

Computer Organization and Architecture



MAGI THOMAS
DEPARTMENT OF COMPUTER APPLICATION

Transmission of Digital Data

Interfaces and Modems

- Digital Data Transmission
- DTE-DCE Interface
- Other Interface Standards
- Modems

Data transmission

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graph TD; A[Data transmission] --> B[Parallel]; A --> C[Serial]; C --> D[Synchronous]; C --> E[Asynchronous];
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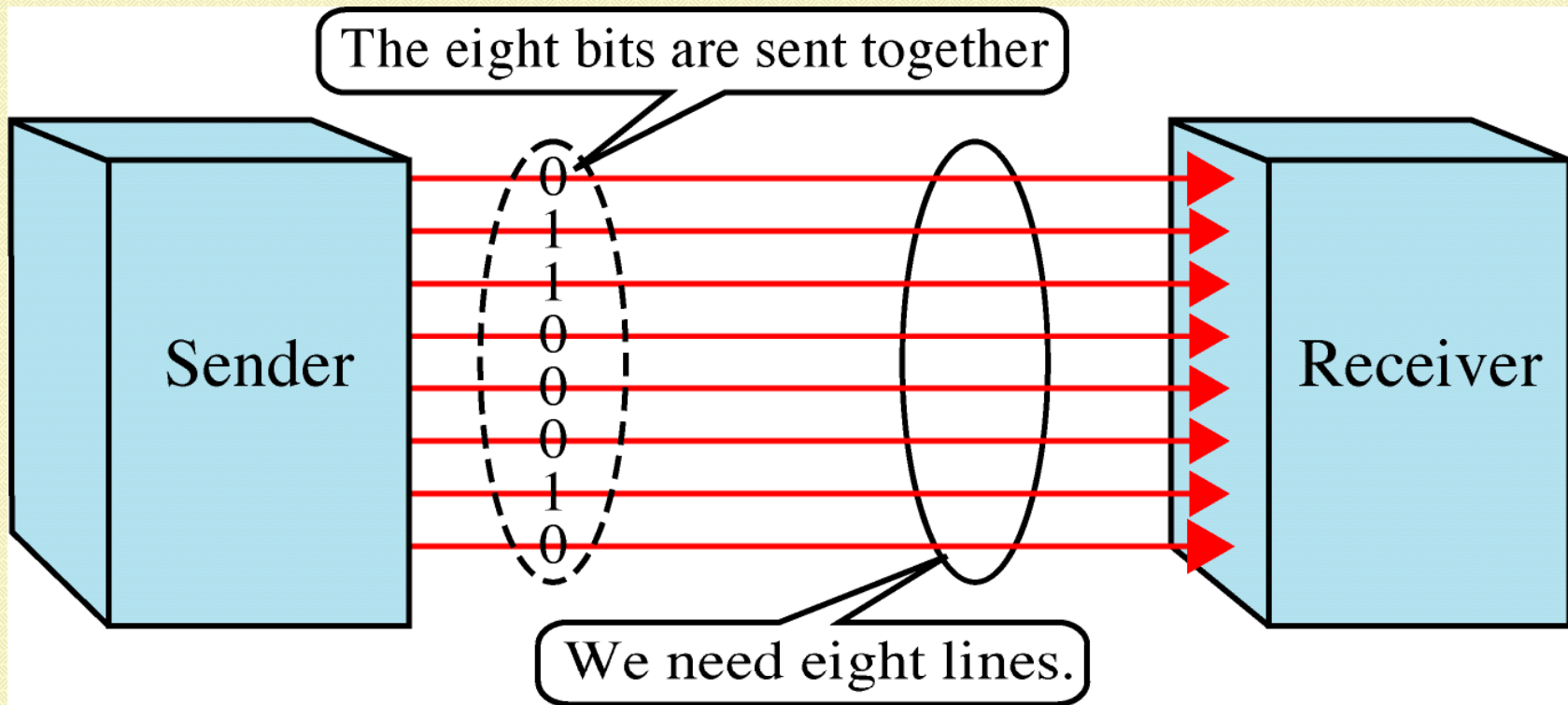
Parallel

Serial

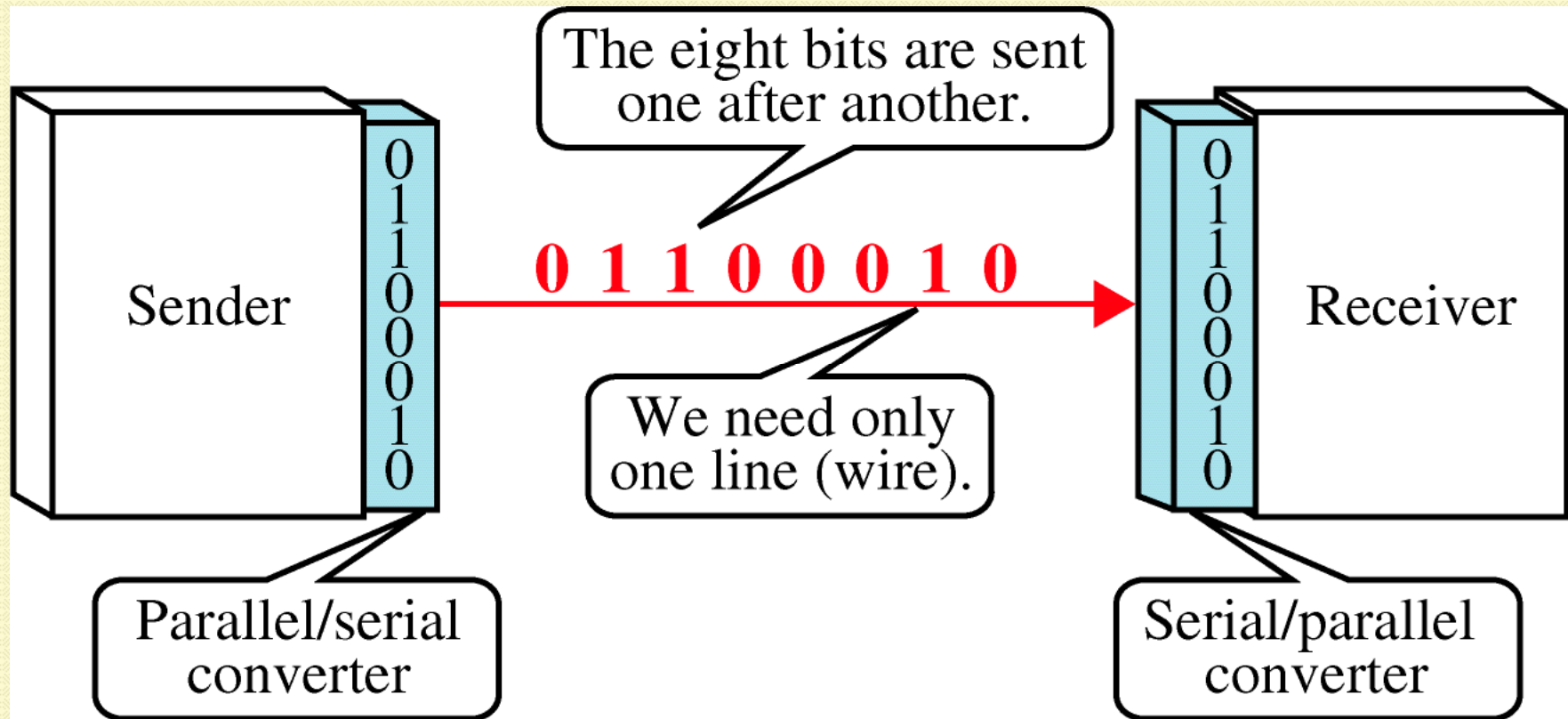
Synchronous

Asynchronous

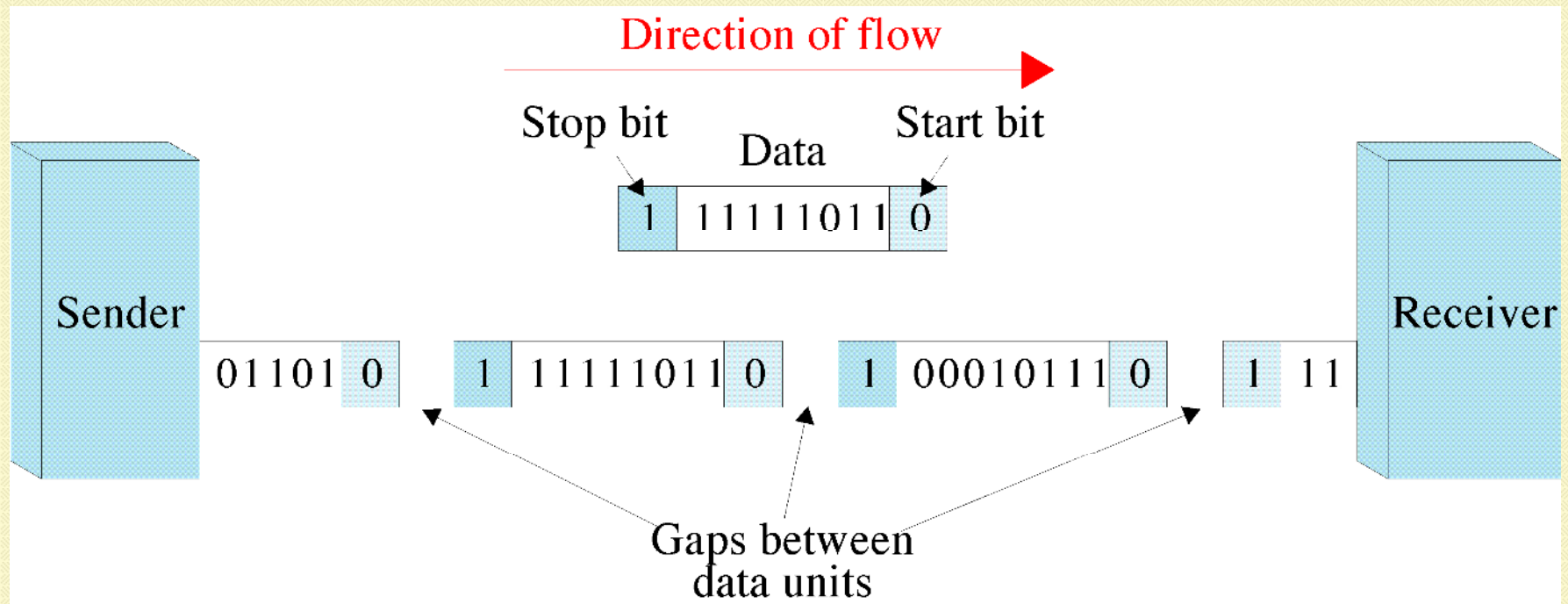
Parallel Transmission



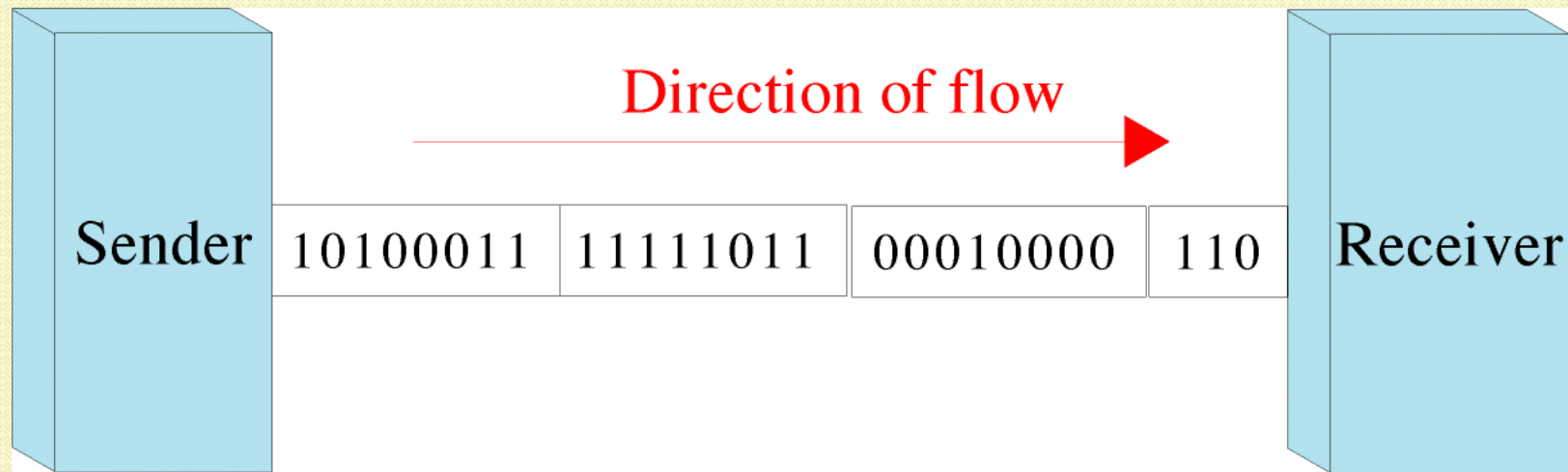
Serial Transmission



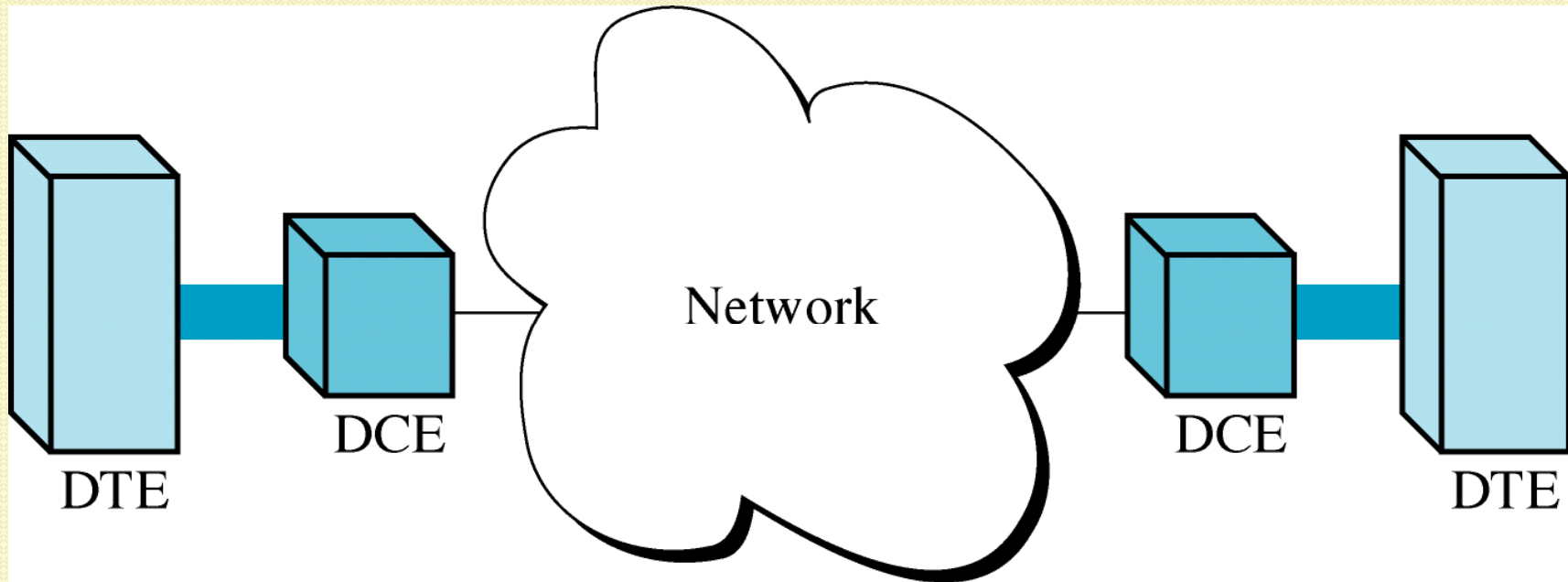
Asynchronous Transmission



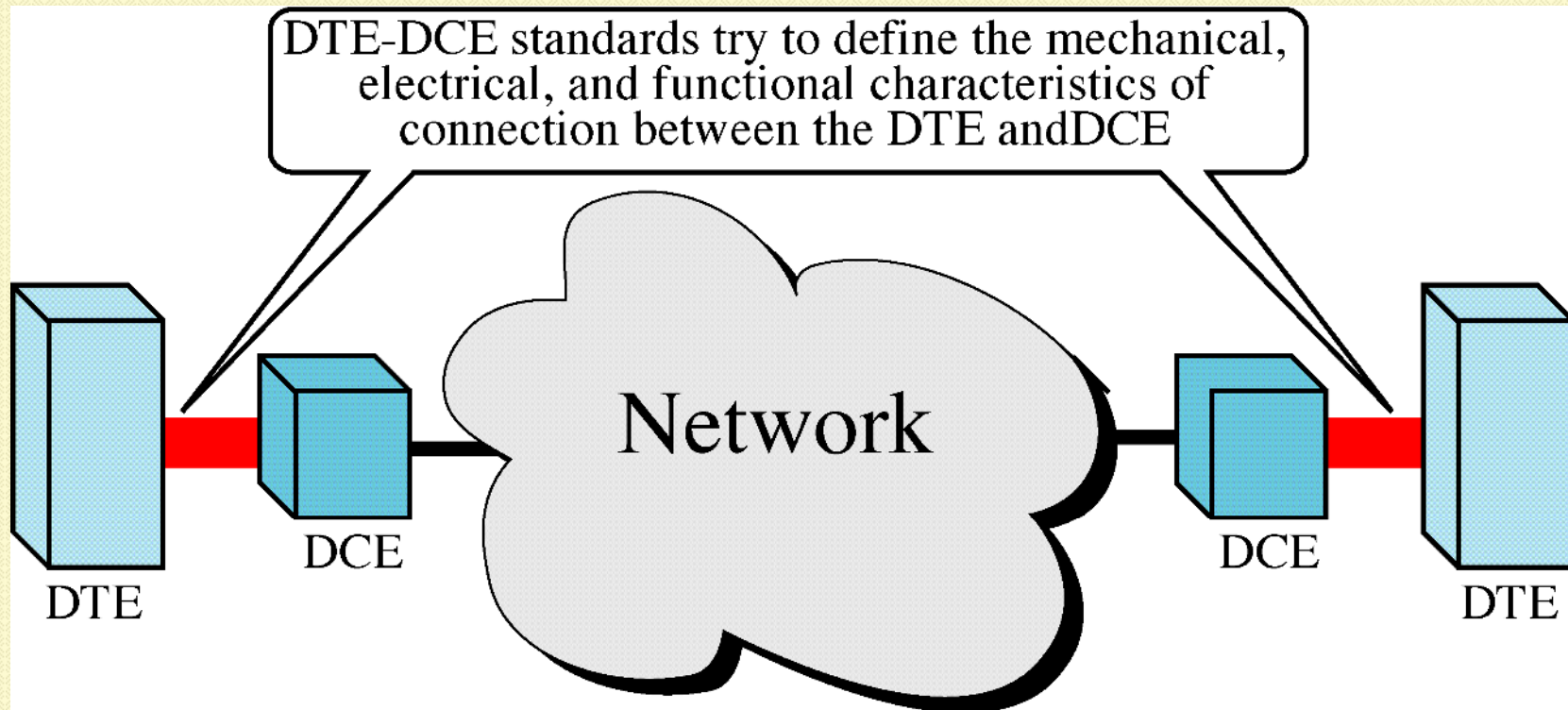
Synchronous Transmission



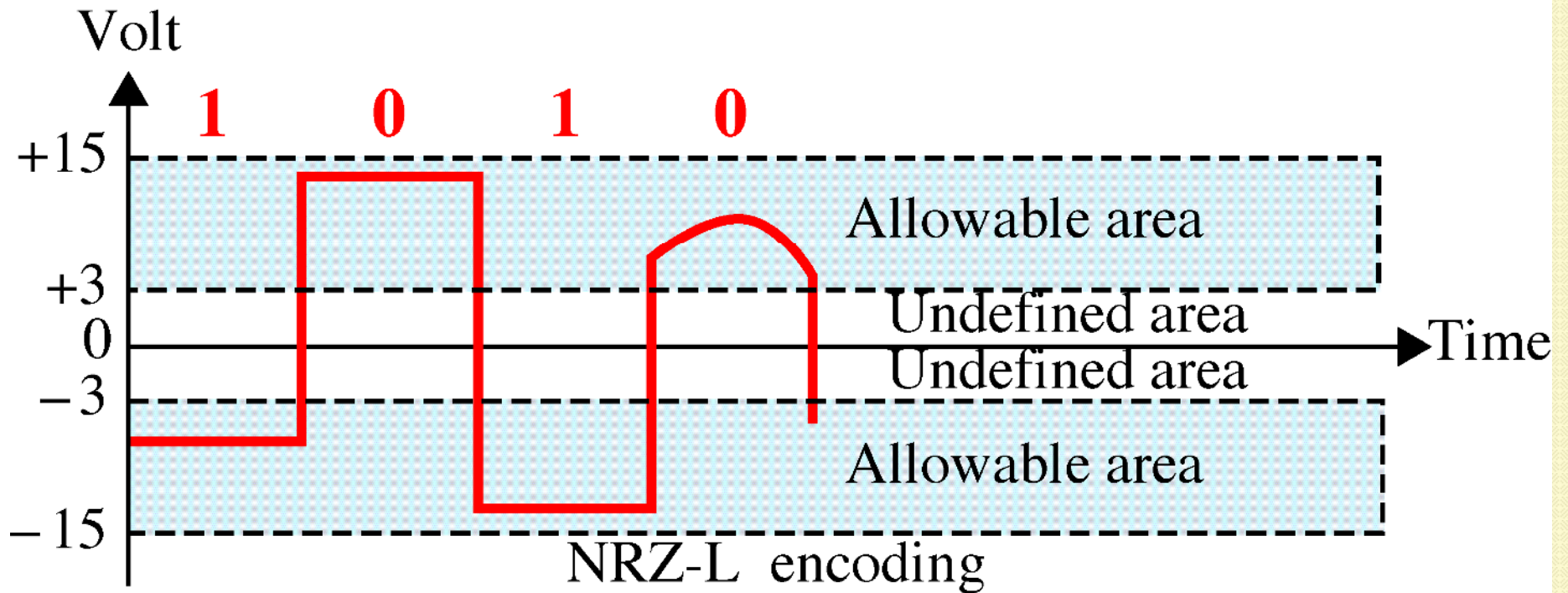
DTEs and DCEs



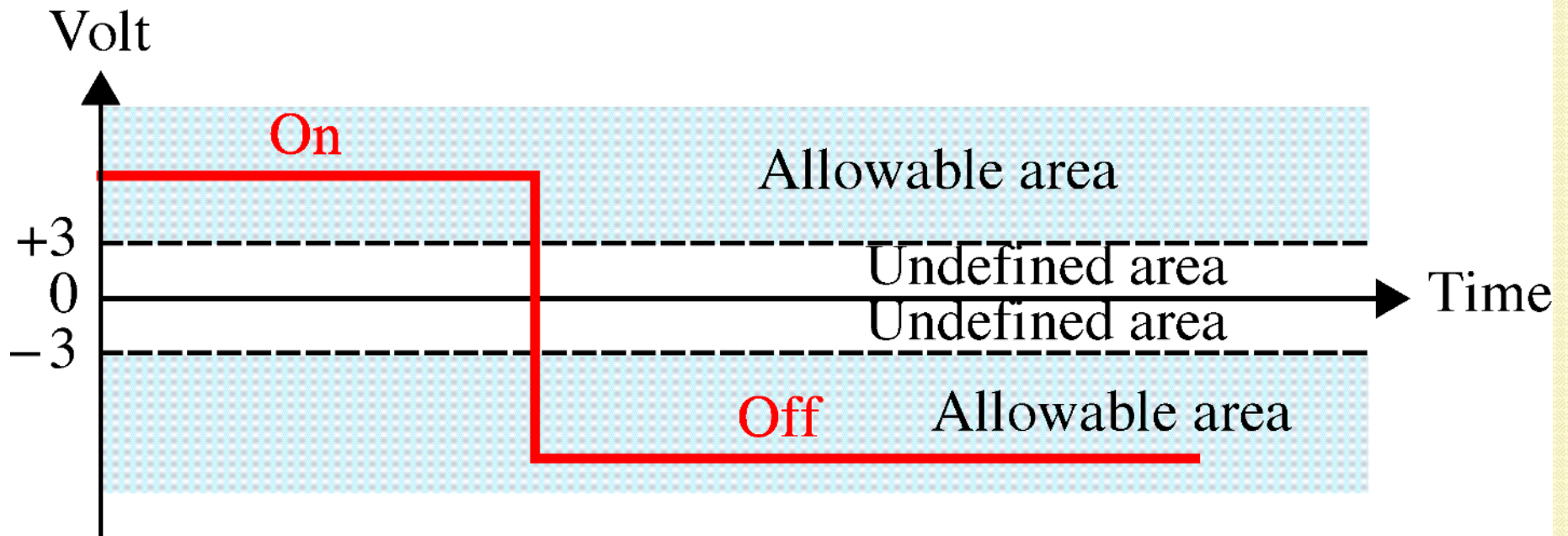
DTE-DCE interface



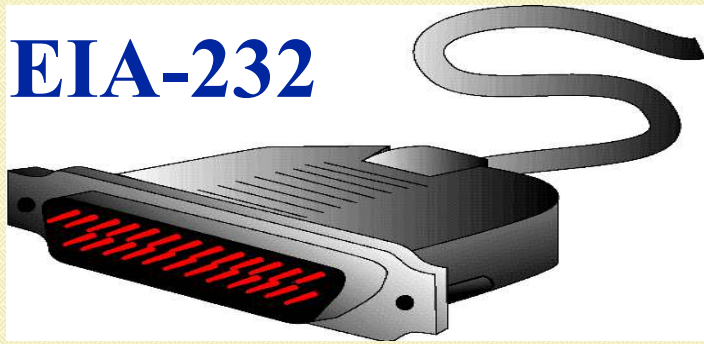
Sending Data



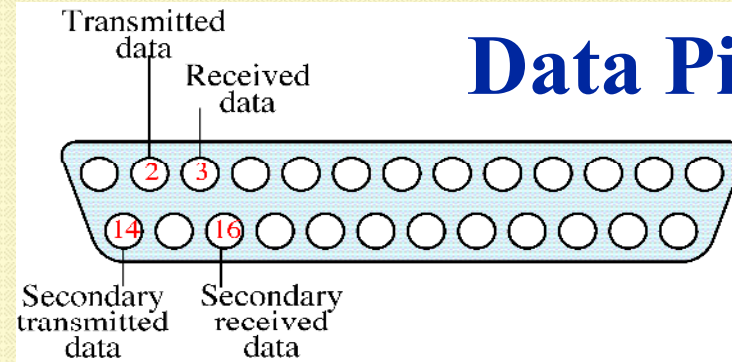
Control



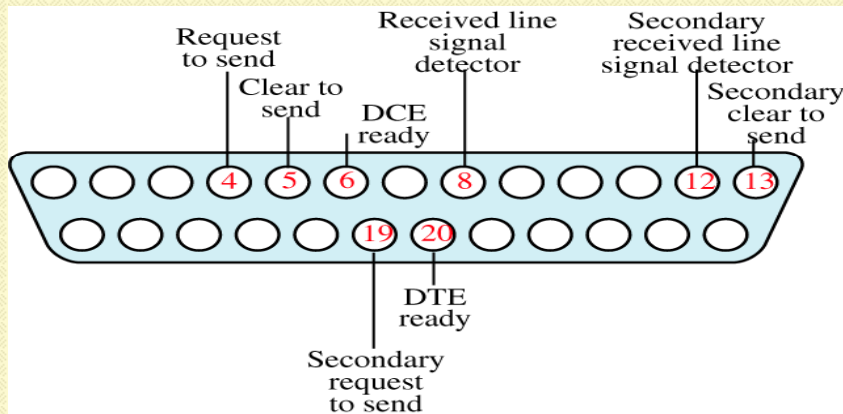
EIA-232



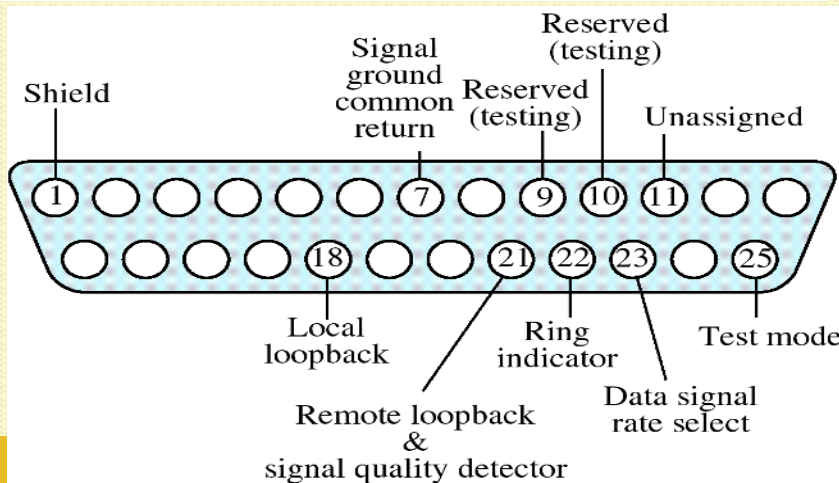
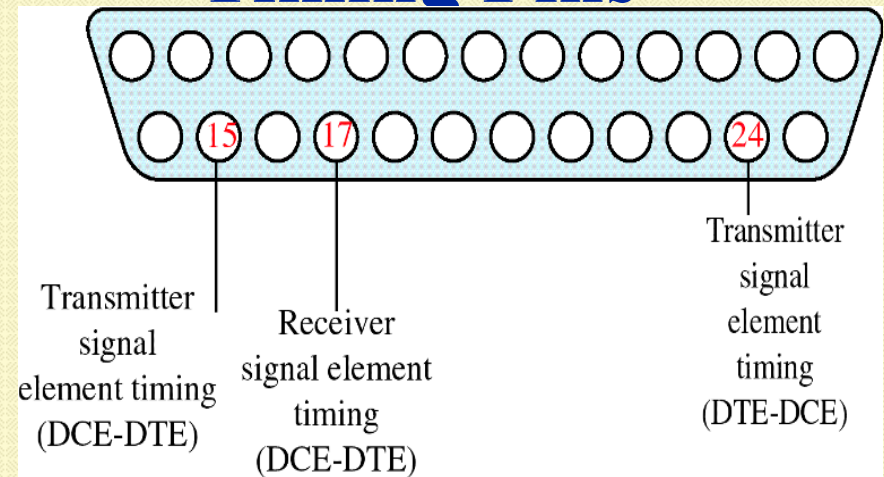
Data Pins



Control Pins



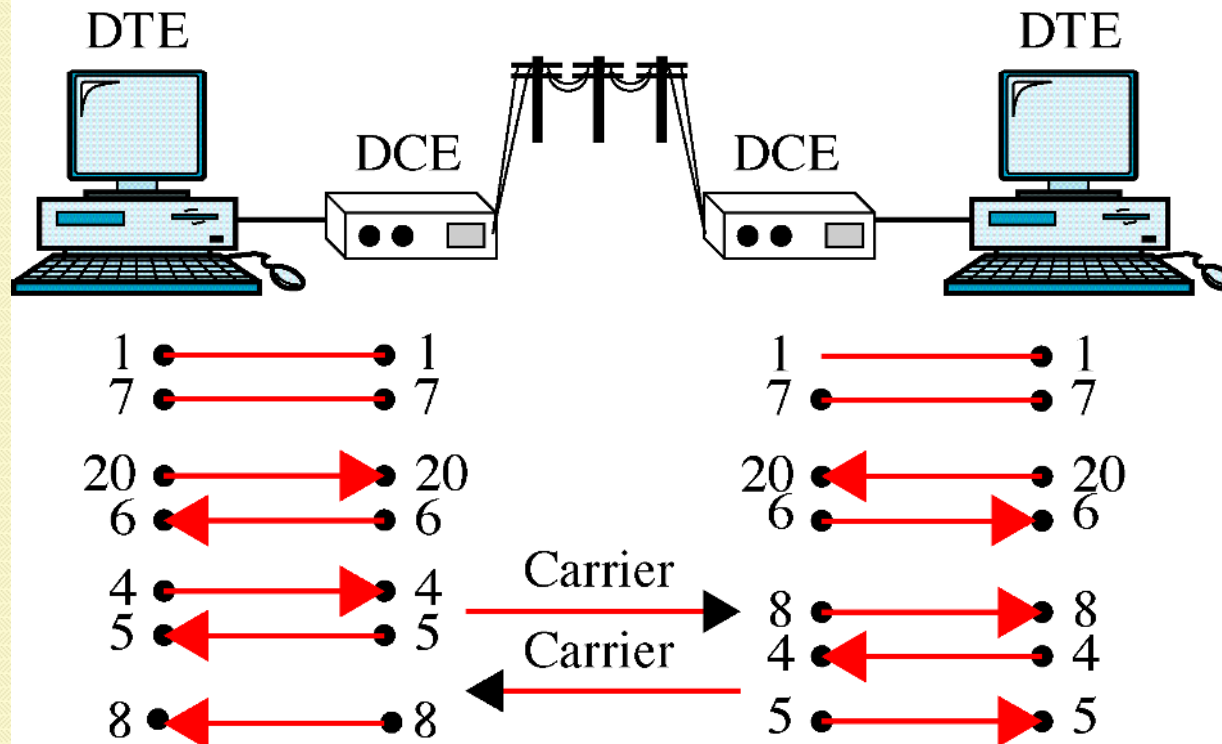
Timing Pins



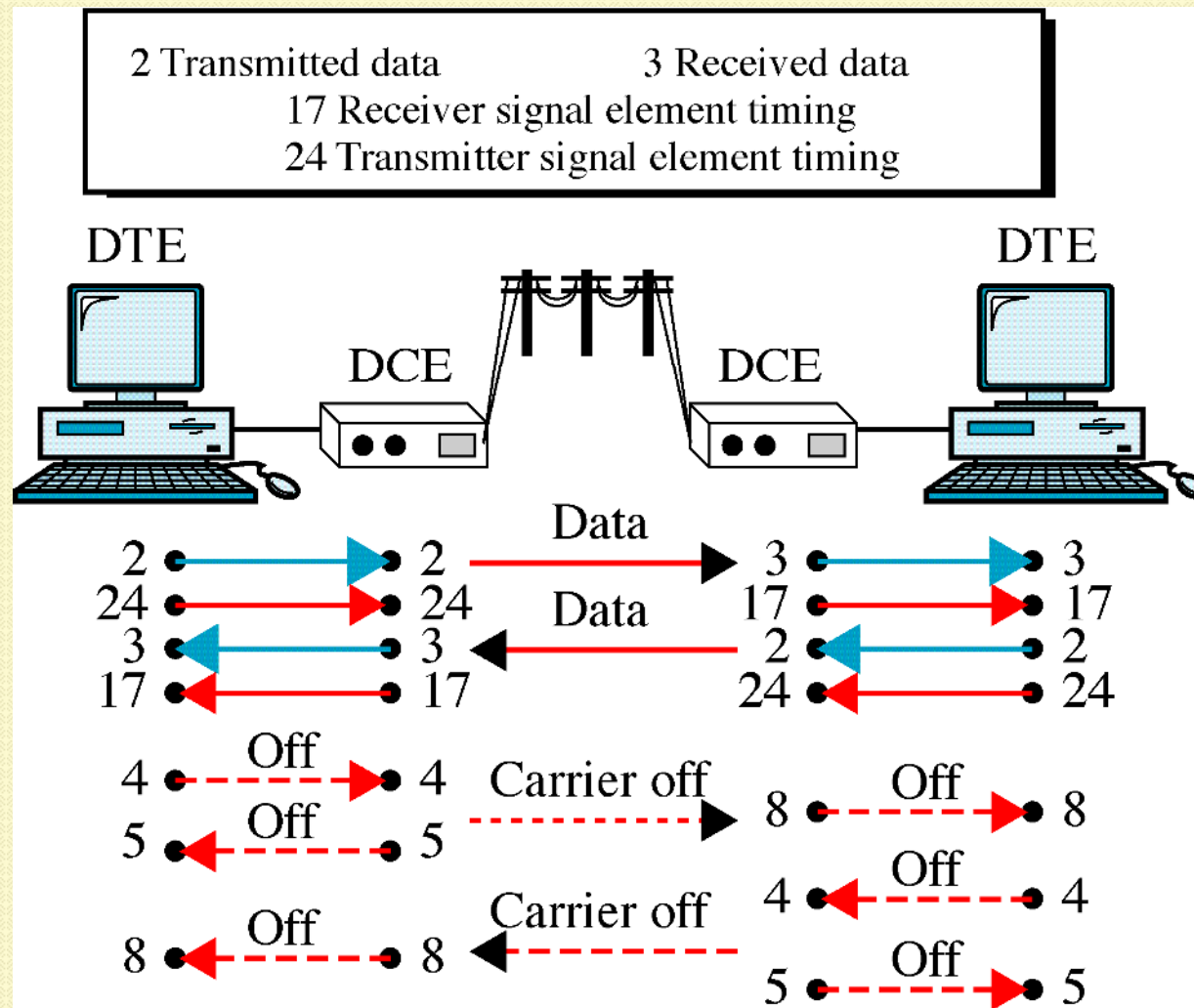
Other Pins

Synchronous Full-Duplex Transmission

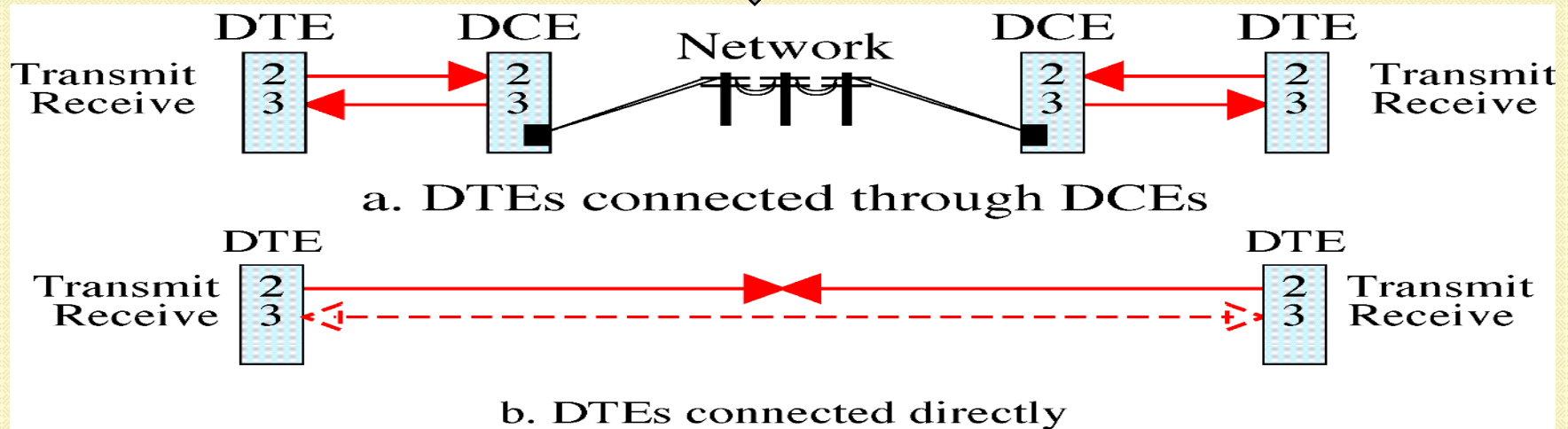
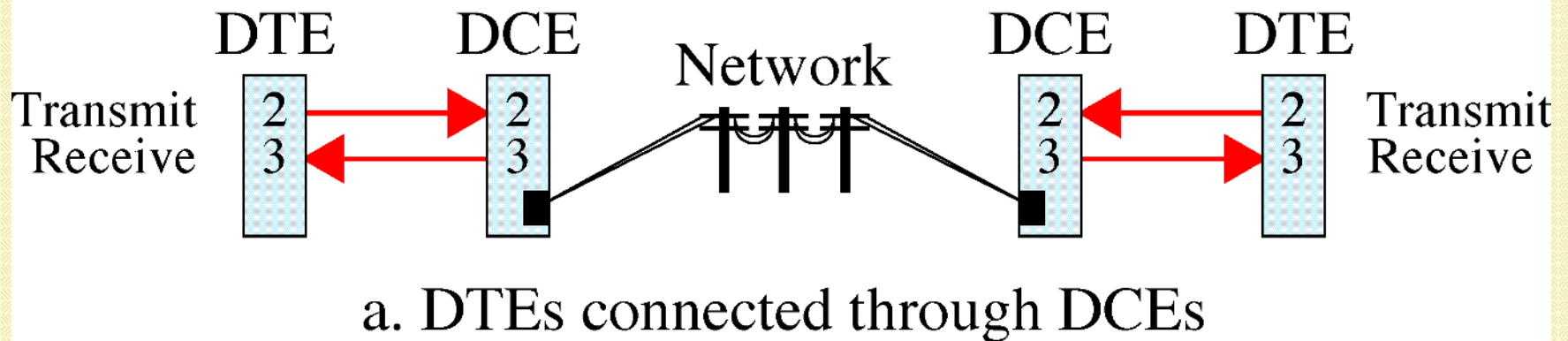
1 Shield
5 Clear to send
7 Signal ground
4 Request to send
6 DCE ready
20 DTE ready
8 Received line signal detector



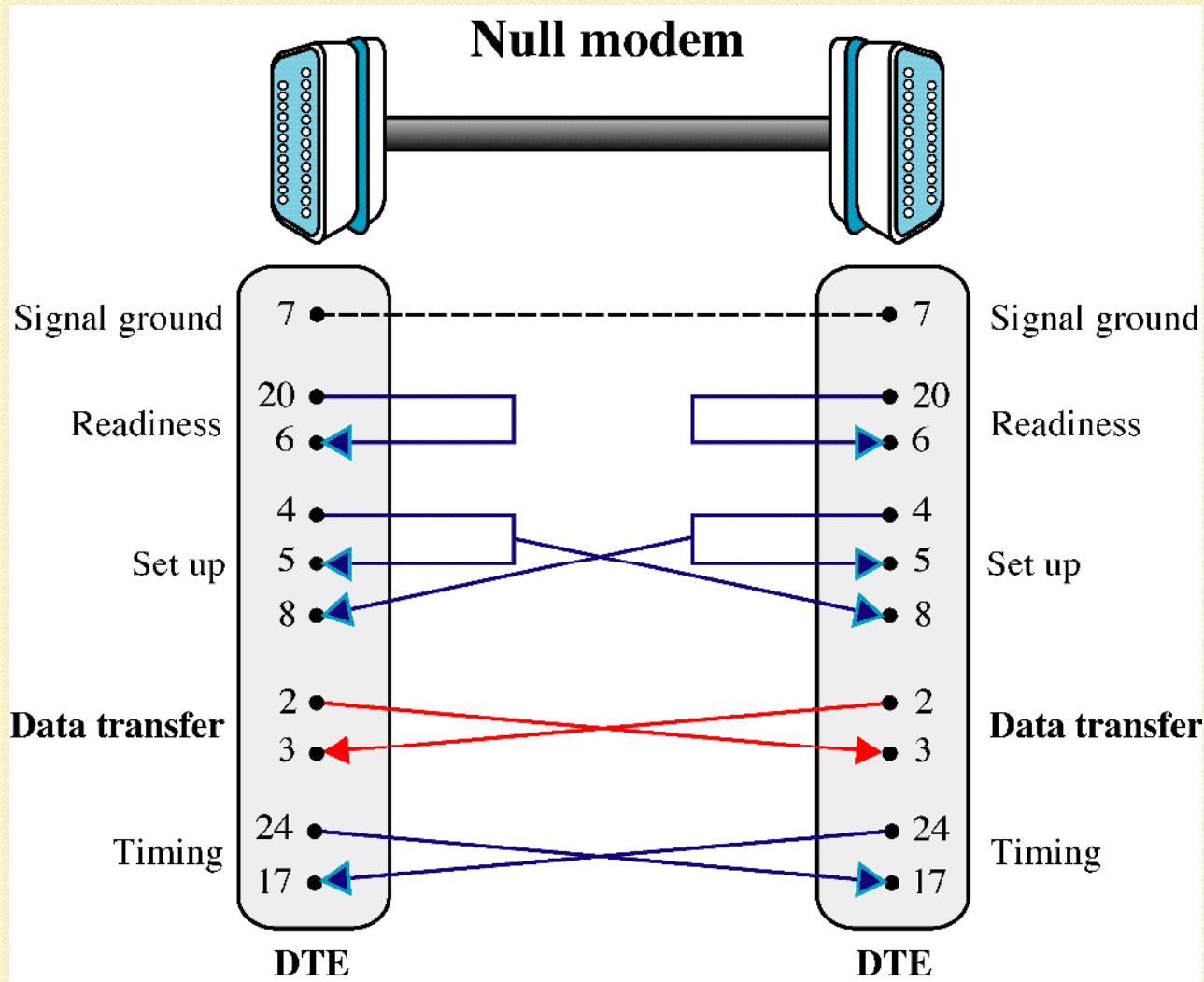
Synchronous Full-Duplex Transmission



Pin Connection With and Without DCEs



Null Modem





*Thank
you*