

Interpretation Number: 1-07/03 (Globally assigned multicast address)
Topic: Globally assigned multicast address bit order
Relevant Clause: Annex 31B
Classification: Unambiguous

Interpretation Request

Standard: IEEE Std 802.3-2002.

I should need a clarification/interpretation about the standard IEEE 802.3.

Consider the Annex 31B (MAC Control PAUSE operation) of the standard IEEE Std 802.3-2002 (pag. 571).

With reference to the globally assigned 48 bit multicast address

01-80-C2-00-00-01,

it's not clear which is the right order of nibble transmission on the MII interface.

There are 2 possible orders of transmission of the nibbles on the MII interface:

a) 1-0-0-0-0-0-2-C-0-8-1-0

In this case, I'm supposing the first octet of the address is the high order byte.

b) 1-0-0-8-2-C-0-0-0-0-1-0

In this case, I'm supposing the first octet of the address is the low order byte.

Interpretation for IEEE Std 802.3-2002

IEEE Std 802.3 clearly references the required information in subclause 3.2.3.1 'Address designation' which includes a footnote attached to the last paragraph which states 'For information on how to use MAC addresses, see IEEE Std 802-2001, Overview and Architecture.'

Referring to IEEE Std 802-2001, subclause 9.2, '48-bit universal MAC addresses', the third paragraph of subclause 9.2.1 'concept' states:

The standard representation of a 48-bit LAN MAC address is as a string of six octets, using the hexadecimal representation (3.1.8). In certain contexts associated with use of IEEE 802.5 frame formats, LAN MAC addresses may be represented using the alternative bit-reversed representation (3.1.2). See 9.5 for further specification relating to use of the bit-reversed representation.

NOTE - The upper, bit-stream representation of the universal address in Figure 8 shows the LSB of each octet first; this corresponds to the data-communications convention for

