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TECHNICAL CORRIGENDUM 1

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Information technology — JPEG 2000 image coding system —

Part 1:
Core coding system

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Système de codage d'image JPEG 2000 —

Partie 1: Système de codage de noyau

RECTIFICATIF TECHNIQUE 1

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INFORMATION TECHNOLOGY – JPEG 2000 IMAGE CODING SYSTEM –
PART 1: CORE CODING SYSTEM

TECHNICAL CORRIGENDUM 1

1) In the List of Figures (p. viii, Figure I-12) change
"Channel Definition box"
to
"Component Mapping box"

2) In subclause A.1.3 (p. 14), add to the end of the list of rules

— Some marker segments have values assigned to groups of bits within a parameter. In some cases there are bits, denoted by "x," that are not assigned a value for any field within a parameter. The codestream shall contain a value of zero for all such bits. The decoder shall ignore these bits.

3) In subclause A.5.1 (p. 26, Ssiz description) change
"$-2^{(\text{Ssiz AND 0x7F})-1} \le$ component sample value $\le 2^{(\text{Ssiz AND 0x7F})-1}-1$"
to
"$-2^{(\text{Ssiz+1 AND 0x7F})-1} \le$ component sample value $\le 2^{(\text{Ssiz+1 AND 0x7F})-1}-1$"

4) In subclause A.6.1 (Table A-13, p. 30, seventh row) change
"EPH marker may be used"
to
"EPH marker shall be used"

5) In subclause A6.6 (Table A-32, p. 43, sixth and seventh row) change

LYEpoc^i	16	0 — 65 534
REpoc^i	8	RSpoc^i — 33

to

LYEpoc^i	16	1 — 65 535
REpoc^i	8	(RSpoc^i + 1) — 33

6) In subclause A.6.6 (Table A-32, p. 43, eighth row, CEpoc value) change
"CSpoc^i — 255; if Csiz < 257
CSpoc^i — 16 383; Csiz ≥ 257"
to
"(CSpoc^i + 1) — 255, 0; if Csiz < 257
(CSpoc^i + 1) — 16 384; Csiz ≥ 257
(0 is interpreted as 256)"

7) In subclause A.8.2 (p. 53, Usage first and second paragraph) change
   "Usage: Optionally used in the bit stream or in the PPM or PPT marker segments. Shall only be used if indicated in the proper COD marker segment (see Annex A.6.1). Appears immediately after a packet header.

   If EPH markers are allowed (by signalling in the COD marker segment, see Annex A.6.1), each packet header in any given tile-part may or may not be postpended with an EPH marker segment (see Annex A.8.1). If the packet headers are moved to a PPM or PPT marker segments (see Annex A.7.4 and Annex A.7.5), then the EPH markers may appear after the packet headers in the PPM or PPT marker segments."
   to
   "Usage: Shall be used if and only if indicated in the proper COD marker segment (see Annex A.6.1). Appears immediately after a packet header.

   If EPH markers are required (by signalling in the COD marker segment, see Annex A.6.1), each packet header in any given tile-part shall be postpended with an EPH marker segment. If the packet headers are moved to a PPM or PPT marker segments (see Annex A.7.4 and Annex A.7.5), then the EPH markers shall appear after the packet headers in the PPM or PPT marker segments."

8) In subclause B.6 (Equation B.16, p. 64) change

$$numprecinctswide = \left\lceil \frac{trx_1}{2^{PPx}} \right\rceil - \left\lfloor \frac{trx_0}{2^{PPx}} \right\rfloor \qquad numprecintshigh = \left\lceil \frac{try_1}{2^{PPy}} \right\rceil - \left\lfloor \frac{try_0}{2^{PPy}} \right\rfloor$$

   to

$$numprecinctswide = \begin{cases} \left\lceil \frac{trx_1}{2^{PPx}} \right\rceil - \left\lfloor \frac{trx_0}{2^{PPx}} \right\rfloor & trx_1 > trx_0 \\ 0 & trx_1 = trx_0 \end{cases} \qquad numprecintshigh = \begin{cases} \left\lceil \frac{try_1}{2^{PPy}} \right\rceil - \left\lfloor \frac{try_0}{2^{PPy}} \right\rfloor & try_1 > try_0 \\ 0 & try_1 = try_0 \end{cases}$$

   and add to the beginning of the next paragraph
   "Even if Equation B.16 indicates that both *numprecinctswide* and *numprecinctshigh* are nonzero, some, or all, precincts may still be empty as explained below."

9) In subclause B.11 (p. 74, sixth paragraph) change
   "If EPH markers are allowed (by signalling in the COD marker segment, see Annex A.6.1), each packet header in any given tile-part may be postpended with an EPH marker segment (see Annex A.8.1). If the packet headers are moved to a PPM or PPT marker segments (see Annex A.7.4 and Annex A.7.5), then the EPH markers may appear after the packet headers in the PPM or PPT marker segments."
   to
   "If EPH markers are required (by signalling in the COD marker segment, see Annex A.6.1), each packet header in any given tile-part shall postpended with an EPH marker segment (see Annex A.8.2). If the packet headers are moved to a PPM or PPT marker segments (see Annex A.7.4 and Annex A.7.5), then the EPH markers shall appear after the packet headers in the PPM or PPT marker segments."

10) In subclause B.12.1.3 (p. 76, fifth equation) change
   "if ($y = ty_0$ or y divisible by $YRsiz(i) \cdot 2^{PPy(r, i) + N_L - r}$)"
   to

   "if ((y divisible by $YRsiz(i) \cdot 2^{PPy(r, i) + N_L(i) - r}$) OR (($y = ty_0$) AND ($try_0 \cdot 2^{N_L(i) - r}$ NOT divisible by $2^{PPy(r, i) + N_L(i) - r}$))"

11) In subclause B.12.1.3 (p. 76, sixth equation) change

"$x = tx_0$ or x divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L-r}$,"

to

"if $((x$ divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L(i)-r})$ OR $((x = tx_0)$ AND $(trx_0 \cdot 2^{N_L(i)-r}$ NOT divisible by $2^{PPx(r,i)+N_L(i)-r}))$"

12) In subclause B.12.1.3 (p. 76, seventh equation) change
"for the next precinct, k,"
to
"for the next precinct, k, if one exists,"

13) In subclause B.12.1.4 (p. 76, fifth equation) change

"if $(y = ty_0$ or y divisible by $YRsiz(i) \cdot 2^{PPy(r,i)+N_L-r})$"

to

"if $((y$ divisible by $YRsiz(i) \cdot 2^{PPy(r,i)+N_L(i)-r})$ OR $((y = ty_0)$ AND $(try_0 \cdot 2^{N_L(i)-r}$ NOT divisible by $2^{PPy(r,i)+N_L(i)-r}))$"

14) In subclause B.12.1.4 (p. 76, sixth equation) change

"$x = tx_0$ or x divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L-r}$,"

to

"if $((x$ divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L(i)-r})$ OR $((x = tx_0)$ AND $(trx_0 \cdot 2^{N_L(i)-r}$ NOT divisible by $2^{PPx(r,i)+N_L(i)-r}))$"

15) In subclause B.12.1.4 (p. 76, seventh equation) change
"for the next precinct, k,"
to
"for the next precinct, k, if one exists,"

16) In subclause B.12.1.5 (p. 76, fifth equation) change

"if $(y = ty_0$ or y divisible by $YRsiz(i) \cdot 2^{PPy(r,i)+N_L-r})$"

to

"if $((y$ divisible by $YRsiz(i) \cdot 2^{PPy(r,i)+N_L(i)-r})$ OR $((y = ty_0)$ AND $(try_0 \cdot 2^{N_L(i)-r}$ NOT divisible by $2^{PPy(r,i)+N_L(i)-r}))$"

17) In subclause B.12.1.5 (p. 76, sixth equation) change

"$x = tx_0$ or x divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L-r}$,"

to

"if $((x$ divisible by $XRsiz(i) \cdot 2^{PPx(r,i)+N_L(i)-r})$ OR $((x = tx_0)$ AND $(trx_0 \cdot 2^{N_L(i)-r}$ NOT divisible by $2^{PPx(r,i)+N_L(i)-r}))$"

18) In subclause B.12.1.5 (p. 76, seventh equation) change
"for the next precinct, k,"
to
"for the next precinct, k, if one exists,"

19) In subclause C.2.5 (p. 85, title) change
"Probability estimation (informative)"
to
"Probability estimation"

20) In subclause D.3.4 (p. 103, first paragraph) change
"All the remaining coefficients are insignificant and had the context value of zero during the significance propagation pass."
to
"The remaining coefficients were previously insignificant and not handled by the significance propagation pass."

21) In subclause D.6 (p. 107, fourth paragraph) change
"When all the bits from a coding pass have been assembled the last byte is packed to a byte boundary with an alternating sequence of 0's and 1's, if necessary. This sequence should start with a 0 regardless of the number of bits to be padded."
to
"When the predictable termination flag is set (see COD and COC in Annex A.6.1 and Annex A.6.2) and all the bits from a magnitude refinement pass have been assembled, any remaining bits in the last byte are filled with an alternating sequence of 0's and 1's. This sequence should start with a 0 regardless of the number of bits to be padded.

"When the termination on each coding pass flag is set (see COD and COC in Annex A.6.1 and Annex A.6.2), then the significance propagation passes are terminated in the same way as the magnitude refinement passes."

22) In subclause D.6 (p. 108, last Note) change
"Since the decoder appends 0xFF values, as necessary, to the bit stream representing the coding pass (see Annex D.4.1), truncation of the bit stream may be possible."
to
"Since the decoder appends 0xFF values, as necessary, to the bit stream representing the coding pass (see Annex D.4.1), truncation of the bit stream may be possible. When the predictable termination flag is set (see COD and COC in Annex A.6.1 and Annex A.6.2), such truncation is not permitted. The last byte cannot be an 0xFF, since the bit-stuffing routine appends a new byte following the FF, having most significant bit value of 0 and unused bits filled with the alternating sequence of 0 and 1 value bits."

23) In subclause H.3.1 (p. 140, title) change
"Region of interest mask generation"
to
"Region of interest mask generation (informative)"

24) In subclause H.3.1.1. (p. 141, title) change
"5-3 reversible filter"
to
"5-3 reversible filter (informative)"

25) In subclause H.3.1.2 (p. 141, title)
"9-7 irreversible filter"
to
"9-7 irreversible filter (informative)"

26) In subclause H.3.2. (p. 142, title) change
"remark"
to
"remark (informative)"

27) In subclause H.3.3 (p. 142, title) change
   "remark"
   to
   "remark (informative)"

28) In subclause H.3.4 (p. 142, title) change
   "remark"
   to
   "remark (informative)"

29) In subclause H.3.5 (p. 142, title) change
   "method"
   to
   "method (informative)"

30) In subclause I.5.3.5 (p. 166, Figure I-12, title) change
   "Channel Definition"
   to
   "Component Mapping"

31) In subclause I.7.1 (p. 176, DATA description) change
   "shall contain a well-formed XML instance document as defined by"
   to
   "shall contain a well-formed XML document as defined in"

32) In subclause I.8 (p.181, first paragraph) change
   "An unknown box is a box that is not defined in this Recommendation | International Standard. A conforming JP2 file may contain unknown boxes. If a conforming reader finds an unknown box, it shall skip and ignore that box."
   to
   "A conforming JP2 file may contain boxes not known to applications based solely on this Recommendation | International Standard. If a conforming reader finds a box that it does not understand, it shall skip and ignore that box."