**IEEE Std 802.3™-2012**
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# Errata to IEEE Standard for Ethernet

Sponsor

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***Page 145: Table 59-12, "Hexadecimal" is missing in the heading row, third column and in Note b. The correction to the table is shown as follows:***

**Table 59–12—Common portion of frame-based test pattern**

| Field | Number of octets | Hexadecimal | 8B/10B encoded binary[a] | |
|---|---|---|---|---|
| | | | Starting disparity + | Starting disparity– |
| SPD (/S/) | 1 | N/A[b] | N/A[c] | 110110 1000 |
| Remainder of preamble | 6 | 55 | N/A[c] | 101010 0101 |
| SFD | 1 | D5 | N/A[c] | 101010 0110 |
| Destination address | 6 | User defined | User defined | User defined |
| Source address | 6 | User defined | User defined | User defined |
| Length/Type | 2 | User defined | User defined | User defined |
| First portion of MAC client data | 32 | User defined | User defined | User defined |
| Second portion of MAC client data | 456 | See Table 59–13 or Table 59–14 | See Table 59–13 or Table 59–14 | See Table 59–13 or Table 59–14 |
| Frame check sequence[d] | 4 | As required by frame | As required by frame | As required by frame |
| EPD (/T/R/)[e] | 2 | N/A[b] | 010001 0111<br>000101 0111 | 101110 1000<br>111010 1000 |
| Idle (/I1/ or /I2/)[e] | 2 | N/A[b] | 110000 0101<br>101001 0110 | 001111 1010<br>100100 0101 |
| Idle (/I2/)[e] | 10 | N/A[b] | N/A[f] | 001111 1010<br>100100 0101 |

[a]The binary bits are transmitted left most bit first.
[b]The SPD, EPD, and Idle code-groups are generated by the PCS and their hexadecimal octet values have no meaning without relation to the signals transmitted across the GMII.
[c]Except when operating in a half-duplex mode, it is not possible to transmit an SPD with a positive starting disparity. The first code-group that could begin with a positive running disparity would be the second octet of the destination address.
[d]The frame check sequence may be calculated using the method described in 3.2.9.
[e]The first row precedes the second row.
[f]The first idle code-group following the frame will be an /I1/ if the running disparity is positive and an /I2/ if the running disparity is negative. All subsequent idle code-groups will be /I2/.

***Page 146 and Page 148: "Hexadecimal" is missing from the heading row, second column in Table 59-13 and Table 59-14. The correction to the tables are shown as follows:***

**Table 59–13—Payload for random pattern test frame**

| Number of octets | Hexadecimal | 8B/10B encoded binary | |
|---|---|---|---|
| | | Starting disparity + | Starting disparity – |
| Repeat 19 times for 228 bytes | BE | 100001 1010 | 011110 1010 |
| | D7 | 111010 0110 | 000101 0110 |
| | 23 | 110001 1001 | 110001 1001 |
| | 47 | 000111 0101 | 111000 0101 |
| | 6B | 110100 0011 | 110100 1100 |
| | 8F | 101000 1101 | 010111 0010 |
| | B3 | 110010 1010 | 110010 1010 |
| | 14 | 001011 0100 | 001011 1011 |
| | 5E | 011110 0101 | 100001 0101 |
| | FB | 001001 1110 | 110110 0001 |
| | 35 | 101010 1001 | 101010 1001 |
| | 59 | 100110 0101 | 100110 0101 |
| Transmit once for 12 bytes | BC | 001110 1010 | 001110 1010 |
| | D7 | 000101 0110 | 111010 0110 |
| | 23 | 110001 1001 | 110001 1001 |
| | 47 | 111000 0101 | 000111 0101 |
| | 6B | 110100 1100 | 110100 0011 |
| | 8F | 010111 0010 | 101000 1101 |
| | B3 | 110010 1010 | 110010 1010 |
| | 14 | 001011 1011 | 001011 0100 |
| | 5E | 100001 0101 | 011110 0101 |
| | FB | 110110 0001 | 001001 1110 |
| | 35 | 101010 1001 | 101010 1001 |
| | 59 | 100110 0101 | 100110 0101 |
| Repeat 18 times for 216 bytes | BE | 011110 1010 | 100001 1010 |
| | D7 | 000101 0110 | 111010 0110 |
| | 23 | 110001 1001 | 110001 1001 |
| | 47 | 111000 0101 | 000111 0101 |
| | 6B | 110100 1100 | 110100 0011 |
| | 8F | 010111 0010 | 101000 1101 |
| | B3 | 110010 1010 | 110010 1010 |
| | 14 | 001011 1011 | 001011 0100 |
| | 5E | 100001 0101 | 011110 0101 |
| | FB | 110110 0001 | 001001 1110 |
| | 35 | 101010 1001 | 101010 1001 |
| | 59 | 100110 0101 | 100110 0101 |

**Table 59–14—Payload for jitter test frame**

| Field | Hexadecimal | 8B/10B encoded binary | |
|---|---|---|---|
| | | Starting disparity + | Starting disparity – |
| Low Transition Density, Repeat 96 times for 192 bytes | 7E | 100001 1100 | 011110 0011 |
| | 7E | 011110 0011 | 100001 1100 |
| Phase Jump, Repeat one time for 8 bytes | F4 | 001011 0001 | 001011 0111 |
| | EB | 110100 1110 | 110100 1000 |
| | F4 | 001011 0001 | 001011 0111 |
| | EB | 110100 1110 | 110100 1000 |
| | F4 | 001011 0001 | 001011 0111 |
| | EB | 110100 1110 | 110100 1000 |
| | F4 | 001011 0001 | 001011 0111 |
| | AB | 110100 1010 | 110100 1010 |
| High Transition Density, Repeat 20 times for 20 bytes | B5 | 101010 1010 | 101010 1010 |
| Phase Jump, Repeat 4 times for 8 bytes | EB | 110100 1110 | 110100 1000 |
| | F4 | 001011 0001 | 001011 0111 |
| Low Transition Density, Repeat 96 times for 192 bytes | 7E | 011110 0011 | 100001 1100 |
| | 7E | 100001 1100 | 011110 0011 |
| Phase Jump, Repeat one time for 8 bytes | F4 | 001011 0111 | 001011 0001 |
| | EB | 110100 1000 | 110100 1110 |
| | F4 | 001011 0111 | 001011 0001 |
| | EB | 110100 1000 | 110100 1110 |
| | F4 | 001011 0111 | 001011 0001 |
| | EB | 110100 1000 | 110100 1110 |
| | F4 | 001011 0111 | 001011 0001 |
| | AB | 110100 1010 | 110100 1010 |
| High Transition Density, Repeat 20 times for 20 bytes | B5 | 101010 1010 | 101010 1010 |
| Phase Jump, Repeat 4 times for 8 bytes | EB | 110100 1000 | 110100 1110 |
| | F4 | 001011 0111 | 001011 0001 |

***Page 220: "Hexadecimal" is missing from the text at the bottom of Figure 61-15. The correction to the figure is shown as follows:***

All octets other than $D_x$ are written in hexadecimal notation.

***Page 468: "Hexadecimal" is missing from the first sentence of paragraph two in 72.6.2. The correction to the text is shown as follows:***

If the optional Energy-Efficient Ethernet (EEE) capability is supported (see Clause 78) then when tx_mode is set to ALERT, the PMD will transmit a repeating 16-bit pattern, hexadecimal 0xFF00.

***Page 471: The first sentence of the paragraph in 72.6.10.2.1 should be corrected to read as follows:***

Frames are delimited by the 32-bit pattern, hexadecimal 0xFFFF0000 (ones transmitted first), as expressed in 10.3125 GBd symbols.

***Page 822: "Hexadecimal" is missing from the top left of Figure 73A-1. The correction to the text is shown as follows:***

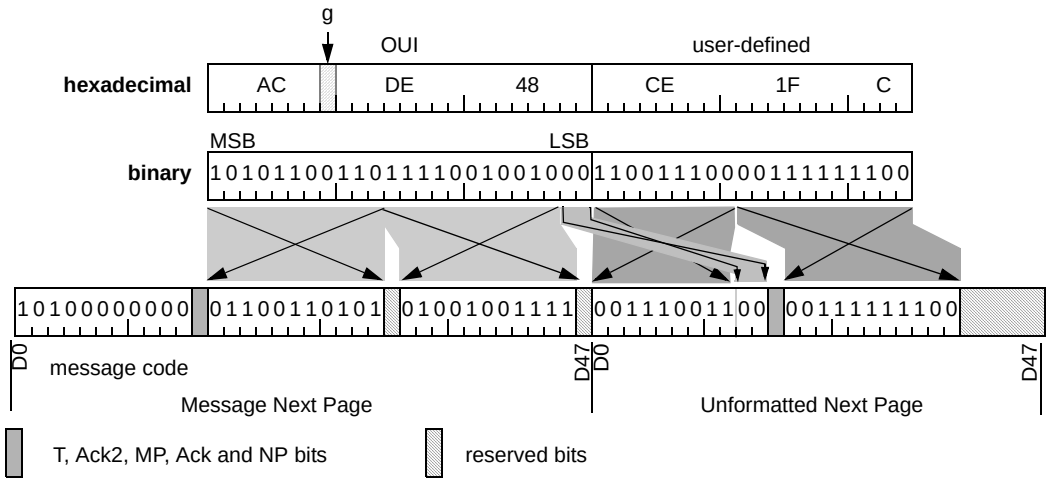


**Figure 73A–1—Message code 5 sequence**

***Page 825: "Hexadecimal" is missing from the third sentence of paragraph two in Annex 74A. The correction to the text is shown as follows:***

Note that there is both binary representation and hexadecimal symbol representation in the table; in case of the hex symbol, the most significant bit of each hex symbol is sent first.

***Page 839: "Hexadecimal" is missing from the second sentence of paragraph two in 76A.2. The correction to the text is shown as follows:***

The 64 bit payload portion of the 66 bit block is described as a series of hexadecimal octets—the left-most octet of each payload portion is transmitted first.

***Page 840: "Hexadecimal" is missing from Note a of Table 76A-1. The correction to Note a is shown as follows:***

[a]64 bit payload values are shown in hexadecimal notation.

***Page 843: "Hexadecimal" is missing from Note a of Table 76A-4. The correction to Note a is shown as follows:***

[a]Dn octet values are shown in hexadecimal notation.

***Page 843: "Hexadecimal" is missing from Note a of Table 76A-5. The correction to Note a is shown as follows:***

[a]Pn values are shown in hexadecimal notation.

***Page 844: "Hexadecimal" is missing from the second sentence of paragraph two in 76A.8. The correction to the text is shown as follows:***

The 64 bit payload portion of the 66 bit block is described as a series of hexadecimal octets—the left-most octet of each payload portion is transmitted first.