

# ISO/IEC 3721:2023-09 (E)

## Information technology - Computer graphics, image processing and environmental data representation - Information model for mixed and augmented reality content - Core objects and attributes

---

<b>Contents</b>	<b>Page</b>
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions and abbreviated terms</b> .....	<b>1</b>
3.1 Terms and definitions.....	1
3.2 Abbreviated terms.....	3
<b>4 Overview</b> .....	<b>4</b>
<b>5 Principles and Requirements</b> .....	<b>5</b>
<b>6 MAR content model</b> .....	<b>6</b>
6.1 Concept.....	6
6.2 Use case diagram.....	7
6.3 MAR content and its scene structure.....	7
6.4 Major MAR system objects that are associated with the MAR content objects <sup>[6]</sup> .....	8
6.4.1 Sensor.....	8
6.4.2 Real World Capturer::Sensor.....	9
6.4.3 Tracker::Sensor.....	9
6.4.4 Recognizer::Sensor.....	10
<b>7 MAR content classes</b> .....	<b>10</b>
7.1 Overall class/object structure.....	10
7.2 MARSNode.....	12
7.3 TransformGroup::MARSNode.....	13
7.3.1 VirtualTG::TransformGroup::MARSNode.....	14
7.3.2 RealTG::TransformGroup::MARSNode.....	14
7.4 Spatial_Mapper::MARSNode.....	15
7.5 Event_Mapper::MARSNode.....	16
7.6 MARObject::MARSNode.....	17
7.6.1 VirtualObject::MARObject::MARSNode.....	18
7.6.2 RealObject::MARObject::MARSNode.....	19
7.7 Behaviour::MARSNode.....	22
7.8 MetaInfo::MARSNode.....	23
<b>8 Example usage scenarios</b> .....	<b>24</b>
8.1 Marker based video see-through AR.....	24
8.2 Location (GNSS) based video see-through AR.....	24
8.3 Marker based AR for glass display.....	25
8.4 Location based AR for glass display.....	26
8.5 2D screen augmentation over a glass display.....	27
8.6 Augmented virtuality with (multiple) live actor extracted and imported live from a chroma-keying set-up.....	27
<b>9 Conformance</b> .....	<b>28</b>
<b>Bibliography</b> .....	<b>29</b>