1.4 Definitions

Change subclause 1.4.355 as follows:

1.4.355 Technology Ability Field: Within IEEE 802.3, an ~~seven~~eight-bit field in the Auto-Negotiation base page that is used to indicate the abilities of a local station, such as support for 10BASE-T, 100BASE-T4, and 100BASE-TX, as well as full duplex.

28.2.1.2 Link Codeword encoding

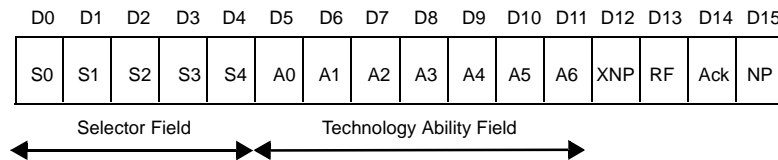*Replace Figure 28-7 with the following:*

D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15
S0	S1	S2	S3	S4	A0	A1	A2	A3	A4	A5	A6	XNP	RF	Ack	NP

Selector Field — Technology Ability Field

Figure 28–7—Base page encoding

28.2.1.2.2 Technology Ability Field

Technology Ability Field (A[~~7~~6:0]) is an ~~seven~~eight bit wide field containing information indicating supported technologies specific to the selector field value. These bits are mapped to individual technologies such that abilities are advertised in parallel for a single selector field value. The Technology Ability Field encoding for the IEEE 802.3 selector is described in Annex 28B.2 and in Annex 28D. Multiple technologies may be advertised in the Link Codeword. A device shall support the data service ability for a technology it advertises. It is the responsibility of the Arbitration function to determine the common mode of operation shared by a Link Partner and to resolve multiple common modes.

Insert 28.2.1.2.3 and renumber subsequent subclauses

28.2.1.2.3 Extended Next Page

Extended Next Page (XNP) is encoded in bit D12 of the base Link Codeword. The extended Next Page bit indicates that the local device supports transmission of extended next pages when set to a logic one, and indicates that the local device does not support extended next pages when set to a logic zero. The use of extended Next Page is orthogonal to the negotiated data rate, medium, or link technology. The extended Next Page bit is used in accordance with the extended Next Page function specifications in 28.2.3.4.

When the selector field is a value is the IEEE Std 802.5 or the IEEE Std 802.9 value the extended Next Page function is not supported and bit D12 is defined as being an additonal Technology Ability Field bit A7, extending the Technology Ability Field to be an eight bit wide field (A[7:0]).

28.2.4.1.3 Auto-Negotiation advertisement register (Register 4) (R/W)

Change the first paragraph of subclause 28.2.4.13 and Table 28-2 as follows:

This register contains the Advertised Ability of the PHY. (See Table 28–2). The bit definition for the base page is defined in 28.2.1.2. On power-up, before Auto-Negotiation starts, this register shall have the following configuration: The Selector Field (4.4:0) is set to an appropriate code as specified in Annex 28A. The

Acknowledge bit (4.14) is set to logic zero. The Technology Ability Field (4.11~~12~~:5) is set based on the values set in the MII status register (Register 1) (1.15:11) or equivalent. See also Annex 28D.

Table 28–2—Advertisement register bit definitions

Bit(s)	Name	Description	R/W[a]
4.15	Next Page	See 28.2.1.2	R/W
4.14	Reserved	Write as zero, ignore on read	RO
4.13	Remote Fault	See 28.2.1.2	R/W
<u>4.12</u>	<u>Extended Next Page</u>	<u>See 28.2.1.2</u>	<u>R/W</u>
4.<u>11</u>~~12~~ :5	Technology Ability Field	See 28.2.1.2	R/W
4.4:0	Selector Field	See 28.2.1.2	R/W

[a]RO = Read Only, R/W = Read/Write.

Change the third paragraph of subclause 28.2.4.13 as follows:

The management entity may initiate renegotiation with the Link Partner using alternate abilities by setting the Selector Field (4.4:0) and Technology Ability Field (4.<u>11</u>~~12~~:5) to indicate the preferred mode of operation and setting the Restart Auto-Negotiation bit (0.9) in the control register (Register 0) to logic one.

28.2.4.1.4 Auto-Negotiation Link Partner ability register (Register 5) (RO)

Change the Table 28-3 as follows:

Table 28–3—Link partner ability register bit definitions (Base Page)

Bit(s)	Name	Description	R/W[a]
5.15	Next Page	See 28.2.1.2	RO
5.14	Acknowledge	See 28.2.1.2	RO
5.13	Remote Fault	See 28.2.1.2	RO
<u>5.12</u>	<u>Extended Next Page</u>	<u>See 28.2.1.2</u>	<u>RO</u>
5.<u>11</u>~~12~~ :5	Technology Ability Field	See 28.2.1.2	RO
5.4:0	Selector Field	See 28.2.1.2	RO

[a]RO = Read Only.