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

Technical Corrigendum 1 to International Standard ISO/IEC 15444-1:2000 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information.*

ICS 35.040

Ref. No. ISO/IEC 15444-1:2000/Cor.1:2002(E)

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
"$-2^{(\text{Ssiz AND 0x7F})-1} \leq$ component sample value $\leq 2^{(\text{Ssiz AND 0x7F})-1} - 1$"
to
"$-2^{(\text{Ssiz+1 AND 0x7F})-1} \leq$ component sample value $\leq 2^{(\text{Ssiz+1 AND 0x7F})-1} - 1$"

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	$(\text{RSpoc}^i + 1)$ — 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
"$(\text{CSpoc}^i + 1)$ — 255, 0; if Csiz < 257
$(\text{CSpoc}^i + 1)$ — 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 $XRsiz(i) \cdot 2^{PPy(r, i) + N_L(i) - r})$ 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,"