



RAMA UNIVERSITY

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FACULTY OF ENGINEERING & TECHNOLOGY

DCS-503 Computer Networks

Lecture-17

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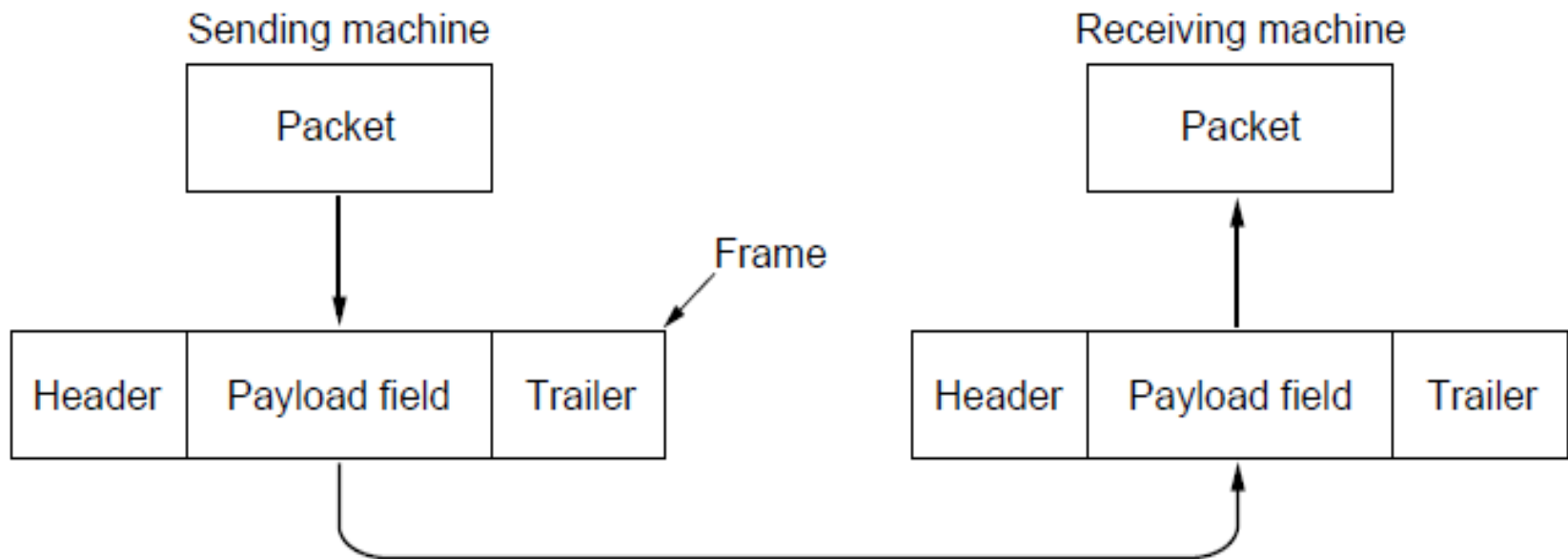
OUTLINE

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

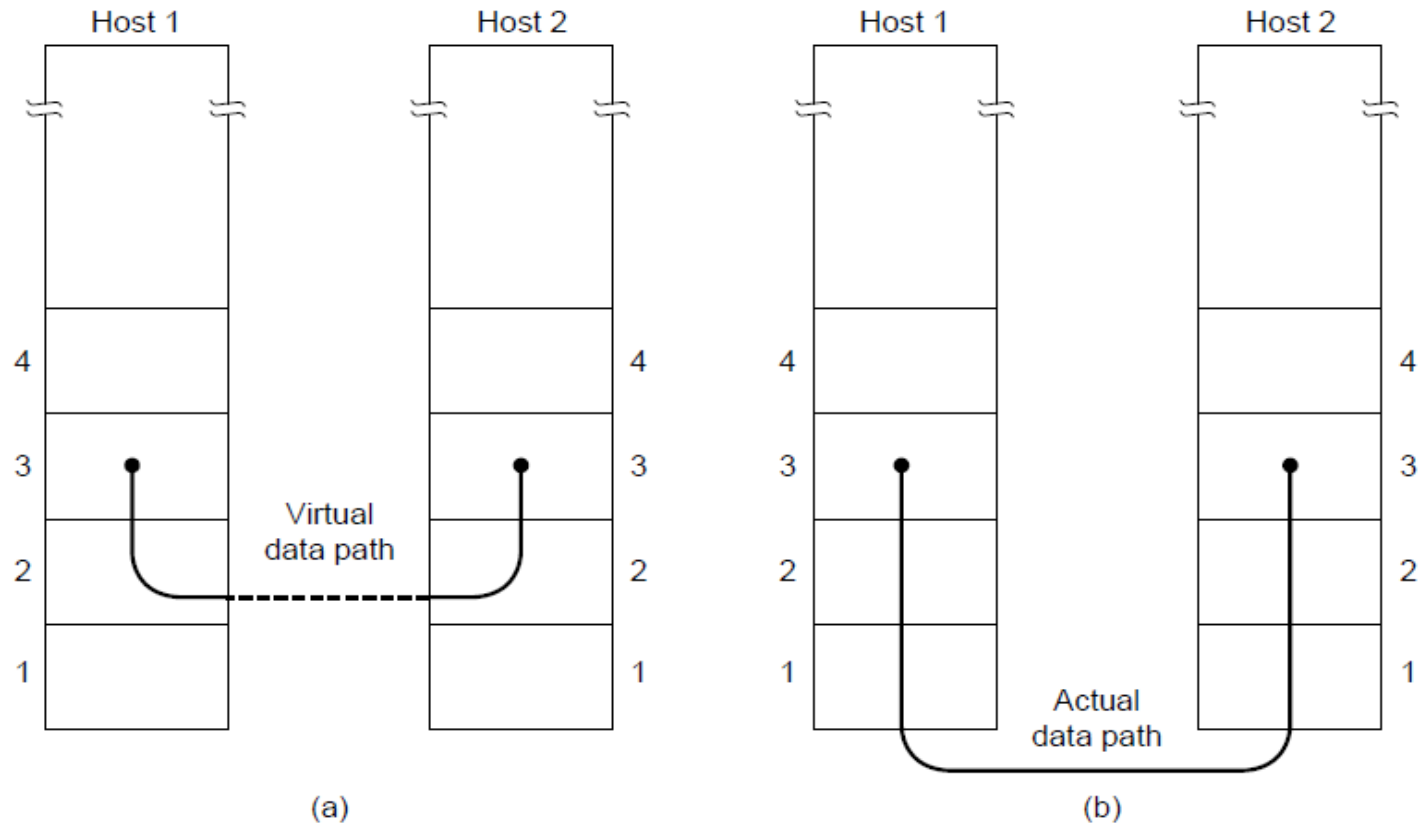


DATA LINK LAYER DESIGN ISSUES

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



NETWORK LAYER SERVICES

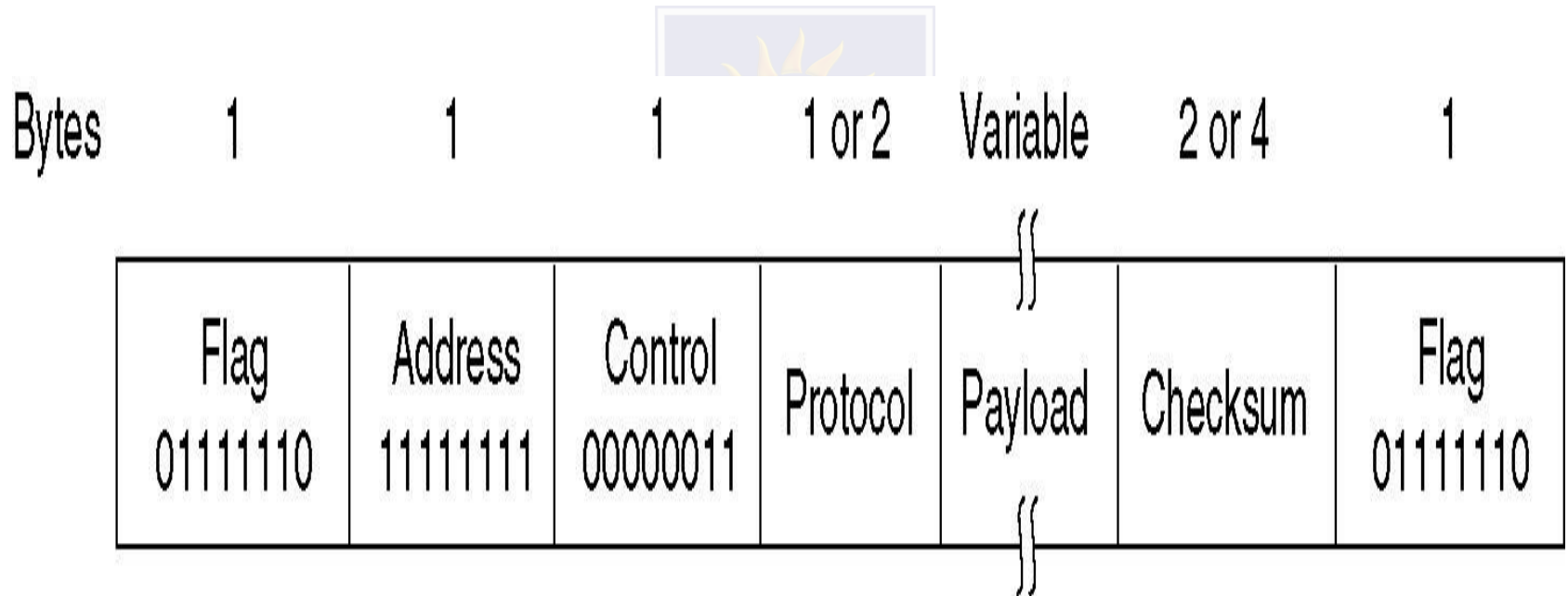


(a) Virtual communication.

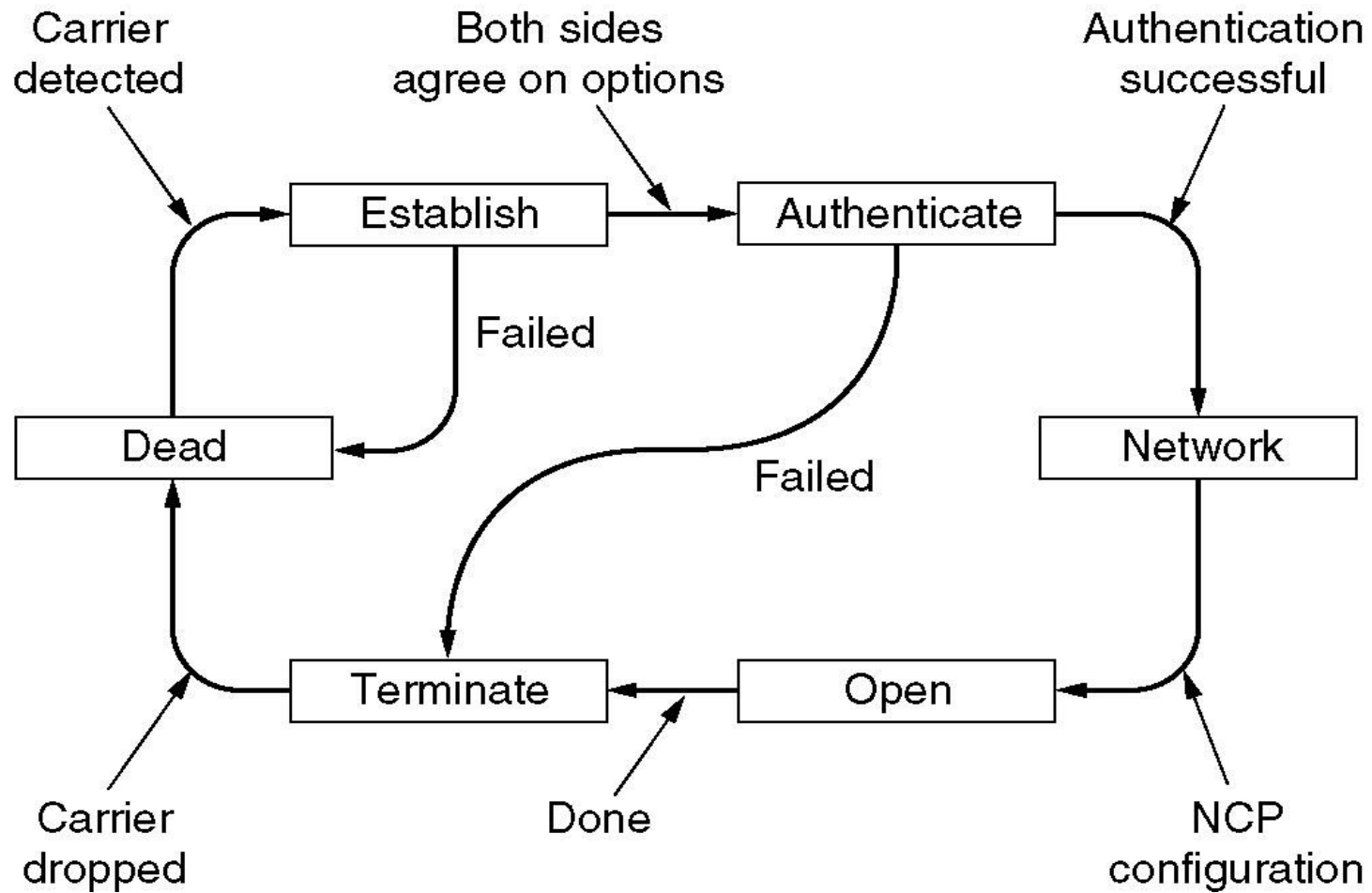
(b) Actual communication

PPP – POINT TO POINT PROTOCOL

The PPP full frame format for unnumbered mode operation.



PPP – POINT TO POINT PROTOCOL



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	What is the subnet id of a host with an IP address 172.16.66.0/21?	172.16.36.0	172.16.48.0	172.16.64.0	172.16.0.0
2	The network address of 172.16.0.0/19 provides how many subnets and hosts?	7 subnets, 30 hosts each	8 subnets, 8,190 hosts each	8 subnets, 2,046 hosts each	7 subnets, 2,046 hosts each
3	Which of the following is the broadcast address for a Class B network ID using the default subnetmask?	172.16.10.255	255.255.255.255	172.16.255.255	172.255.255.255
4	You have an IP address of 172.16.13.5 with a 255.255.255.128 subnet mask. What is your class of address, subnet address, and broadcast address?	Class A, Subnet 172.16.13.0, Broadcast address 172.16.13.127	Class B, Subnet 172.16.13.0, Broadcast address 172.16.13.127	Class B, Subnet 172.16.13.0, Broadcast address 172.16.13.255	Class B, Subnet 172.16.0.0, Broadcast address 172.16.255.255
5	If you wanted to have 12 subnets with a Class C network ID, which subnet mask would you use?	255.255.255.252	255.255.255.255	255.255.255.240	255.255.255.248

REFERENCES

- <http://www.engppt.com/2009/12/networking-fourzan-ppt-slides.html>

