

1 Annex

INSPIRE TG on Orthoimagery – Annex E “Encoding rules for TIFF and JPEG 2000 file formats”: (Issues 64-68)

Table 13. Mapping between boxes in JP2 format and GML elements

Box name		Type	Description	Card.	Conditions/Values	Mapping GML
JPEG 2000 Signature box		'jP\040\040'	The combination of the particular type and contents for this box enable an application to detect a common set of file transmission errors.	1	'<CR><LF><0x87><LF>'	N/A
File Type box		'ftyp'		1		N/A
	BR		Brand. This field specifies the Recommendation International Standard which completely defines this file.		'jp2\040' meaning is 15444-1, Annex I	N/A
	MinV		Minor version. This parameter defines the minor version number of this JP2 specification for which the file complies.	1		N/A
	CL		Compatibility list. This field specifies a code representing this Recommendation International Standard, another standard, or a profile of another standard, to which the file conforms.	1..*	At least 'jp2\040' + 'jpx\040' for GMLJP2 images	N/A
JP2 Header box		'jp2h'		1		N/A
	ihdr	'ihdr'	Image Header box	1		N/A
	HEIG HT		Image area height	1	Ysiz – Y0siz	domainSet.limits.high[1]-domainSet.limits.low[1] + 1

		WIDT H		Image area width	1	Xsiz – X0siz	domainSet.limits.high[0]- domainSet.limits.low[0] + 1
		NC		Number of components	1	= Csiz	= rangeType.field.size() if no use of palette-colour data. If use of a colour palette NC=1, rangeType.field.size()=3.
		BPC		Bits per component	1	If the bit depth of all components in the codestream is the same (sign an precision) = Ssiz ⁱ	For each band i, rangeType.field[i].constraint.in terval = “0 2 ^{[Ssizⁱ+1]-1} ” if no use of palette-colour data. If use of a palette colour, there is no relation.
		C		Compression type		7 (Other values are reserved for ISO use)	N/A
		UnkC		Colourspace Unknown.	1	0 (colourspace of the image is known and correctly specified in the Colourspace Specification boxes within the file) 1 (if the colourspace of the image is not known)	N/A
		IPR		Intellectual Property	1		N/A
	bpc ⁱ		'bpcc'	Bits per component	Optional Required if componen t have different bit depth	x000 0000 to x0100101 Component sample bit depth = value + 1. x=0 (unsigned values) x=1 (signed values)	For each band i, rangeType.field[i].constraint.in terval = “0 2 ^{[Ssizⁱ+1]-1} ”

	colr ⁱ		'colr'	Each Colour Specification box defines one method by which an application can interpret the colour space of the decompressed image data	1		N/A
		METH		Specification method	1	1 (Enumerated Colour space) 2 (Restricted ICC profile) other values (Reserved for other ISO use)	N/A
		PREC		Precedence	1	0 (field reserved for ISO use)	
		APPROX		Colour space approximation.	1	0	N/A
		ENUMCS		Enumerated colour space	1	16 (sRGB as defined by IEC 61966-2-1) 17 (greyscale) 18 (sYCC as defined by IEC 61966-2-1 Amd. 1) other values (Reserved for other ISO uses)	N/A
	pclr		'pclr'	Palette box. This box specifies a palette that can be used to create channels from components.	0..1		N/A
	cmap		'cmap'	Component Mapping box. The Component Mapping box defines how image channels are identified from the actual components decoded from the codestream.	0..1		N/A

	cdef		'cdef'	Channel Definition box	Optional		The description provided shall be consistent with the rangeType description
		N		Number of channel descriptions	1		= rangeType.field.size()
		Cni		Channel index	1/channel		N/A
		Typi		Channel type	1/channel	0 This channel is the colour image data for the associated colour. 1 (Opacity) 2 (Premultiplied opacity)	N/A
		Asoci		Channel association	1/channel	0 (This channel is associated as the image as a whole) 1 to (216– 2) This channel is associated with a particular colour as indicated by this value) 216– 1 This channel is not associated with any particular colour.	N/A
	res		'resd'		Optional		N/A
		resc		Capture Resolution box.	Optional		N/A
		resd		Default Display Resolution box.	Optional		N/A
Contiguous Codestream box			'jp2c'	This box contains the codestream as defined by Annex A of ISO 15444-1.	1	Contains the encoded data in JPEG 2000.	
Intellectual property box			'jp2i'	This box contains intellectual property information about the image.	Optional		N/A

XML Box		'xml\040'	Box for XML formatted information to a JP2 file.	Optional		N/A
UUID box		'uuid'	Box for additional information to a file without risking conflict with other vendors	Optional		The place to provide GeoJP2 georeference. Shall be consistent with georeference given by the origin of the grid "domainSet.origin" and the offset vector "domainSet.offsetVector".
UUID info box		'uinf'	Box for providing access to additional information associated with a UUID.	Optional		N/A
	UUID list box	'ulst'	This box specifies a list of UUIDs.	Optional		N/A
	URL box	'url\040'	This box specifies a URL.	Optional		N/A
ASOC Box		'asoc'	"outer" association Box for XML formatted information to a JP2 file.	Optional		The place to provide GML within JPEG 2000 (see OGC standard 05-047r3 paragraph 8.2).

Update of the numbering of the various (sub-) sections of the Annex A for all TGs

Theme	Current text	New text
AD	A.7/A.8.1	A.7/A.7.1
AD	A.8/A.9.[1-6]	A.8/A.8.[2-7]
AD	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
AD	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.1"
AU	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
AU	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.1"
CP	A.4/A.5.1	A.4/A.4.1
CP	A.5/A.6.[2-3]	A.5/A.5.[1-2]
CP	A.7/A.8.1	A.7/A.7.1
CP	A.8/A.9.[1-6]	A.8/A.8.[2-7]
CP	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.1"
CP	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
GN	A.8/A.9.[1-6]	A.8/A.8.[2-7]
GN	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.1"
GN	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
HY	A.4/A.5.1	A.4/A.4.1
HY	A.5/A.6.[1-4]	A.5/A.5.[1-4]
HY	A.7/A.8.1	A.7/A.7.1
HY	A.8/A.9.[1-8]	A.8/A.8.[2-9]
HY	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
HY	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
PS	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
PS	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
TN	A.1/C.1	A.1/A.1.[1-10]
TN	A.4/A.5.1	A.4/A.4.1
TN	A.5/A.6.[1-4]	A.5/A.5.[1-4]
TN	A.7/A.8.1	A.7/A.7.1
TN	A.8/A.9.[1-8]	A.8/A.8.[2-9]
TN	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
TN	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
AF	A.9/A.9.[1],[1-6]	A.9/A.9.[1-7]
AF	A.9.[1-6].{a),c),b)}	A.9.[1-6].{a),b),c)}
Template	A.9/A.9.[1],[1-7]	A.9/A.9.[1-8]
Template	A.9.[1-6].{a),c),b)}	A.9.[1-6].{a),b),c)}

AM	A.9.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.9.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
AM	A.9.[1-6].{a,c,b}}	A.9.[1-6].{a,b,c}}
AC-MF	A.7.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.7.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
AC-MF	A.7.[1-6].{a,c,b}}	A.7.[1-6].{a,b,c}}
BR	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
BR	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
BU	A.4/A.5.1	A.4/A.4.1
BU	A.5/A.6.[1-3]	A.5/A.5.[1-3]
BU	A.7/A.8.1	A.7/A.7.1
BU	A.8/A.9.[1-6]	A.8/A.8.[2-7]
BU	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
BU	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
EL	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
EL	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	
ER	A.8/A.9.1	A.8/A.8.17
ER	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
ER	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
EF	A.9/A.9.{1,[1-8]}	A.9/A.9.[1-9]
EF	A.9.[1-6].{a,c,b}}	A.9.[1-6].{a,b,c}}
GE	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
GE	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
HB	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
HB	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
HH	A.4/A.5.1	A.4/A.4.1
HH	A.5/A.6.[1-3]	A.5/A.5.[1-3]
HH	A.7/A.8.1	A.7/A.7.1
HH	A.8/A.9.[1-6]	A.8/A.8.[2-7]
HH	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
HH	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
LC	A.4/A.5.1	A.4/A.4.1
LC	A.5/A.6.[1-4]	A.5/A.5.[1-4]
LC	A.7/A.8.1	A.7/A.7.1
LC	A.8/A.9.[1-8]	A.8/A.8.[2-9]
LC	A.8.[1-6].{a,c,b}}	A.8.[1-6].{a,b,c}}
LC	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
LU	2.6 XML Extensible Markup Language How the Technical Guidelines map to the Implementing Rules	2.6 How the Technical Guidelines map to the Implementing Rules
LU	A.4/A.5.1	A.4/A.4.1

LU	A.5/A.6.[1-4]	A.5/A.5.[1-4]
LU	A.7/A.8.1	A.7/A.7.1
LU	A.8/A.9.[1-8]	A.8/A.8.[2-9]
LU	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
LU	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
MR	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
MR	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
NZ	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
NZ	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
OF	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
OF	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
OI	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
OI	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
PD	A.4/A.5.1	A.4/A.4.1
PD	A.5/A.6.[1-4]	A.5/A.5.[1-4]
PD	A.7/A.9.[1-6]	A.7/A.7.[2-7]
PD	A.7.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.7.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
PD	A.7.[1-6].{a),c),b)}	A.7.[1-6].{a),b),c)}
PF	A.9/A.9.{1,[1-7]}	A.9/A.9.[1-8]
PF	A.9.[1-6].{a),c),b)}	A.9.[1-6].{a),b),c)}
SR	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
SR	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
SO	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
SO	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
SD	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
SD	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
SU	A.4/A.5.1	A.4/A.4.1
SU	A.5/A.6.[1-4]	A.5/A.5.[1-4]
SU	A.7/A.8.1	A.7/A.7.1
SU	A.8/A.9.[1-6]	A.8/A.8.[2-7]
SU	A.8.[1-6].{a),c),b)}	A.8.[1-6].{a),b),c)}
SU	A.8.2 NOTE 1 Passing this test implies the fulfilment of test A6.2	A.8.2 "NOTE 1 Passing this test implies the fulfilment of test A.5.2"
US	A.9/A.9.{1,[1-6]}	A.9/A.9.[1-7]
US	A.9.[1-6].{a),c),b)}	A.9.[1-6].{a),b),c)}