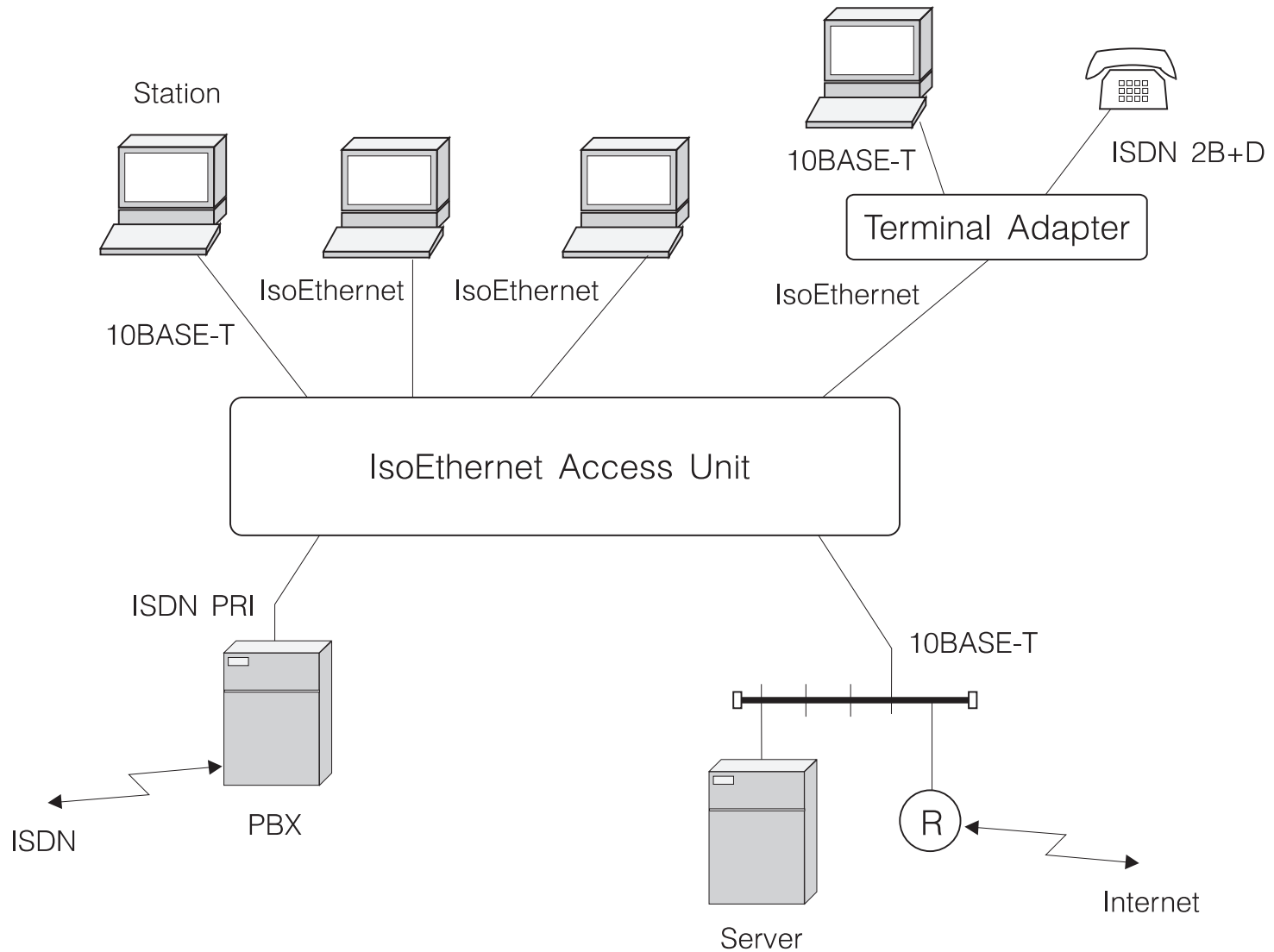

Lokální síť (05)

Jan Janeček

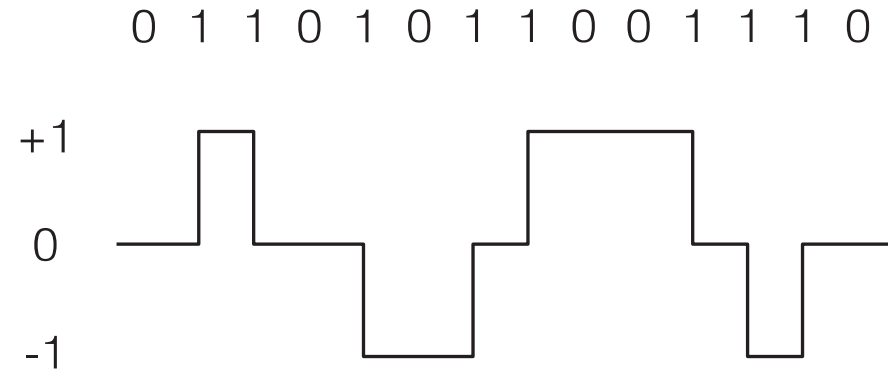
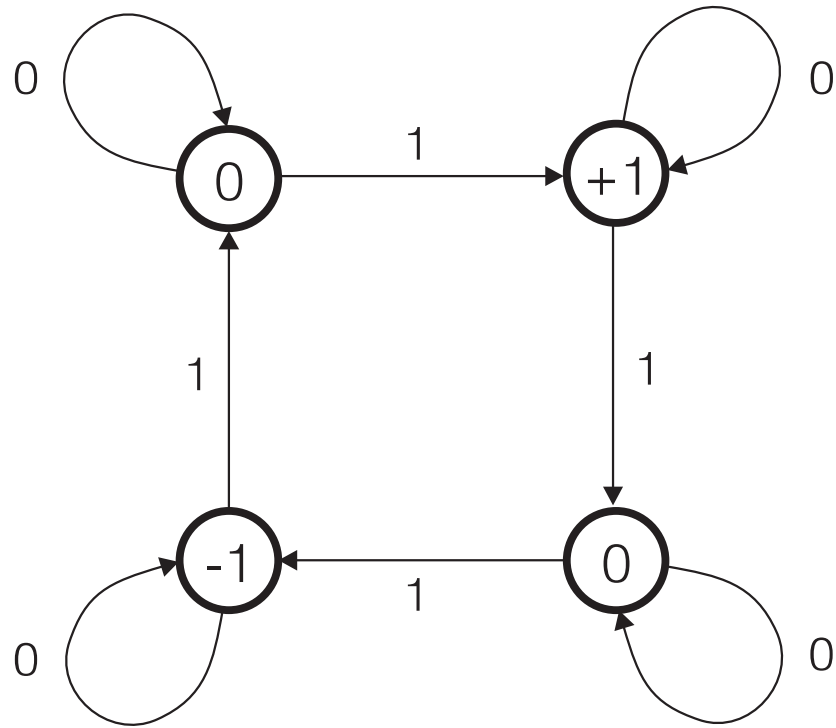
katedra počítačů

České vysoké učení technické v Praze

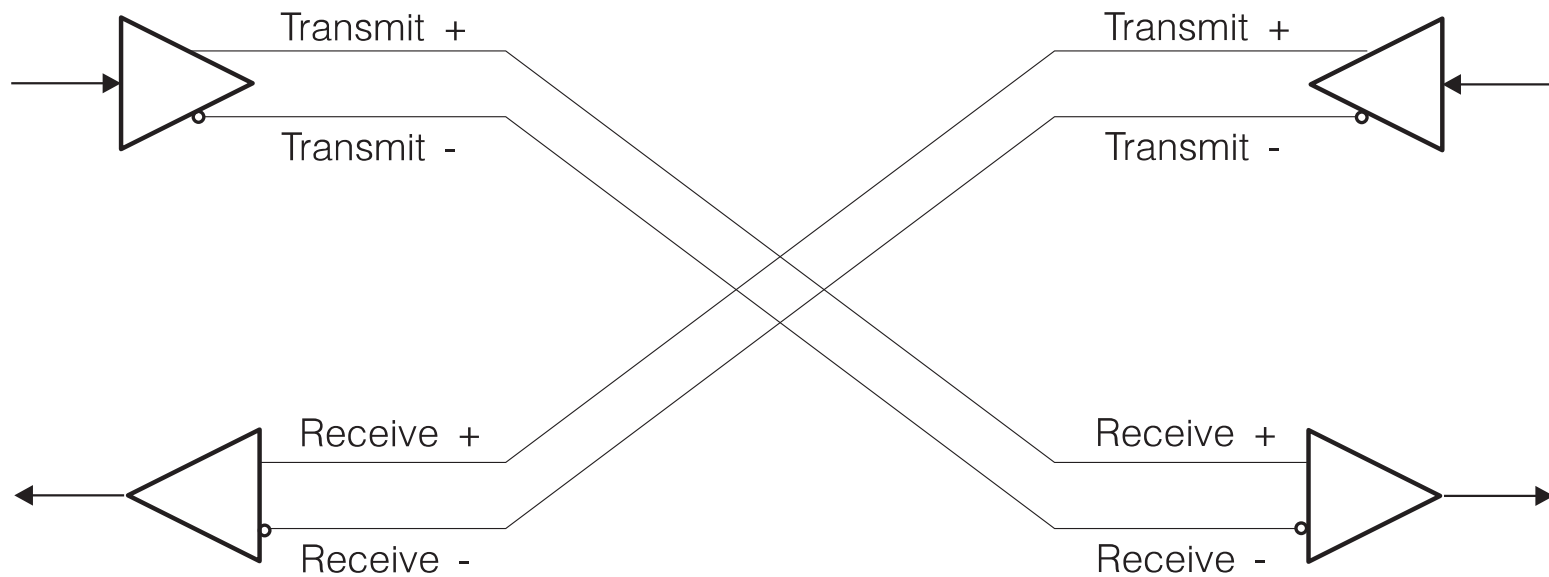
IEEE 802.9 Isochronous Ethernet



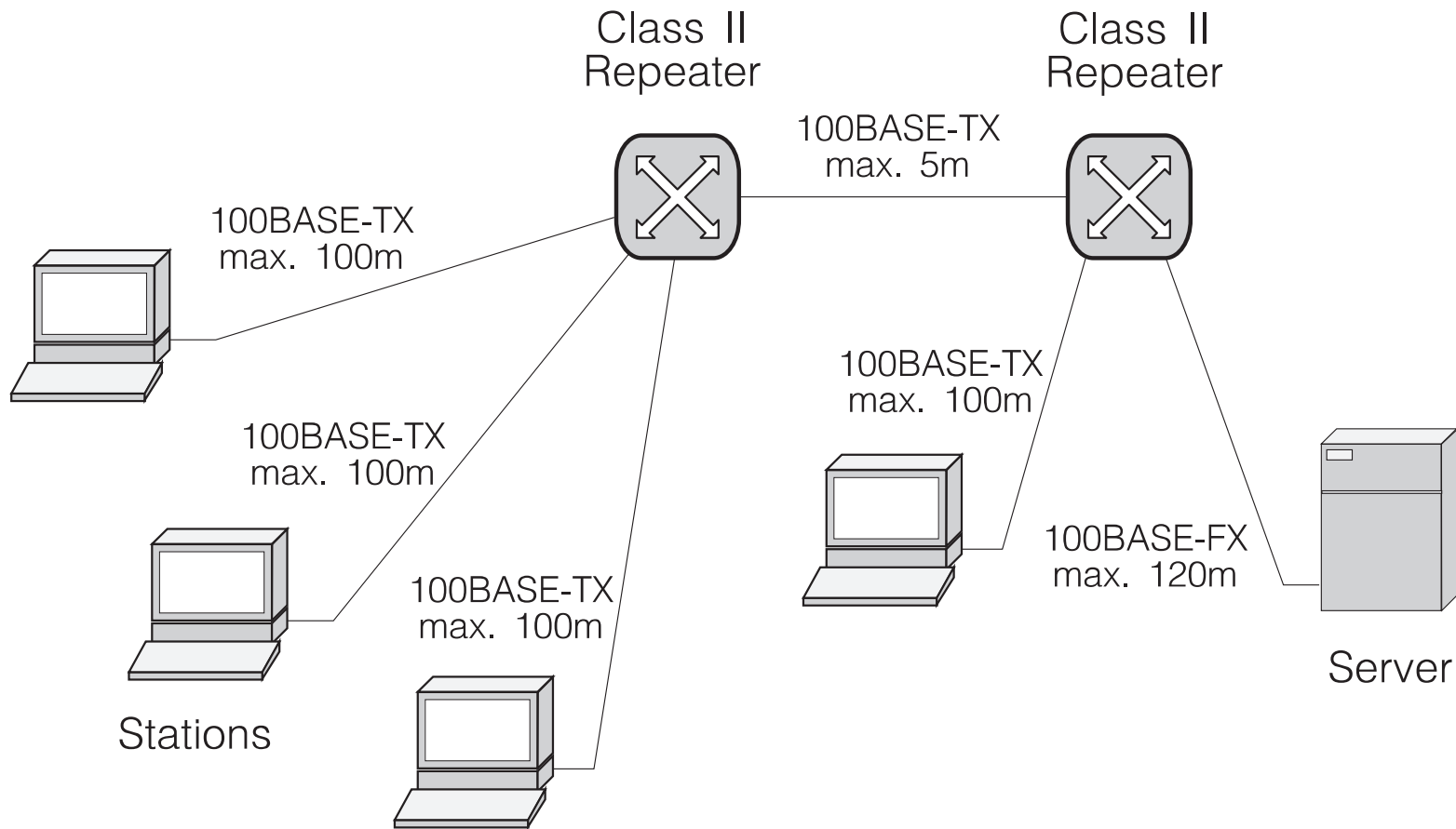
100BASE-Tx Encoding



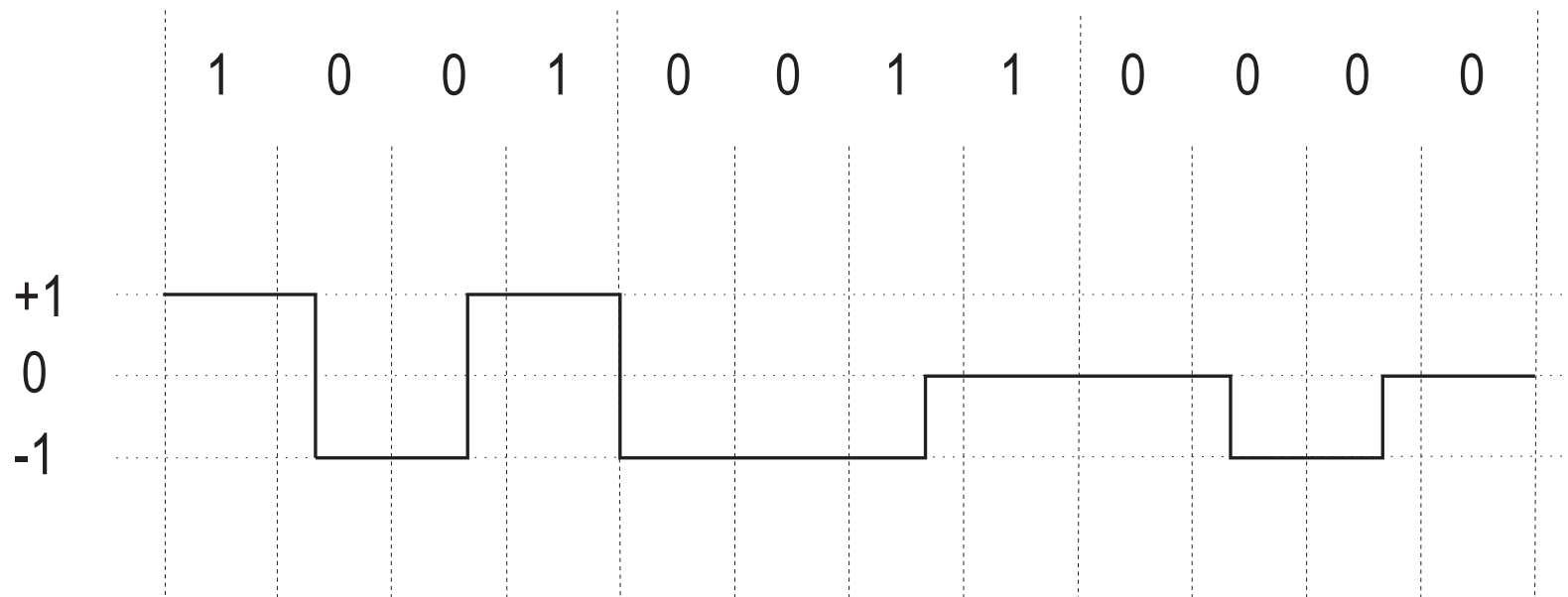
100BASE-Tx Cabling



100BASE-Tx Repeater

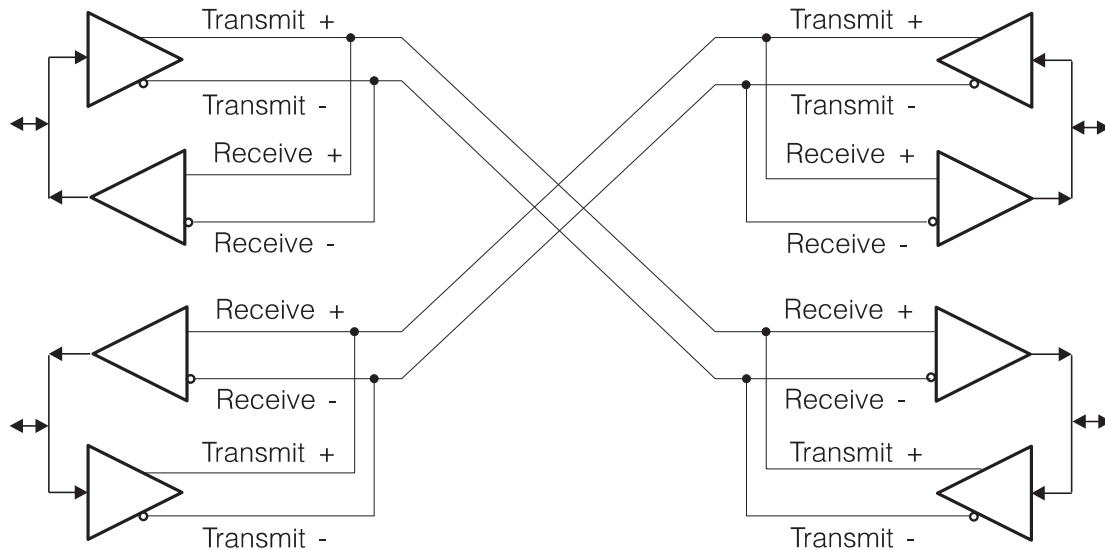
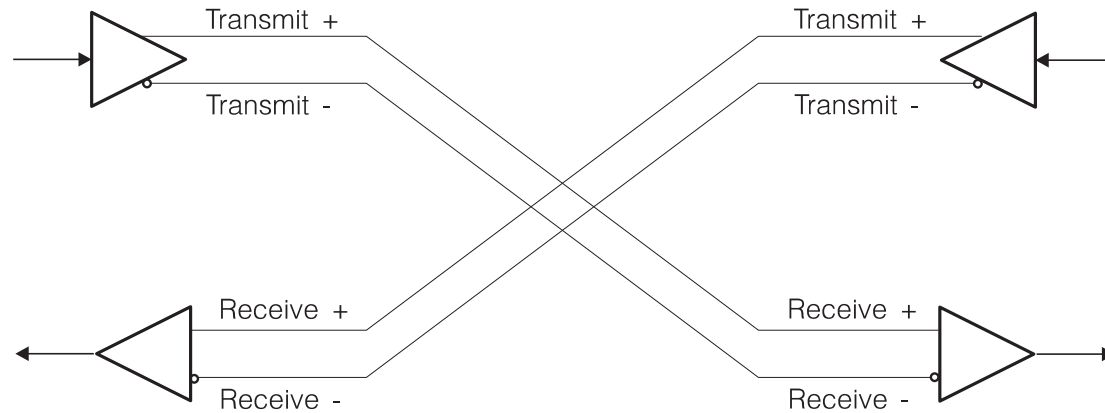


100BASE-T4 Encoding

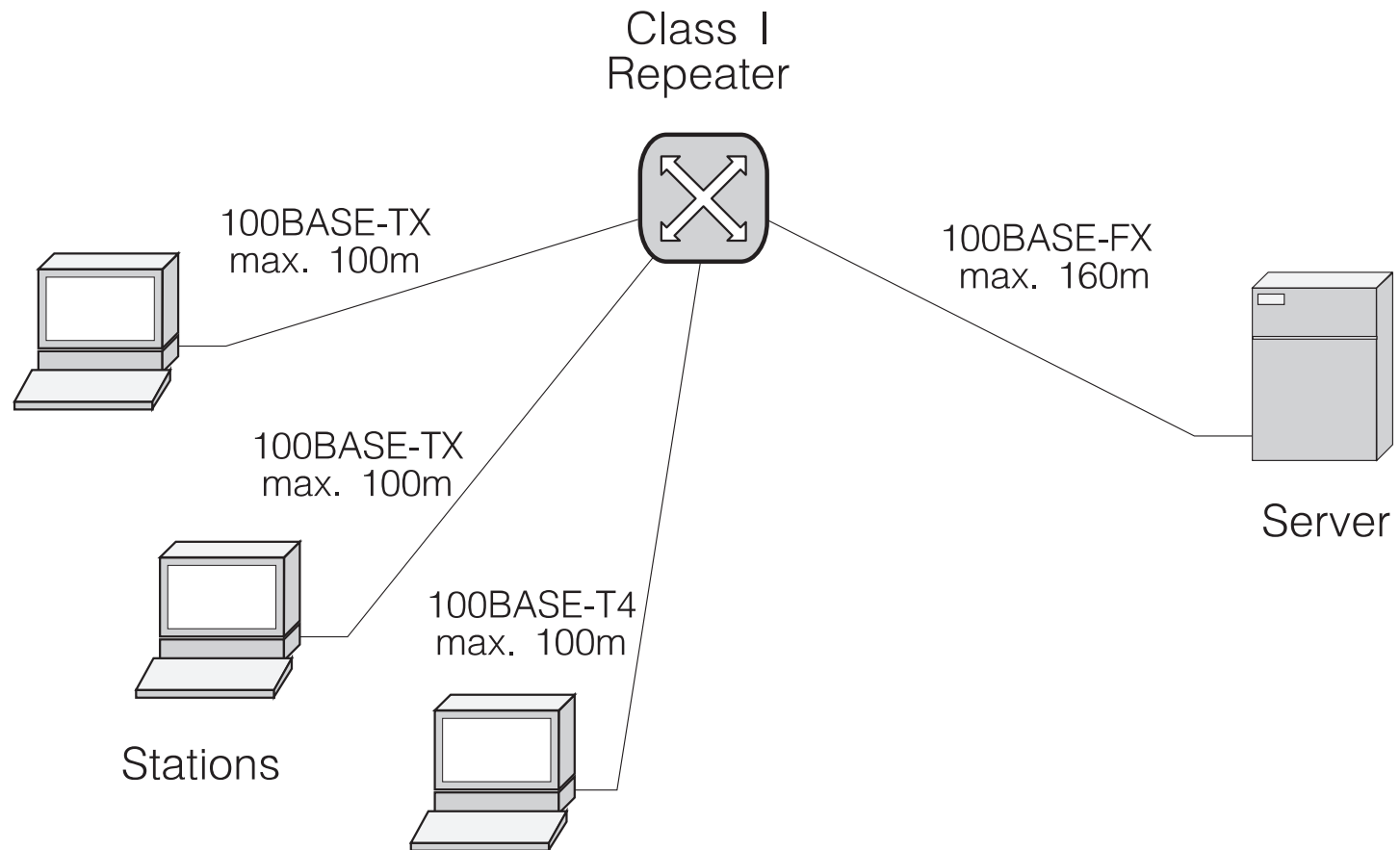


4B3T

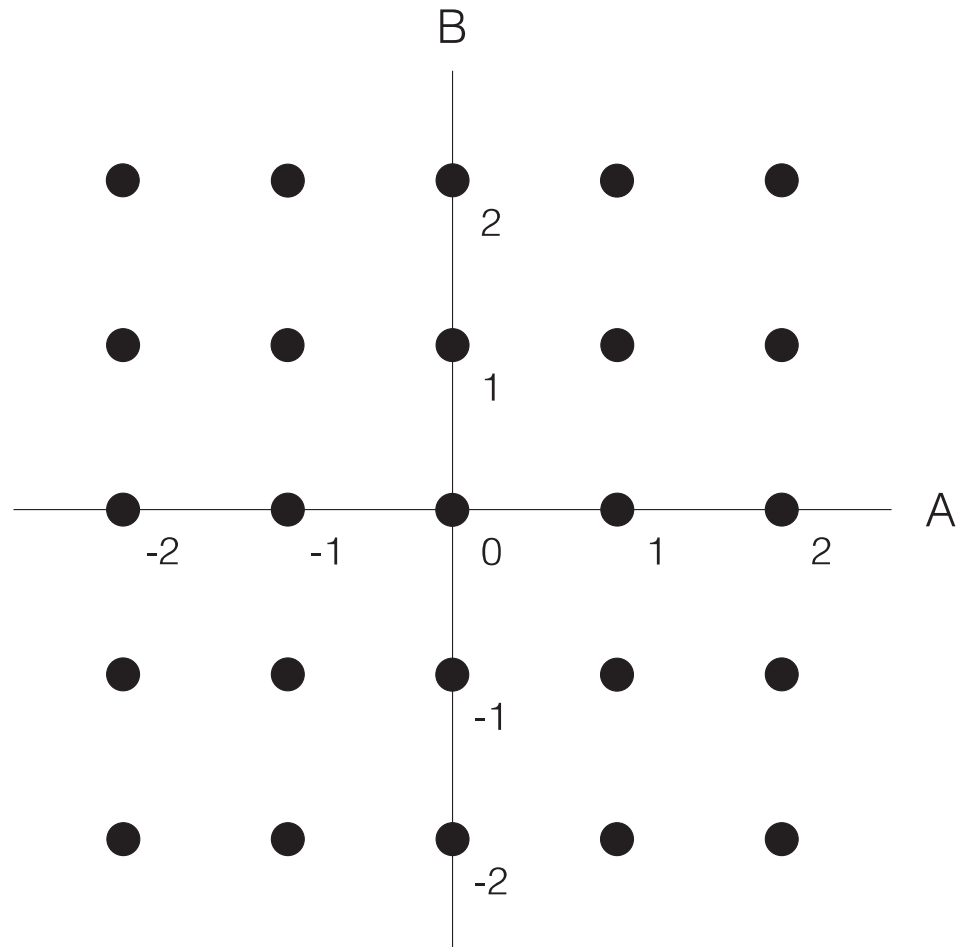
100BASE-T4 Cabling



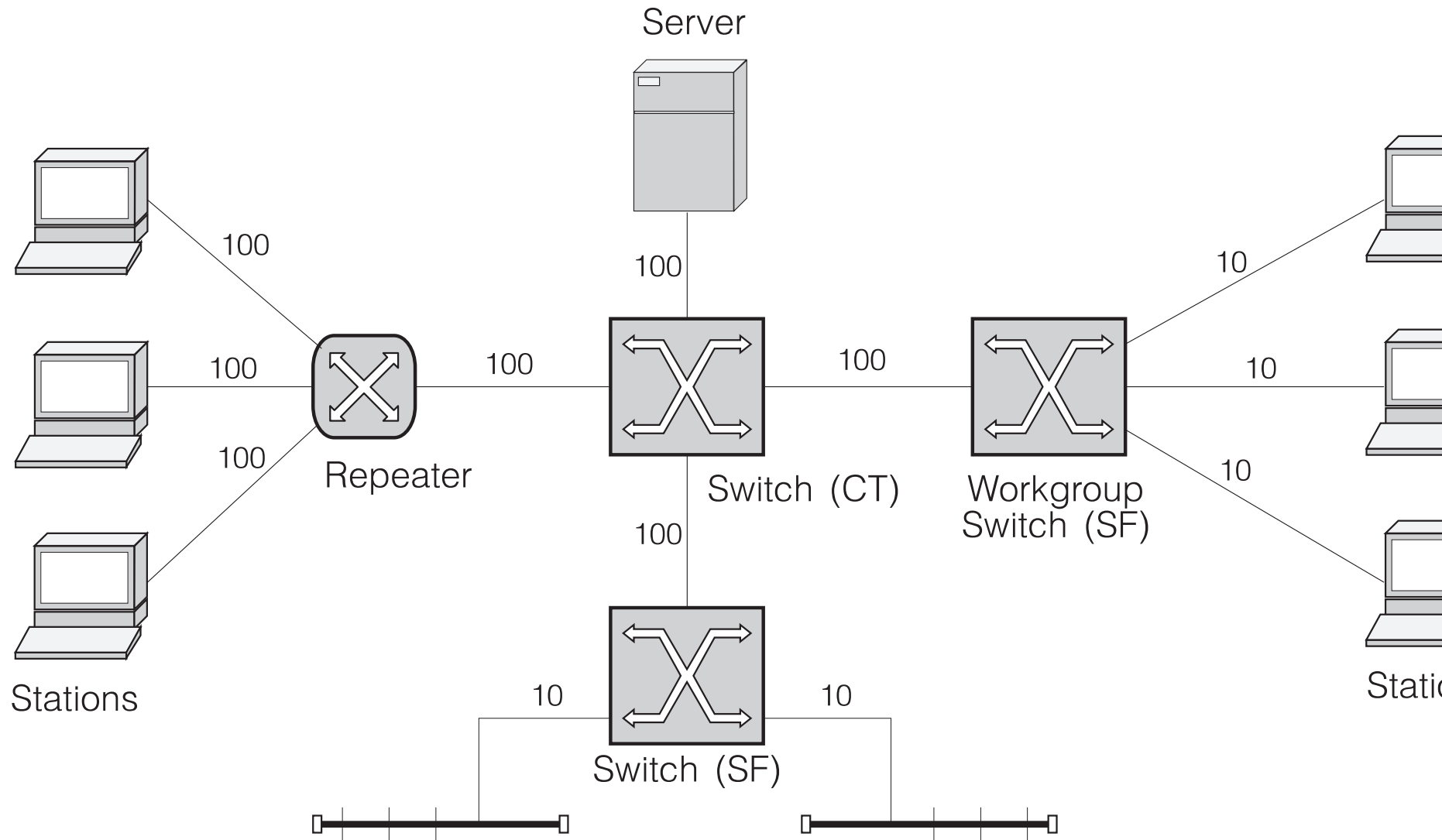
100BASE-Tx/T4 Repeater



100BASE-T2 Encoding



Fast Ethernet - mixed network

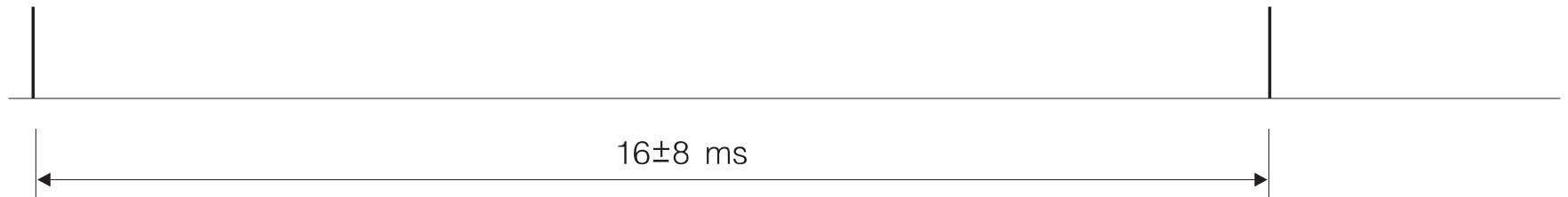


Fast Ethernet - encodings

	Number of Pairs / Fibers	Encoding Method	Coding Efficiency
10BASE-T/Fx	2	Manchester	2.00 baud/bit
100BASE-TX/FX	2	4B5B	1.25 baud/bit
100BASE-T4	4	8B6T	0.75 baud/bit
100BASE-T2	2	PAM-5	0.5 baud/bit

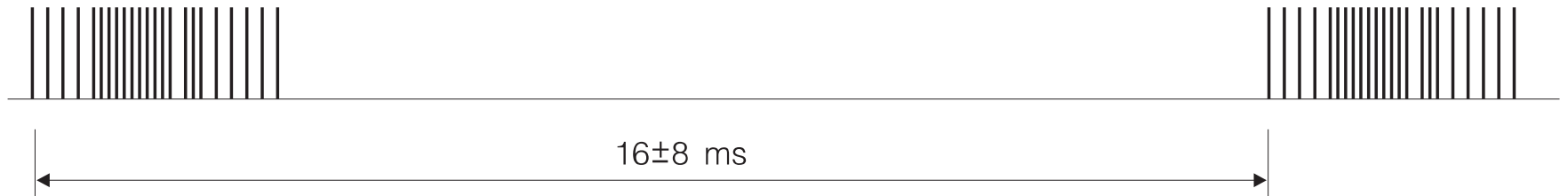
Fast Ethernet - negotiation

10BASE-T Link Integrity Test Pulse



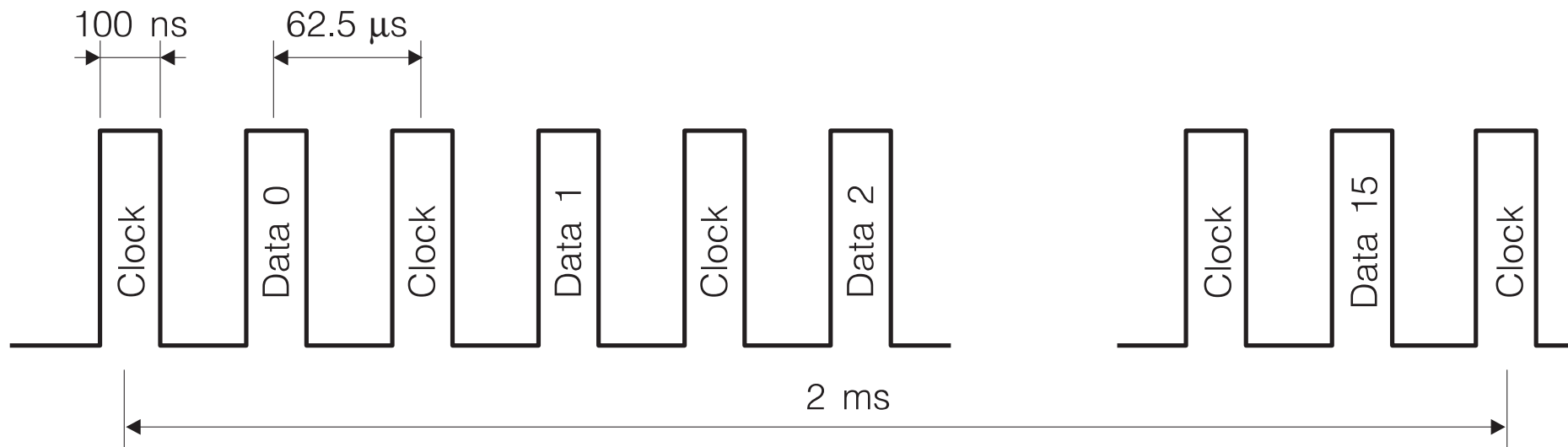
a)

Fast Link Pulse (FLP) Burst

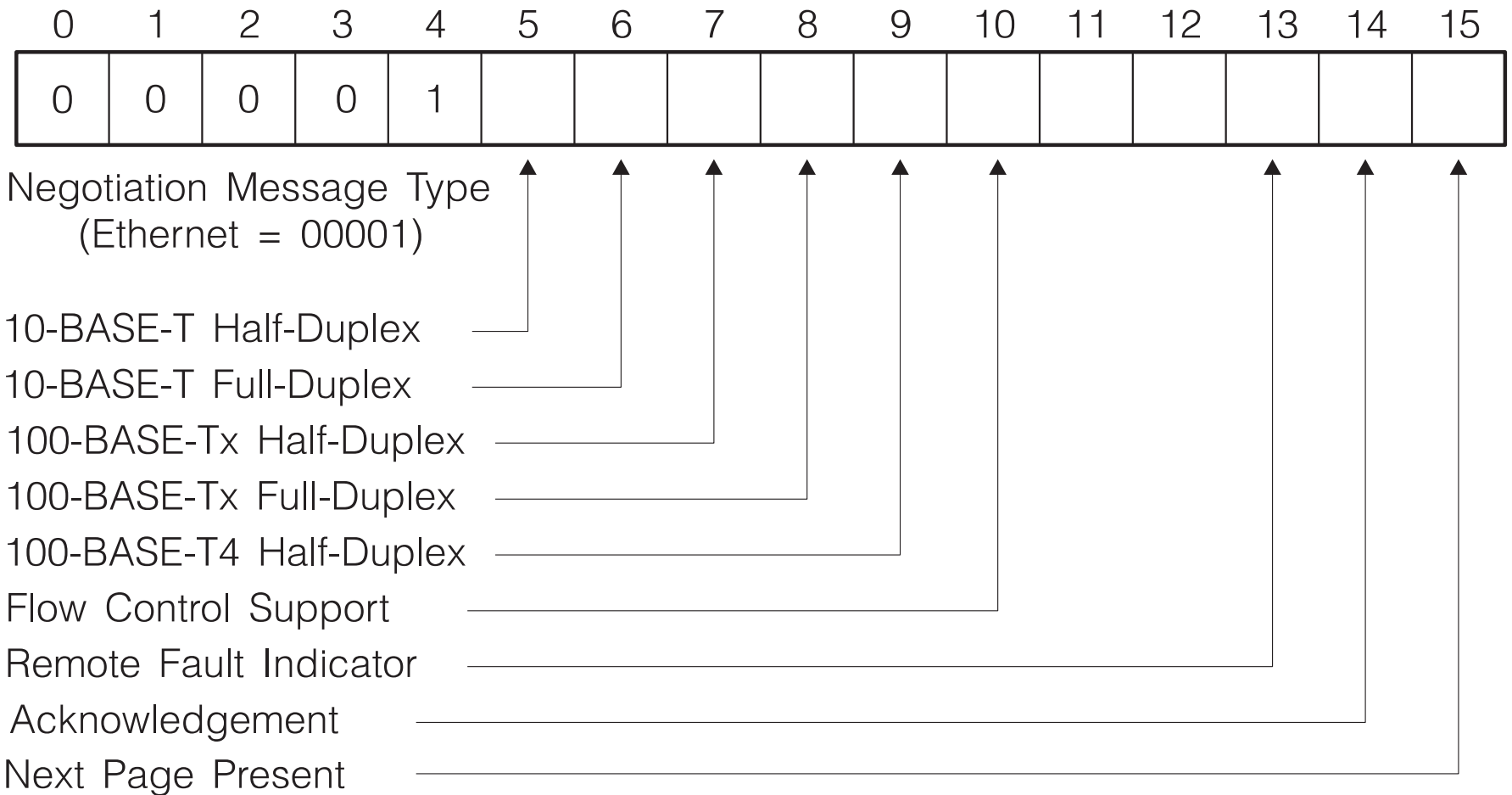


b)

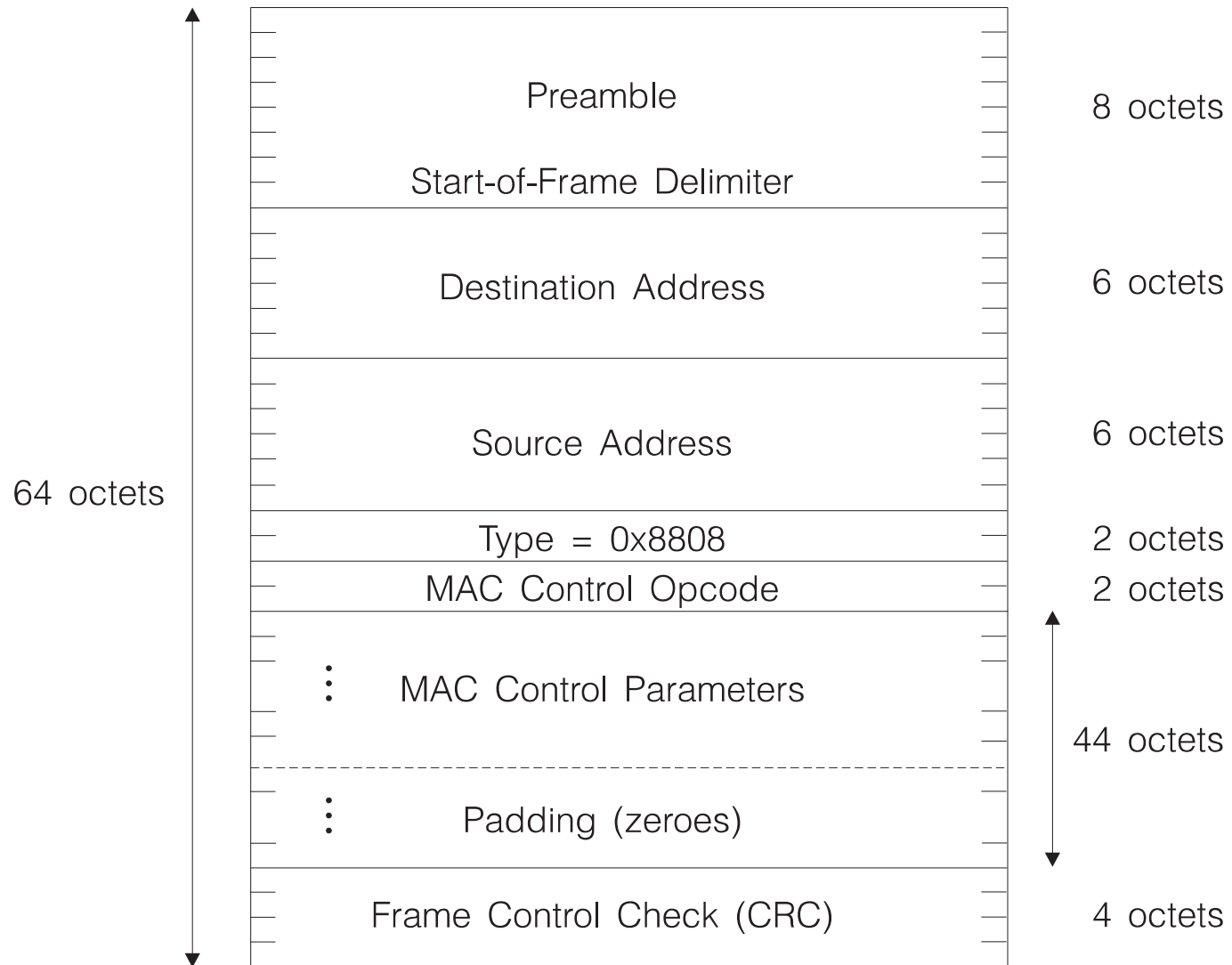
Fast Ethernet - negotiation



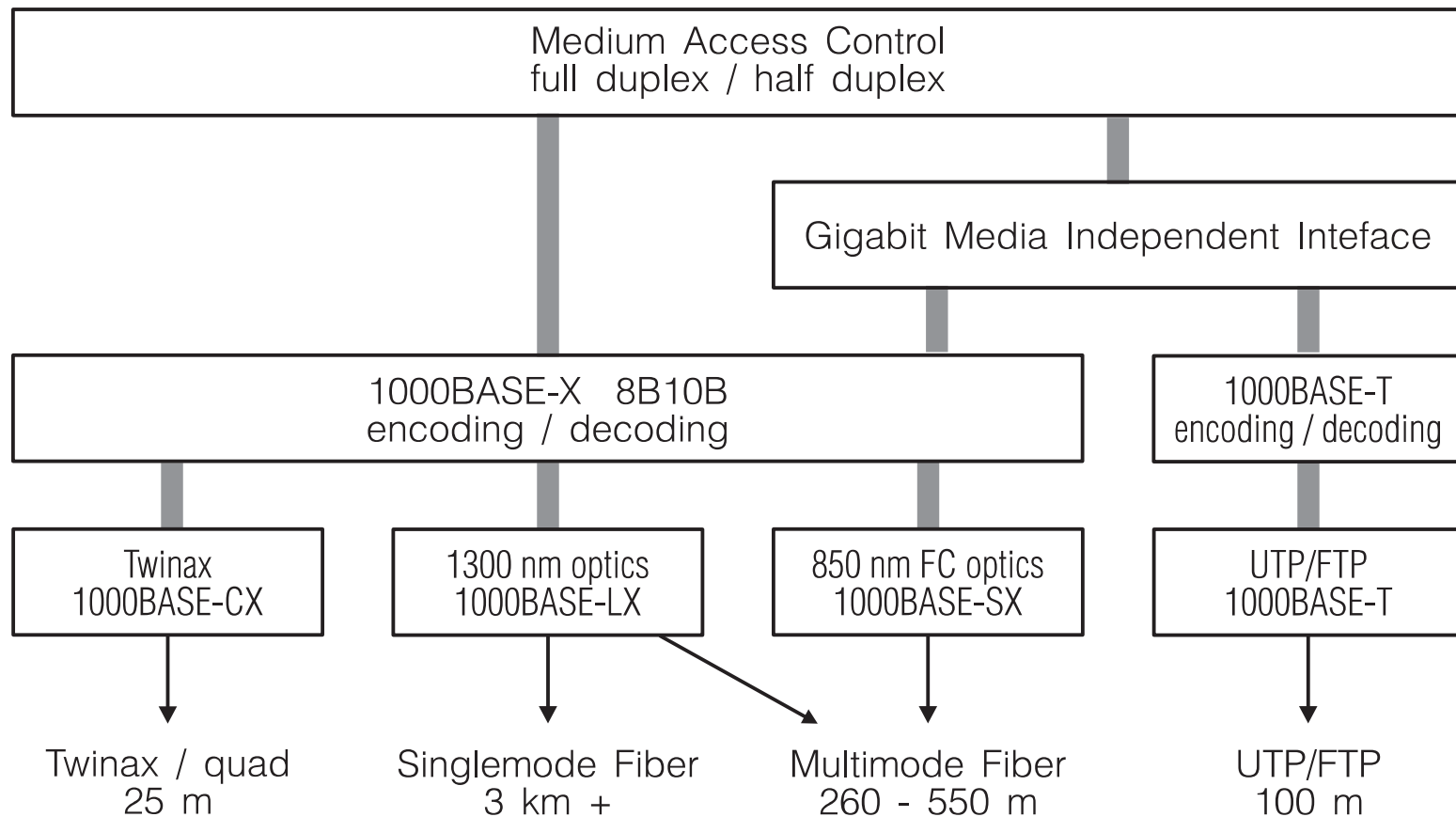
Fast Ethernet - negotiation



MAC Control



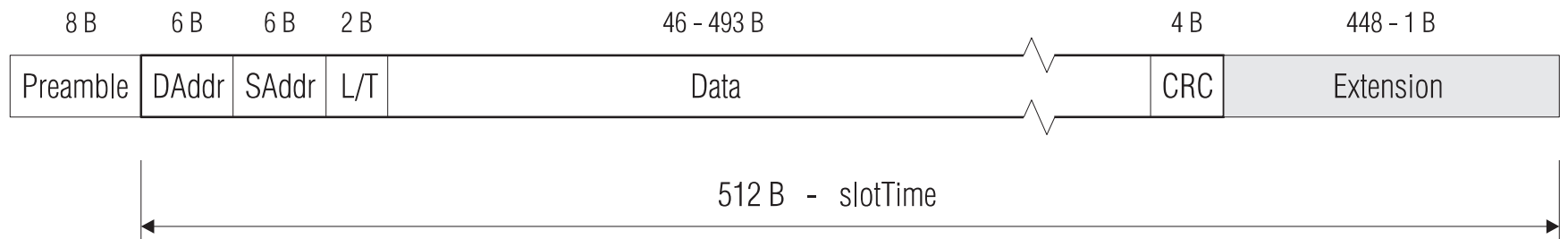
Gigabit Ethernet



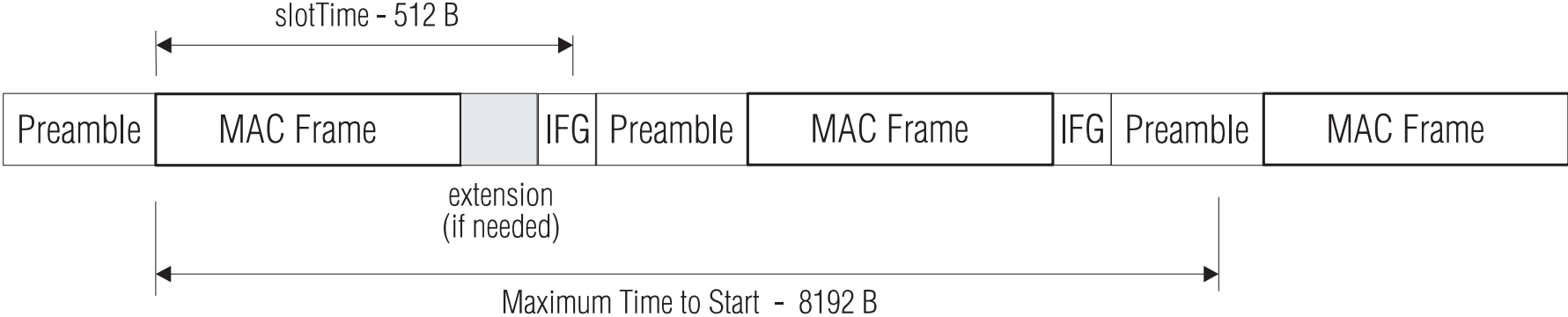
Gigabit Ethernet

	Multimode 62.5/125 μm	Multimode 50/125 μm	Singlemode 9/125 μm	STP 150 Ω	UTP Cat.5+
1000BASE-SX	260 m	525 m			
1000BASE-LX	550 m	550 m	3000 m		
1000BASE-CX				25 m	
1000BASE-T					100 m

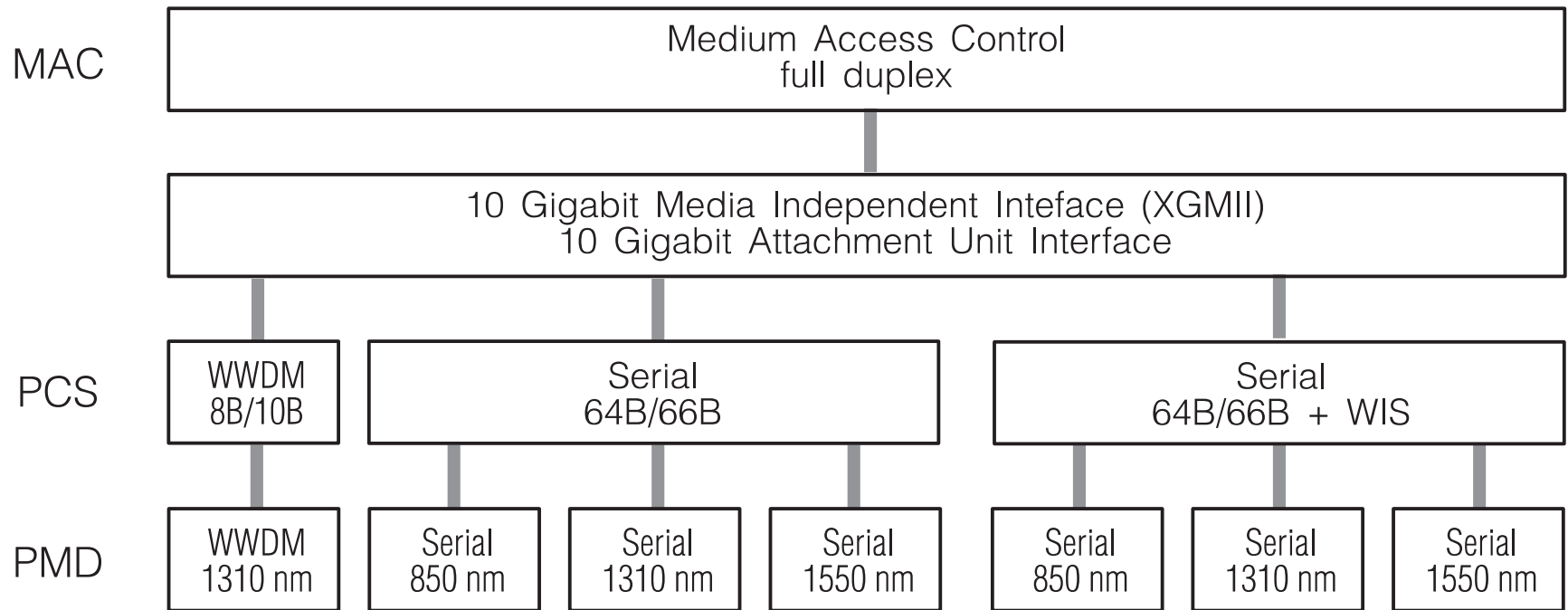
Gigabit Ethernet



Gigabit Ethernet



10G Ethernet



10G Ethernet

	Encoding Method	Wavelength	PHY Type	Framing
10GBASE-SR	64B/66B	850 nm	serial	
10GBASE-LX4	8B/10B	1310 nm	WWDM	
10GBASE-LR	64B/66B	1310 nm	serial	
10GBASE-ER	64B/66B	1550 nm	serial	
10GBASE-SW	64B/66B	850 nm	serial	OC -192
10GBASE-LW	64B/66B	1310 nm	serial	OC -192
10GBASE-EW	64B/66B	1550 nm	serial	OC -192