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**Information technology—Computer
graphics and image processing—Image
Processing and Interchange (IPI)—
Functional specification**

**Part 5: Basic Image Interchange Format
(BIIF)**



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-

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Australian Standard[®]

**Information technology—Computer
graphics and image processing—Image
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**Part 5: Basic Image Interchange Format
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PREFACE

This Standard was prepared by the Standards Australia Committee IT-031, Computer Modelling and Simulation.

The objective of this Standard is to establish the specification of the Basic Image Information Image Format (BIIF). BIIF is a standard developed to provide a foundation for interoperability in the interchange of imagery and imagery-related data among applications. This Standard provides a detailed description of the overall structure of the format, as well as specification of the valid data and format for all fields defined with BIIF. Annex C contains a model profile in tabular format to assist in profile development.

This Standard is identical with, and has been reproduced from ISO/IEC 12087-5:1998, *Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification, Part 5: Basic Image Interchange Format (BIIF)* and its Corrigendum 1 (2001) and Corrigendum 2 (2002) which has been added at the end of the source text.

As this Standard is reproduced from an International Standard, the following applies.

- (a) In the source text ‘this part of ISO/IEC 12087’ should read ‘this Australian Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO 8601	AS ISO 8601
Data elements and interchange formats—Information interchange—Representation of dates and times	Data elements and interchange formats—Information interchange—Representation of dates and times
ISO/IEC 9973	AS ISO/IEC 9973
Information technology—Computer graphics, image processing and environmental data representation—Procedures for registration of items	Information technology—Computer graphics, image processing and environmental data representation—Procedures for registration of items
12087	12087
Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification	Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification
12087-1	12087.1
Part 1: Common architecture for imaging	Part 1: Common architecture for imaging
12087-2	12087.2
Part 2: Programmer's imaging kernel system application programme interface	Part 2: Programmer's imaging kernel system application programme interface
12087-3	12087.3
Part 3: Image Interchange Facility (IIF)	Part 3: Image Interchange Facility (IIF)

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

CONTENTS

1 Scope.....	1
2 Normative references	2
3 Terms, definitions and abbreviations	4
3.1 Definitions.....	4
3.2 Abbreviations:.....	7
4 Basic Image Interchange Format (BIIF) specification.....	8
4.1 Format overview	8
4.1.1 Description	9
4.1.1.1 Format fields.....	9
4.1.1.2 Standard data types	9
4.1.1.3 Extensions.....	9
4.1.1.4 Transportable file structure (TFS).....	10
4.1.1.5 Complexity Levels	10
4.1.2 Interoperability/exchange	10
4.1.3 Fields.....	11
4.1.3.1 Valid data	11
4.1.3.2 Date and time expressions.....	11
4.1.3.3 Representation of textual information in fields	11
4.1.4 Logical structure of pixel storage.....	12
4.1.4.1 Pixel coordinates	12
4.1.4.2 PIKS pixel coordinates	12
4.1.5 Common coordinate system	13
4.1.5.1 Common coordinate system structure.....	13
4.1.5.2 Row and column coordinates	13
4.1.5.3 CCS Boundaries.....	14
4.1.6 Display and attachment levels.....	14
4.1.6.1 Display levels	14
4.1.6.2 Attachment levels.....	15
4.2 Format	16
4.2.1 Data recording formats.....	16
4.2.2 Encoding.....	17
4.2.3 Header.....	18
4.2.4 Image segment.....	26
4.2.4.1 Image subheader	26
4.2.4.2 Look-up tables (LUTS)	27
4.2.5 Image data field format	36
4.2.5.1 Blocked images.....	36
4.2.5.2 Image data masking.....	37
4.2.5.3 Compressed image data format	42
4.2.5.4 Uncompressed image data format	42
4.2.5.5 Vector quantized data	43
4.2.5.6 Number of bands (NBANDS).....	43
4.2.5.7 PIKS Objects.....	43
4.2.5.8 Image representation	44

	Page
4.2.6 Symbol segment.....	45
4.2.6.1 Symbol subheader.....	45
4.2.6.2 Symbol data.....	48
4.2.7 Text information segment.....	48
4.2.7.1 Text subheader.....	48
4.2.7.2 Text.....	50
4.2.8 Data Extensions.....	50
4.2.8.1 Tagged Record Extensions (TRE): Public and Private.....	50
4.2.8.2 Data extension segments (DES).....	52
4.2.8.3 Defined DESs.....	54
4.2.8.4 Reserved extension segments (RES).....	56
5 Conformance profiles and extensions.....	58
5.1 Profiles.....	58
5.2 Profile specific header/subheader dependencies proforma.....	58
5.3 Complexity level proforma.....	58
5.4 Implementation support requirements.....	59
5.4.1 General support requirements.....	59
5.4.2 Producing and interpreting BIIF files.....	59
5.4.2.1 Producing BIIF files.....	59
5.4.2.2 Interpreting BIIF files.....	59
5.5 Defined extensions.....	59
5.6 Profile registration.....	59
Annex A (normative) Transportable file structure.....	61
A.1 Transportable file structure (TFS).....	61
A.1.1 TFS Commands.....	61
A.1.2 TFS encoding.....	62
A.1.3 TFS command flow.....	62
A.2 TFS command formats.....	63
A.2.1 TFS delimiter commands.....	63
A.2.1.1 Begin TFS command.....	63
A.2.1.2 Begin transport command.....	64
A.2.1.3 Begin transport body command.....	64
A.2.1.4 Begin transport profile command.....	64
A.2.1.5 Begin transport profile body command.....	65
A.2.1.6 End transport profile command.....	65
A.2.1.7 End transport command.....	65
A.2.1.8 End TFS command.....	65
A.2.2 TFS descriptor commands.....	65
A.2.2.1 TFS version command.....	66
A.2.2.2 TFS security command.....	66
A.2.2.3 TFS subscription command.....	66
A.2.2.4 TFS configuration command.....	67
A.2.2.5 TFS configuration data command.....	68
A.2.2.6 TFS metadata command.....	68
A.2.2.7 TFS index command.....	68
A.2.3 Transport descriptor commands.....	69
A.2.3.1 Transport security command.....	69
A.2.3.2 Transport metadata command.....	70
A.2.3.3 Transport index command.....	70
A.2.4 Transport Profile descriptor commands.....	70
A.2.4.1 Transport Profile security command.....	70
A.2.4.2 Transport profile metadata command.....	70
A.2.4.3 Transport profile index command.....	70
A.2.5 Transport profile commands.....	70
A.2.5.1 Transport profile action command.....	71
A.2.5.2 Transport profile object command.....	71
A.2.6 TFS escape command.....	79
Annex B (normative) Vector Quantization.....	80
B.1 Vector Quantized Data.....	80
B.2 Quantization Process.....	80
B.3 Reconstruction.....	81
B.3.1 Spatial reconstruction.....	82
B.3.2 Color reconstruction.....	83
B.3.3 Data elements.....	84

B.3.3.1 Quantization ratio	84
B.3.3.2 Masked vs unmasked	84
B.3.3.3 Code book organization	84
B.3.3.4 Spatial data section	85
B.4 File organization	85
B.5 Definitions - image data section	87
B.6 Definitions - BIIF header and image subheader	87
Annex C (normative) Profiling BIIF	89
C.1 Profiling process	89
C.2 Profile proforma	89
C.2.1 Use of the model profile	89
C.2.2 Rules for filling out the proforma tables	89
C.2.2.1 Profile Tables	91
Annex D (informative) Implementation Considerations and Product Configurations	123
D.1 Implementation considerations and product configurations	123
D.2 TRE_OVERFLOW example	123
D.3 Scope of implementation	123
D.3.1 Creating headers and subheaders	123
D.3.2 Character counts	123
D.3.3 Data entry	124
D.3.4 Tagged Record Extensions	124
D.3.5 Out-of-bounds field values	124
D.3.6 Use of images	124
D.3.7 Use of text files	124
D.3.7.1 BCS (TXTFMT=STA)	124
D.3.7.2 Additional TXTFMT Codes	124
D.3.8 File system constraints	130
D.3.9 Security considerations	130
D.4 Product configurations	131
D.4.1 General	131
D.4.1.1 Single file, single base image	131
D.4.1.2 Single file, multiple images	132
D.4.1.3 Single file, no image	134
D.4.1.4 Multiple correlated files	134
Annex E (informative) Examples BIIF Profiles	135
E.1 Example file	135
E.1.1 Use of this example	135
E.1.2 BIIF Model Profile for example file	135
E.1.2.1 Explanation of the file header	137
E.1.2.2 Explanation of the image subheaders	138
E.1.2.3 Explanation of the synchro subheaders	142
E.1.2.4 Explanation of the text subheaders	147
E.2 Examples using the Transportable File Structure (TFS)	147
E.2.1 Use of TFS	147
E.2.2 TFS Example	147
E.2.2.1 TFS example of PIKS processing for an image	147
E.2.2.2 TFS example of requesting imagery and patient history	148
E.2.2.3 TFS example of using configuration and a five band image	148
E.3 Open Skies Digital Data Exchange Profile example (Informative)	149
E.3.1 Open Skies Digital Data Exchange File Header	150
E.3.2 Open Skies Image Data Subheader	151
E.3.3 Open Skies SAR Information	154
E.3.4 Open Skies Text Data Subheader	156
E.3.5 Open Skies Annotation Text Format	157
E.3.6 Data Extension Segment Subheader	159
E.3.7 Open Skies Digital Data Exchange Format (OSDDEF) DCRsi TAPE ANNOTATION and TAPE DIRECTORY File Examples	160
E.3.8 Example Entries in Data and Field Tables	163

List of Figures

Figure 1 -- Translation process.....	8
Figure 2 -- Structure.....	9
Figure 3 -- Image Array Structure	12
Figure 4 -- Common coordinate system	13
Figure 5 -- Display level and attachment level relationships.....	15
Figure 6 -- Display and attachment levels	16
Figure 7 -- Octet sequence order.....	17
Figure 8 -- Header structure	18
Figure 9a -- A blocked image.....	37
Figure 9b -- A blocked padded image.....	37
Figure 10 -- A blocked padded image with empty blocks	38
Figure B.1 -- Vector quantization process flow	80
Figure B.2 -- BIIF file structure with VQ data	81
Figure B.3 -- VQ reconstruction procedure.....	82
Figure B.4 -- Spatial reconstruction	83
Figure B.5 -- Color reconstruction.....	84
Figure B.6 -- Structure of the BIIF VQ image data section	86
Figure D.1 -- Single file, single base image representation	131
Figure D.2 -- Single file, multiple images representation	133
Figure E.1 -- Sample file composite image.....	135

List of Tables

Table 1 -- Header.....	19
Table 2 -- Image pixel data type codes and descriptions	27
Table 3 -- Image subheader	28
Table 4 -- Image data mask table.....	39
Table 5 -- Representative examples of IREP and associated fields.....	45
Table 6 -- Symbol subheader.....	46
Table 7 -- Text subheader	49
Table 8 -- TRE subheader	52
Table 9 -- Data extension segment subheader.....	53
Table 10 -- Data extension segment subheader for TRE OVERFLOW	54
Table 11 -- Data extension segment subheader for TRANSPORTABLE_FILE_STRUCT	55
Table 12 -- Reserved extension segment subheader.....	57
Table A.1 -- Encoding of a TFS command	62
Table A.2 -- TFS delimiter command table	63
Table A.3 -- TFS command even form	64
Table A.4 -- TFS command odd form	64
Table A.5 -- TFS descriptor command table.....	65
Table A.6 -- TFS version.....	66
Table A.7 -- TFS subscription command	67
Table A.8 -- TFS subscription contents table.....	67
Table A.9 -- TFS configuration command.....	68
Table A.10 -- TFS config data command.....	68
Table A.11 -- TFS index command.....	69
Table A.12 -- Transport descriptor command table	69
Table A.13 -- Transport profile descriptor command table	70
Table A.14 -- Transport profile command table	71
Table A.15 -- Transport profile object command	72
Table A.16 -- Object data for BIIF transport profile object	72
Table A.17 -- Object storage and object data format.....	73
Table A.18 -- PIKS Objects minimum size	73
Table A.19 -- PIKS objects data structures.....	74
Table B.1 -- BIIF header and subheader specified data values.....	88
Table C.1 -- File header fields.....	91
Table C.2 -- Security fields specification.....	96
Table C.3 -- Image subheader fields	97
Table C.4 -- Image data mask table	107
Table C.5 -- Symbol subheader	108
Table C.6 -- Text subheader.....	111
Table C.7 -- Tagged record extensions	112
Table C.8a -- Data extension segment proforma	113
Table C.8b -- Reserved extension segment proforma.....	114
Table C.9 -- TFS profile proforma table	115
Table C.10 -- Implementation Support Requirements.....	122
Table D.1 -- Basic Latin character set	125
Table D.2 -- Basic Latin character set explanation	126
Table D.3 -- Latin-1 supplement character set	128
Table D.4 -- Latin-1 supplement character set explanation	129
Table E.1 -- Example BIIF file header.....	136
Table E.2 -- Example of the first image subheader	138
Table E.3 -- Example of the second image subheader	140
Table E.4 -- Symbol subheader for the first symbol.....	142
Table E.5 -- Symbol subheader for the second symbol.....	143
Table E.6 -- Symbol subheader for the third symbol.....	144
Table E.7 -- Symbol subheader for the fourth symbol	145
Table E.8 -- Symbol subheader for the fifth symbol.....	146
Table E.9 -- Text subheader for the text document.....	147
Table E.10 -- Open Skies Digital Data Exchange File Header	150
Table E.11 -- Image Data Subheader.....	151
Table E.12 -- Tagged Record Extension for SAR Information Parameters.....	154
Table E.13 -- SAR Information Parameters	154

	<i>Page</i>
Table E.14 -- Text Data Subheader.....	156
Table E.15 -- Treaty on Open Skies Annotation Text Format	157
Table E.16 -- Data Extension Segment Subheader.....	159
Table E.17 -- Tape annotation file example.....	160
Table E.18 -- Tape annotation file example.....	160
Table E.19 -- Tape annotation file	161
Table E.20 -- Tape Directory File Example.....	161
Table E.21 -- Tape Directory File.....	162
Table E.22 -- Data Field Table Example.....	162
Table E.23 -- Header example for various exchange files examples	163
Table E.24 -- Image data subheader	164
Table E.25 -- Text subheader	165
Table E.26 -- RETAG data for SAR initial phase data	165
Table E.27 -- User defined registered extension	166
Table E.28 -- Expansion of SAR micronavigational parameters	166
Table E.29 -- Configuration of SAR	166
Table E.30 -- 2nd example of configuration of SAR	166
Table E.31 -- Data extension segment for SAR	167

AUSTRALIAN STANDARD

Information technology—Computer graphics and image processing—Image Processing and Interchange (IPI)—Functional specification**Part 5:
Basic Image Interchange Format (BIIF)****1 Scope**

This part of ISO/IEC 12087 establishes the specification of the Basic Image Interchange Format (BIIF) part of the standard. BIIF is a standard developed to provide a foundation for interoperability in the interchange of imagery and imagery-related data among applications. This part of ISO/IEC 12087 provides a detailed description of the overall structure of the format, as well as specification of the valid data and format for all fields defined with BIIF. Annex C contains a model profile in tables to assist in profile development.

As part of the ISO/IEC 12087 family of image processing and interchange standards, BIIF conforms to the architectural and data object specifications of ISO/IEC 12087-1, the Common Architecture for Imaging. BIIF supports a profiling scheme that is a combination of the approaches taken for ISO/IEC 12087-2 (PIKS), ISO/IEC 10918 (JPEG), ISO/IEC 8632 (CGM), and ISO/IEC 9973 (The Procedures for Registration of Graphical Items). It is intended that profiles of the BIIF will be established as an International Standardised Profile (ISP) through the normal ISO processes (ISO/IEC TR 10000).

The scope and field of application of this part of ISO/IEC 12087 includes the capability to perpetuate a proven interchange capability in support of commercial and government imagery, Programmer's Imaging Kernel System Data, and other imagery technology domains in that priority order.

This part of ISO/IEC 12087 provides a data format container for image, symbol, and text, along with a mechanism for including image-related support data.

This part of ISO/IEC 12087 satisfies the following requirements:

- Provides a means whereby diverse applications can share imagery and associated information.
- Allows an application to exchange comprehensive information to users with diverse needs or capabilities, allowing each user to select only those data items that correspond to their needs and capabilities.
- Minimizes preprocessing and postprocessing of data.
- Minimizes formatting overhead, particularly for those applications exchanging only a small amount of data and for bandwidth-limited systems.
- Provides a mechanism (Transportable File Structure, TFS) to interchange PIKS image and image-related objects
- Provides extensibility to accommodate future data, including objects.

When the extensibility of this part of ISO/IEC 12087, or the inherent constraints of the structured format of BIIF, do not meet the needs of a more complex application, the concepts and features of 12087-3 (IIF) should be considered as a more appropriate method of image interchange. For example, the ability to support complex combinations of heterogeneous pixel types, self defining pixel structures, or abstract structures can be done with IIF.