

Interpretation Number: 2-07/04
Topic: Far-End fault
Relevant Clause: 24.3.2.1
Classification: Unambiguous

Interpretation Request

It seems from this clause (and from clause 28) that auto-negotiation is not possible for 100Base-FX interfaces. Is it right?

Moreover, the clause specifies that the FEF shall not implemented for media capable of supporting Auto-Negotiation. It is not clear to me whether we have 100Base-Tx with auto-negotiation disabled, whether or not the FEF can be implemented or not.

If the FEF can be implemented in 100Base-Tx when auto-negotiation is disabled, is there something similar for 100Base-X interfaces?

Interpretation for IEEE Std 802.3-2002

The second sentence of the second paragraph of subclause 28.1.4 'Compatibility considerations' states 'For CSMA/CD compatible devices that use the eight-pin modular connector of ISO/IEC 8877: 1992 and that also encompass multiple operational modes, if a signaling method is used to automatically configure the preferred mode of operation, then the Auto-Negotiation function shall be used in compliance with Clause 28.' Furthermore the second sentence of the second paragraph of subclause 24.3.2.1 'Far-End fault' clearly states that 'Far-End Fault shall not be implemented for media capable of supporting Auto-Negotiation.'

Hence 100BASE-TX operation over unshielded twisted pair, which utilizes the eight-pin modular connector, is capable of supporting Auto-Negotiation and therefore implementation of Far-End fault is prohibited. 100BASE-TX operation over shielded twisted pair, which does not utilize the eight-pin modular connector, and 100BASE-FX are both not capable of supporting Auto-Negotiation and therefore implementation of Far-End fault is permitted.