpatialComputingConfig	object	0	N/A	Provides a set of recommended parameters specifying the needed spatial description. The semantics of this object are given in Table 8.1-1.

And add the following table after the table 28

Table 8.1 — 1: RecommendedSpatialComputingConfig Object

Name	Type	Usage	Default	Description
scanOptions	array	0	N/A	Array of options (enumeration) for the scan computation: possible values are given in Table 8.1- 2.
scanDetails	object	0	N/A	Specifies the required level of detail for the representation. The semantics are presented in Table 8.1- 3.
scanUpdate	object	0	N/A	Specifies the frequency at which the spatial description must be updated (Table 8.1- 4).
scanVolumes	array	0	N/A	Array of bounding volumes that determine the spaces where scanned objects must be provided. Real scan objects that intersect one or more of the bounding volumes should be provided, and all other objects ignored. The semantics for these volumes are presented in Table 8.1- 5.
realSemantic	array	0	N/A	Semantic descriptions of nodes that are needed ("table", "room", "chair", "wall", "light", "freespace" ...)
lightOptions	array	0	N/A	Array of option (enumeration) for the light extraction: possible values are given in Table 8.1- 6.
lightUpdate	object	0	N/A	Specifies the frequency at which the extraction of real light must be updated (Table 8.1- 4)

Table 8.1 — 2: Possible values for a scanOptions item

Enumeration value	Description
PLANE = 0	Request plane data for scanned objects
PLANAR_MESH	Request planar meshes for scanned objects
VISUAL_MESH	Request 3D visualization meshes for scanned objects
COLLIDER_MESH	Request 3D collider meshes for scanned objects
FREE_VOLUME	Request to get the available space around a trackable
BOUNDING_BOX	Request a simplified collider mesh
TEXTURED_MESH	Request mesh with a texture

Table 8.1 — 3: Semantics for the scanDetail object

Name	Type	Usage	Default	Description
primitivesNumber	number	0	N/A	Gives the quantity of geometric primitives per cubic meter (m ³)
textureOption	enumeration	0	LOW_RES	Gives the resolution of the texture of textured meshes. Possible values are 512X512 (0), 1024X1024 (1) or 2048X2048 (2).