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FACULTY OF ENGINEERING & TECHNOLOGY

BCA-302Computer Networks

Lecture-15

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OUTLINE

- DATA LINK LAYER DESIGN ISSUES
- NETWORK LAYER SERVICES
- PPP – POINT TO POINT PROTOCOL

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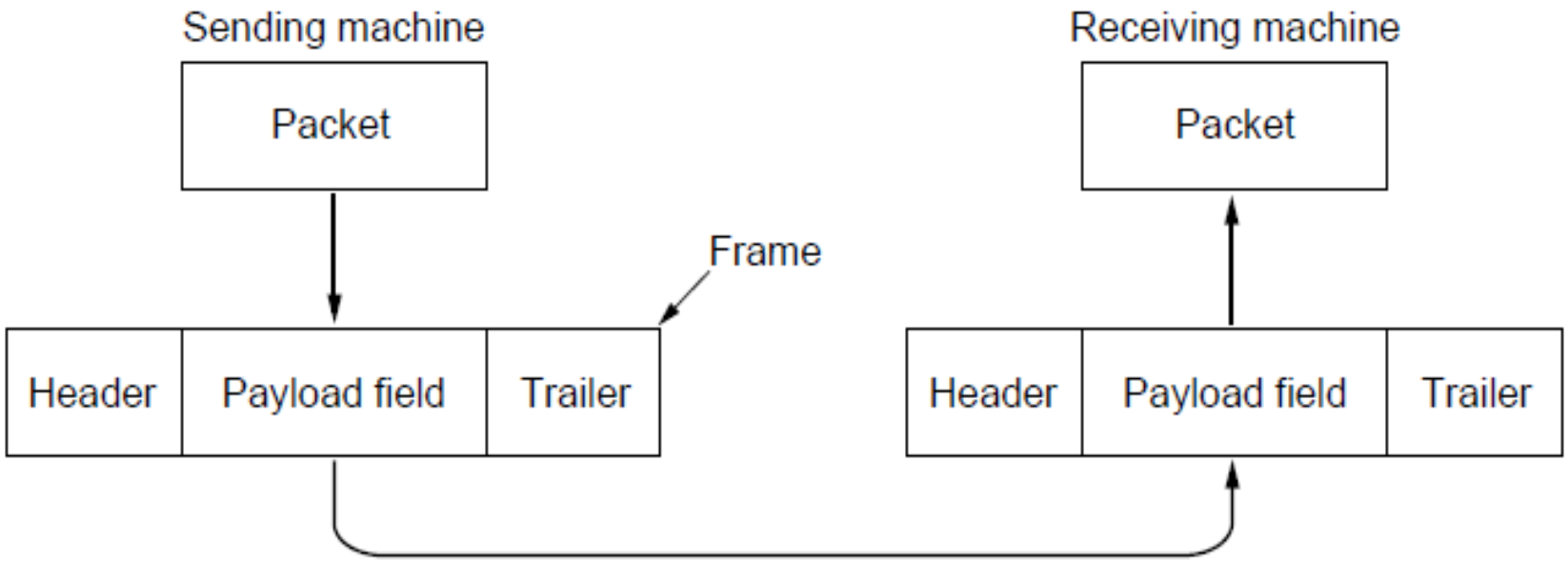
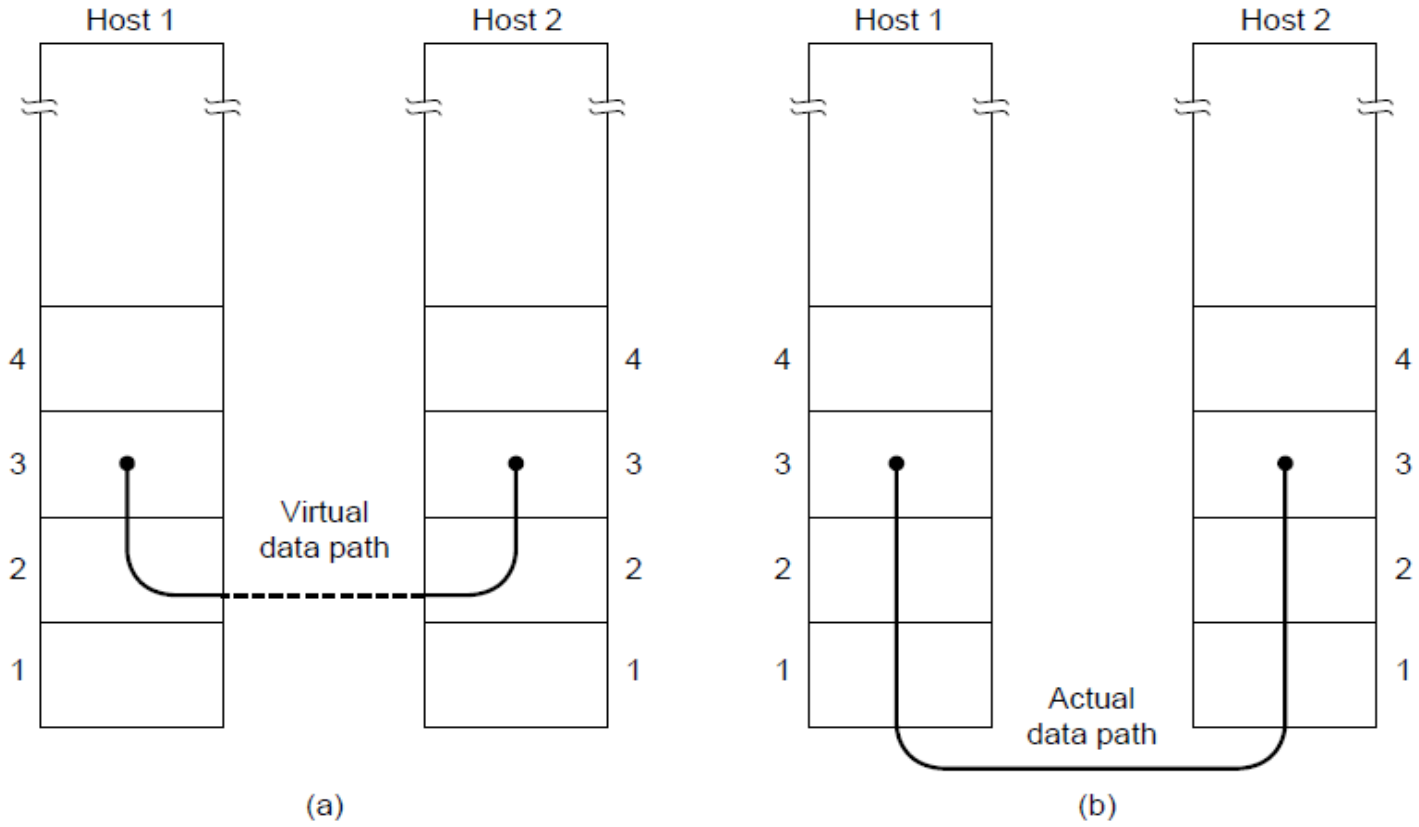
DATA LINK LAYER DESIGN ISSUES

- Network layer services
- Framing
- Error control
- Flow control



NETWORK LAYER SERVICES

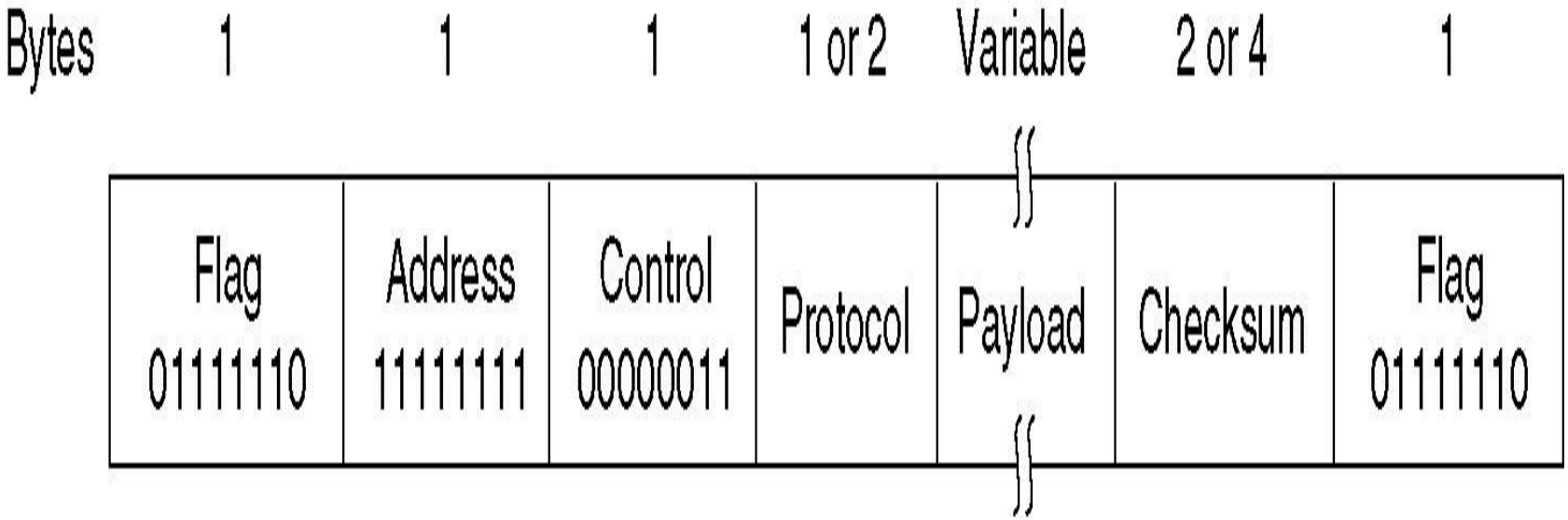


(a) Virtual communication.

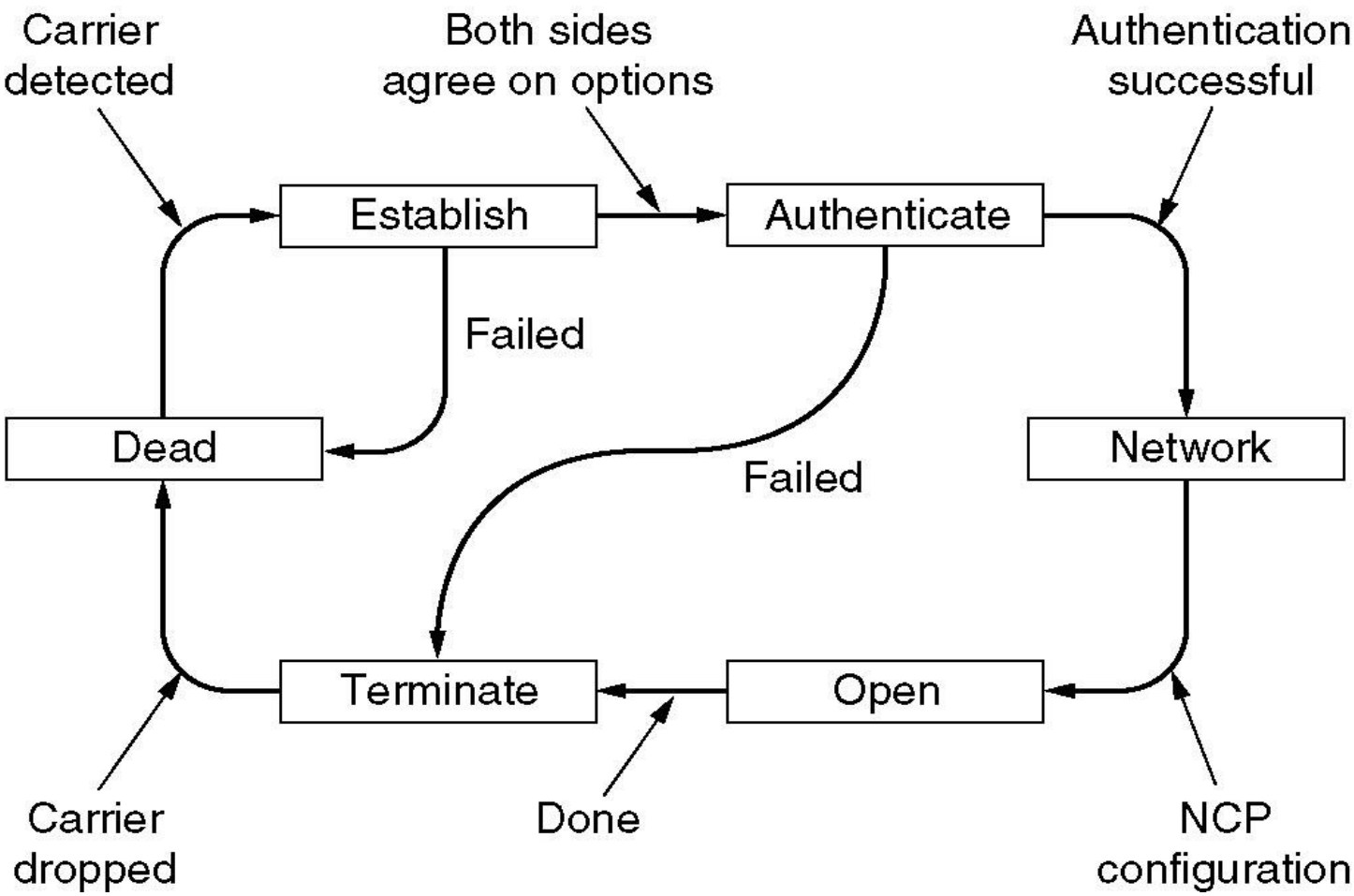
(b) Actual communication

PPP – POINT TO POINT PROTOCOL

The PPP full frame format for unnumbered mode operation.



PPP – POINT TO POINT PROTOCOL



The LCP frame types.

Name	Direction	Description
Configure-request	I → R	List of proposed options and values
Configure-ack	I ← R	All options are accepted
Configure-nak	I ← R	Some options are not accepted
Configure-reject	I ← R	Some options are not negotiable
Terminate-request	I → R	Request to shut the line down
Terminate-ack	I ← R	OK, line shut down
Code-reject	I ← R	Unknown request received
Protocol-reject	I ← R	Unknown protocol requested
Echo-request	I → R	Please send this frame back
Echo-reply	I ← R	Here is the frame back
Discard-request	I → R	Just discard this frame (for testing)

Multiple Choice Question

MUTIPLE CHOICE QUESTIONS:

Sr no	Question	Option A	Option B	OptionC	OptionD
1	Transmission data rate is decided by _____	network layer	physical layer	data link layer	transport layer
2	The physical layer is concerned with _____	bit-by-bit delivery	p) process to process delivery	application to application delivery	port to port delivery
3	Bits can be sent over guided and unguided media as analog signal by _____	digital modulation	amplitude modulation	frequency modulation	phase modulation
4	The physical layer provides _____	mechanical specifications of electrical connectors and cables	specification for IR over optical fiber	electrical specification of transmission line signal level	all of the mentioned
5	The physical layer is responsible for _____	line coding	channel coding	modulation	all of the mentioned

REFERENCES

- http://www.engppt.com/2009/12/networking-fourozan-ppt-slides.html