# ISO/IEC 23000-22:2025-02 (E)

## Information technology - Multimedia application format (MPEG-A) - Part 22: Multi-image application format (MIAF)

## Contents

Page


**Foreword** ..... **v**

**Introduction** ..... **vi**

**1 Scope** ..... **1**

**2 Normative references** ..... **1**

**3 Terms and definitions** ..... **2**

**4 Abbreviated terms** ..... **4**

**5 Document organization and conventions** ..... **4**

**6 MIAF concepts and processing of MIAF files** ..... **4**
6.1 General ..... 4
6.2 MIAF data object model ..... 5
6.3 MIAF image items ..... 5
6.4 MIAF thumbnail image items ..... 5
6.5 MIAF auxiliary image item ..... 5
6.6 MIAF reader processing model ..... 6
6.7 MIAF renderer processing model ..... 8

**7 MIAF file general requirements** ..... **9**
7.1 General ..... 9
7.2 Box-level requirements ..... 9
7.2.1 Box-level requirements on image items ..... 9
7.2.2 Box-level requirements on image sequences and video ..... 12
7.3 Item level requirements on image items ..... 12
7.3.1 General ..... 12
7.3.2 Primary item ..... 12
7.3.3 MIAF thumbnail images ..... 12
7.3.4 MIAF master image items that are not the primary item ..... 13
7.3.5 MIAF auxiliary image items ..... 13
7.3.6 Item properties ..... 14
7.3.7 Content light level property ..... 16
7.3.8 Mastering display colour volume property ..... 16
7.3.9 Transformations and derived items ..... 16
7.3.10 Metadata ..... 16
7.3.11 Derived images and derived image items ..... 17
7.3.12 Image grouping ..... 19
7.4 Track-level requirements on image sequences and video ..... 20
7.4.1 General ..... 20
7.4.2 Track reference types ..... 20
7.4.3 Video track-level requirements ..... 20
7.4.4 Video track sample entry boxes ..... 20
7.4.5 Audio track-level requirements ..... 21
7.4.6 Auxiliary video track-level requirements ..... 21
7.5 Association of image items and tracks ..... 21
7.6 Metadata ..... 21

**8 Shared conditions and requirements** ..... **22**
8.1 General ..... 22
8.2 Self-containment ..... 22

8.2.1 Image items ..... 22
8.2.2 Image sequences and video ..... 22
8.3 Single-layer ..... 22
8.4 Grid-limit ..... 22
8.5 Single-track ..... 22
8.6 Edit-lists ..... 22
8.7 Matched-duration ..... 23
8.8 HDR signalling ..... 23
**9 Profile-independent image item and sequence coding ..... 24**
**10 Brands and file extensions ..... 24**
10.1 General ..... 24
10.2 Progressive application brand ..... 24
10.3 Animation application brand ..... 25
10.4 Burst capture application brand ..... 26
10.5 Fragmented alpha video brand ..... 26
10.6 Common media fragmented brand ..... 26
**Annex A** (normative) **MIAF profiles ..... 27**
**Annex B** (Informative) **Reference software and conformance ..... 32**
**Bibliography ..... 34**