



# Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk

## TECHNICAL CORRIGENDUM 1

*Technologies de l'information — Supports enregistrés numériquement pour échange et stockage d'information — Disques BD réinscriptibles de 120 mm triple couche (100,0 Go par disque)*

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 30193:2013 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 23, *Digitally Recorded Media for Information Interchange and Storage*.

Page 23, 10.7

Replace the third paragraph:

"If the step from the top surface in the area to the top surface in the Information Area is  $> h_{16} = 0,2$  mm, then the slope down to the top surface of the Information Area shall be smooth and  $l_1 < 1,8$  mm as indicated in Figure 14. If the top surface in the Information Area is stepped down from the top surface in the Second transition Area, then the step shall end within diameter  $d_8 = 40,0$  mm."

with:

"The step from the top surface in the area to the top surface in the Information Area is  $h_{16}$ . The distance between the start and the end diameter of the step is  $l_1$ . If  $h_{16} > 0,2$  mm, then the slope down to the top surface of the Information Area shall be smooth and  $l_1$  shall be  $> 1,8$  mm as indicated in Figure 14. If the top surface in the Information Area is stepped down from the top surface in the Second transition Area, then the step shall end within diameter  $d_8 = 40,0$  mm."

Replace the forth paragraph:

On Recording Layer L2

- Inner Zone 2
- Inner Zone 2
- Lead-out Zone ( Outer Zone 2)

with

On Recording Layer L2

- Inner Zone 2
- Data Zone 2
- Lead-out Zone ( Outer Zone 2)

Replace the top sentence:

Some conclusions:

All information bytes of the BIS Block are found in the first 15 rows of each Address Unit.

All parity bytes of the BIS Block are found in the last 16 rows of each Address Unit.

Each Address Field is found in the first 3 rows of each Address Unit (see Figure 34)

with

| Unit <i>u</i> | row <i>r</i> | byte number <i>N,C</i> from BIS Block |                      |       | shift right<br>(= mod( <i>r</i> ,3)) | filling in upward direction              |
|---------------|--------------|---------------------------------------|----------------------|-------|--------------------------------------|------------------------------------------|
|               |              | 0                                     | column <i>e</i><br>1 | 2     |                                      |                                          |
| 8             | 0            | 1,0                                   | 1,1                  | 1,2   | 0                                    | start of Block row <i>N</i> = 1          |
|               | 1            | 3,5                                   | 3,3                  | 3,4   | 1                                    |                                          |
|               | 2            | 5,7                                   | 5,8                  | 5,6   | 2                                    |                                          |
|               | 3            | 7,9                                   | 7,10                 | 7,11  | 0                                    |                                          |
|               | :            |                                       |                      |       |                                      |                                          |
|               | 8            | 17,1                                  | 17,2                 | 17,0  | 2                                    | start of Block row <i>N</i> = 17         |
|               | :            |                                       |                      |       |                                      |                                          |
|               | 30           | 61,18                                 | 61,19                | 61,20 |                                      |                                          |
| 9             | 0            | 1,21                                  | 1,22                 | 1,23  |                                      | end of Block row <i>N</i> = 1            |
| 10            | 0            | 1,18                                  | 1,19                 | 1,20  |                                      |                                          |
| 11            | 0            | 1,15                                  | 1,16                 | 1,17  |                                      |                                          |
| 12            | 0            | 1,12                                  | 1,13                 | 1,14  |                                      |                                          |
| 13            | 0            | 1,9                                   | 1,10                 | 1,11  |                                      |                                          |
| 14            | 0            | 1,6                                   | 1,7                  | 1,8   |                                      |                                          |
| 15            | 0            | 1,3                                   | 1,4                  | 1,5   | 0                                    | ↑ continuation of Block row <i>N</i> = 1 |
|               | 1            | 3,8                                   | 3,6                  | 3,7   | 1                                    |                                          |
|               | 2            | 5,10                                  | 5,11                 | 5,9   | 2                                    |                                          |
|               | :            |                                       |                      |       |                                      |                                          |
|               | 7            | 15,2                                  | 15,0                 | 15,1  | 1                                    | start of Block row <i>N</i> = 15         |
|               | :            |                                       |                      |       |                                      |                                          |
|               | 30           | 61,21                                 | 61,22                | 61,23 | 0                                    | end of Block row <i>N</i> = 61           |

Figure 32 – Example of mapping (partial) of BIS bytes into last 8 Units

Some conclusions:

All information bytes of the BIS Block are found in the first 15 rows of each Address Unit.

All parity bytes of the BIS Block are found in the last 16 rows of each Address Unit.

Each Address Field is found in the first 3 rows of each Address Unit (see Figure 34)

Page 74, Figure 66

Replace the Figure:

| nibble | bit 3 | bit 2 | bit 1 | bit 0 |                                     |
|--------|-------|-------|-------|-------|-------------------------------------|
| $n_0$  | AS23  | AS22  | AS21  | AS20  | ↑<br>6 nibbles ADIP<br>address<br>↓ |
| $n_1$  | AS19  | AS18  | :     | :     |                                     |
| :      | :     | :     | :     | :     |                                     |
| $n_5$  | AS3   | :     | :     | AS0   | ↑<br>3 nibbles AUX data<br>↓        |
| $n_6$  | AX11  | :     | :     | :     |                                     |
| :      | :     | :     | :     | :     |                                     |
| $n_8$  | AX3   | :     | :     | AX0   |                                     |

with

| nibble | bit 3 | bit 2 | bit 1 | bit 0 |                                    |
|--------|-------|-------|-------|-------|------------------------------------|
| $n_0$  | AS23  | AS22  | AS21  | AS20  | ↑<br>6 nibbles ADIP<br>symbol<br>↓ |
| $n_1$  | AS19  | AS18  | :     | :     |                                    |
| :      | :     | :     | :     | :     |                                    |
| $n_5$  | AS3   | :     | :     | AS0   | ↑<br>3 nibbles AUX data<br>↓       |
| $n_6$  | AX11  | :     | :     | :     |                                    |
| :      | :     | :     | :     | :     |                                    |
| $n_8$  | AX3   | :     | :     | AX0   |                                    |

Page 157 to 159, Figure 105 to 108

Replace these 4 Figures

| byte position | bits      | INFO 1 / PAC 1 location PAA |
|---------------|-----------|-----------------------------|
| 64            | $b_7 b_6$ | 01 FF 80h                   |
| 64            | $b_5 b_4$ | 01 FF 84h                   |
| 64            | $b_3 b_2$ | 01 FF 88h                   |
| 64            | $b_1 b_0$ | 01 FF 8Ch                   |
| 65            | $b_7 b_6$ | 01 FF 90h                   |
| :             | :         | :                           |
| :             | :         | :                           |
| 70            | $b_1 b_0$ | 01 FF ECh                   |
| 71            | $b_7 b_6$ | 01 FF F0h                   |
| 71            | $b_5 b_4$ | 01 FF F4h                   |
| 71            | $b_3 b_2$ | 01 FF F8h                   |
| 71            | $b_1 b_0$ | 01 FF FCh                   |

Figure 105 – Status bits and related INFO1/PAC1 address locations on Layer L0

| byte position | bits                          | INFO 2 / PAC 2 location PAA |
|---------------|-------------------------------|-----------------------------|
| 72            | b <sub>7</sub> b <sub>6</sub> | 01 BA 00h                   |
| 72            | b <sub>5</sub> b <sub>4</sub> | 01 BA 04h                   |
| 72            | b <sub>3</sub> b <sub>2</sub> | 01 BA 08h                   |
| 72            | b <sub>1</sub> b <sub>0</sub> | 01 BA 0Ch                   |
| 73            | b <sub>7</sub> b <sub>6</sub> | 01 BA 10h                   |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 78            | b <sub>1</sub> b <sub>0</sub> | 01 BA 6Ch                   |
| 79            | b <sub>7</sub> b <sub>6</sub> | 01 BA 70h                   |
| 79            | b <sub>5</sub> b <sub>4</sub> | 01 BA 74h                   |
| 79            | b <sub>3</sub> b <sub>2</sub> | 01 BA 78h                   |
| 79            | b <sub>1</sub> b <sub>0</sub> | 01 BA 7Ch                   |

Figure 106 – Status bits and related INFO2/PAC2 address locations on Layer L0

| byte position | bits                          | INFO 1 / PAC 1 location PAA |
|---------------|-------------------------------|-----------------------------|
| 80            | b <sub>7</sub> b <sub>6</sub> | 3E 00 00h                   |
| 80            | b <sub>5</sub> b <sub>4</sub> | 3E 00 04h                   |
| 80            | b <sub>3</sub> b <sub>2</sub> | 3E 00 08h                   |
| 80            | b <sub>1</sub> b <sub>0</sub> | 3E 00 0Ch                   |
| 81            | b <sub>7</sub> b <sub>6</sub> | 3E 00 10h                   |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 86            | b <sub>1</sub> b <sub>0</sub> | 3E 00 6Ch                   |
| 87            | b <sub>7</sub> b <sub>6</sub> | 3E 00 70h                   |
| 87            | b <sub>5</sub> b <sub>4</sub> | 3E 00 74h                   |
| 87            | b <sub>3</sub> b <sub>2</sub> | 3E 00 78h                   |
| 87            | b <sub>1</sub> b <sub>0</sub> | 3E 00 7Ch                   |

Figure 107 – Status bits and related INFO1/PAC1 address locations on Layer L1

| byte position | bits                          | INFO 2 / PAC 2 location PAA |
|---------------|-------------------------------|-----------------------------|
| 88            | b <sub>7</sub> b <sub>6</sub> | 3E 45 80h                   |
| 88            | b <sub>5</sub> b <sub>4</sub> | 3E 45 84h                   |
| 88            | b <sub>3</sub> b <sub>2</sub> | 3E 45 88h                   |
| 88            | b <sub>1</sub> b <sub>0</sub> | 3E 45 8Ch                   |
| 89            | b <sub>7</sub> b <sub>6</sub> | 3E 45 90h                   |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 94            | b <sub>1</sub> b <sub>0</sub> | 3E 45 ECh                   |
| 95            | b <sub>7</sub> b <sub>6</sub> | 3E 45 F0h                   |
| 95            | b <sub>5</sub> b <sub>4</sub> | 3E 45 F4h                   |
| 95            | b <sub>3</sub> b <sub>2</sub> | 3E 45 F8h                   |
| 95            | b <sub>1</sub> b <sub>0</sub> | 3E 45 FCh                   |

: Figure 108 – Status bits and related INFO2/PAC2 address locations on Layer L1

with:

| byte position | bits                          | INFO 1 / PAC 1 location PAA |
|---------------|-------------------------------|-----------------------------|
| 64            | b <sub>7</sub> b <sub>6</sub> | 0 01 FF 80h                 |
| 64            | b <sub>5</sub> b <sub>4</sub> | 0 01 FF 84h                 |
| 64            | b <sub>3</sub> b <sub>2</sub> | 0 01 FF 88h                 |
| 64            | b <sub>1</sub> b <sub>0</sub> | 0 01 FF 8Ch                 |
| 65            | b <sub>7</sub> b <sub>6</sub> | 0 01 FF 90h                 |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 70            | b <sub>1</sub> b <sub>0</sub> | 0 01 FF ECh                 |
| 71            | b <sub>7</sub> b <sub>6</sub> | 0 01 FF F0h                 |
| 71            | b <sub>5</sub> b <sub>4</sub> | 0 01 FF F4h                 |
| 71            | b <sub>3</sub> b <sub>2</sub> | 0 01 FF F8h                 |
| 71            | b <sub>1</sub> b <sub>0</sub> | 0 01 FF FCh                 |

Figure 105 – Status bits and related INFO1/PAC1 address locations on Layer L0

| byte position | bits                          | INFO 2 / PAC 2 location PAA |
|---------------|-------------------------------|-----------------------------|
| 72            | b <sub>7</sub> b <sub>6</sub> | 0 01 BA 00h                 |
| 72            | b <sub>5</sub> b <sub>4</sub> | 0 01 BA 04h                 |
| 72            | b <sub>3</sub> b <sub>2</sub> | 0 01 BA 08h                 |
| 72            | b <sub>1</sub> b <sub>0</sub> | 0 01 BA 0Ch                 |
| 73            | b <sub>7</sub> b <sub>6</sub> | 0 01 BA 10h                 |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 78            | b <sub>1</sub> b <sub>0</sub> | 0 01 BA 6Ch                 |
| 79            | b <sub>7</sub> b <sub>6</sub> | 0 01 BA 70h                 |
| 79            | b <sub>5</sub> b <sub>4</sub> | 0 01 BA 74h                 |
| 79            | b <sub>3</sub> b <sub>2</sub> | 0 01 BA 78h                 |
| 79            | b <sub>1</sub> b <sub>0</sub> | 0 01 BA 7Ch                 |

Figure 106 – Status bits and related INFO2/PAC2 address locations on Layer L0

| byte position | bits                          | INFO 1 / PAC 1 location PAA |
|---------------|-------------------------------|-----------------------------|
| 80            | b <sub>7</sub> b <sub>6</sub> | 0 7E 00 00h                 |
| 80            | b <sub>5</sub> b <sub>4</sub> | 0 7E 00 04h                 |
| 80            | b <sub>3</sub> b <sub>2</sub> | 0 7E 00 08h                 |
| 80            | b <sub>1</sub> b <sub>0</sub> | 0 7E 00 0Ch                 |
| 81            | b <sub>7</sub> b <sub>6</sub> | 07 E 00 10h                 |
| :             | :                             | :                           |
| :             | :                             | :                           |
| 86            | b <sub>1</sub> b <sub>0</sub> | 0 7E 00 6Ch                 |
| 87            | b <sub>7</sub> b <sub>6</sub> | 0 7E 00 70h                 |
| 87            | b <sub>5</sub> b <sub>4</sub> | 0 7E 00 74h                 |
| 87            | b <sub>3</sub> b <sub>2</sub> | 0 7E 00 78h                 |
| 87            | b <sub>1</sub> b <sub>0</sub> | 0 7E 00 7Ch                 |

Figure 107 – Status bits and related INFO1/PAC1 address locations on Layer L1