Welcome to

CS 3516:
Computer Networks

Prof. Yanhua Li

Time: 9:00am –9:50am M, T, R, and F
Location: AK219
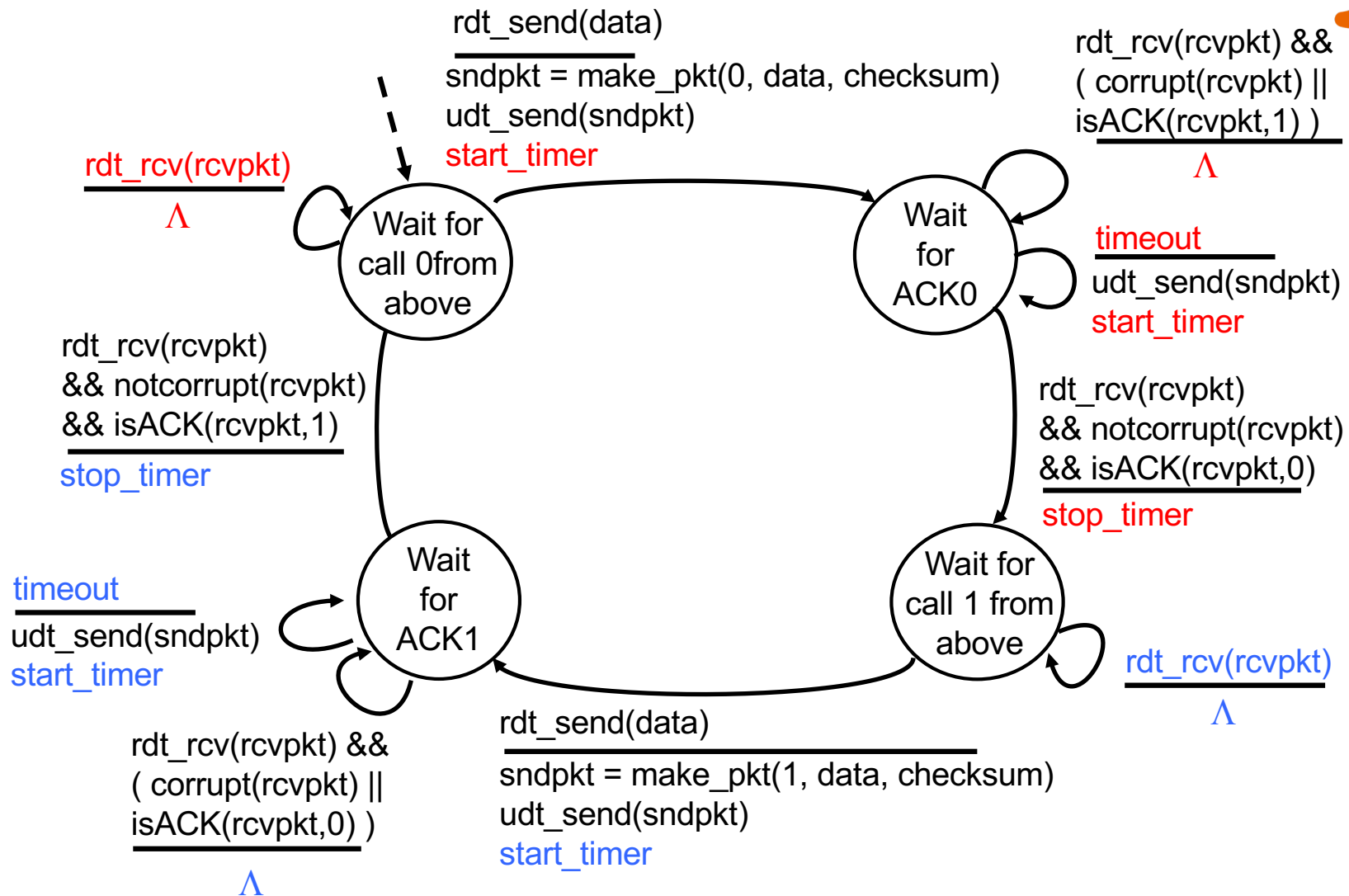Fall 2018 A-term

1
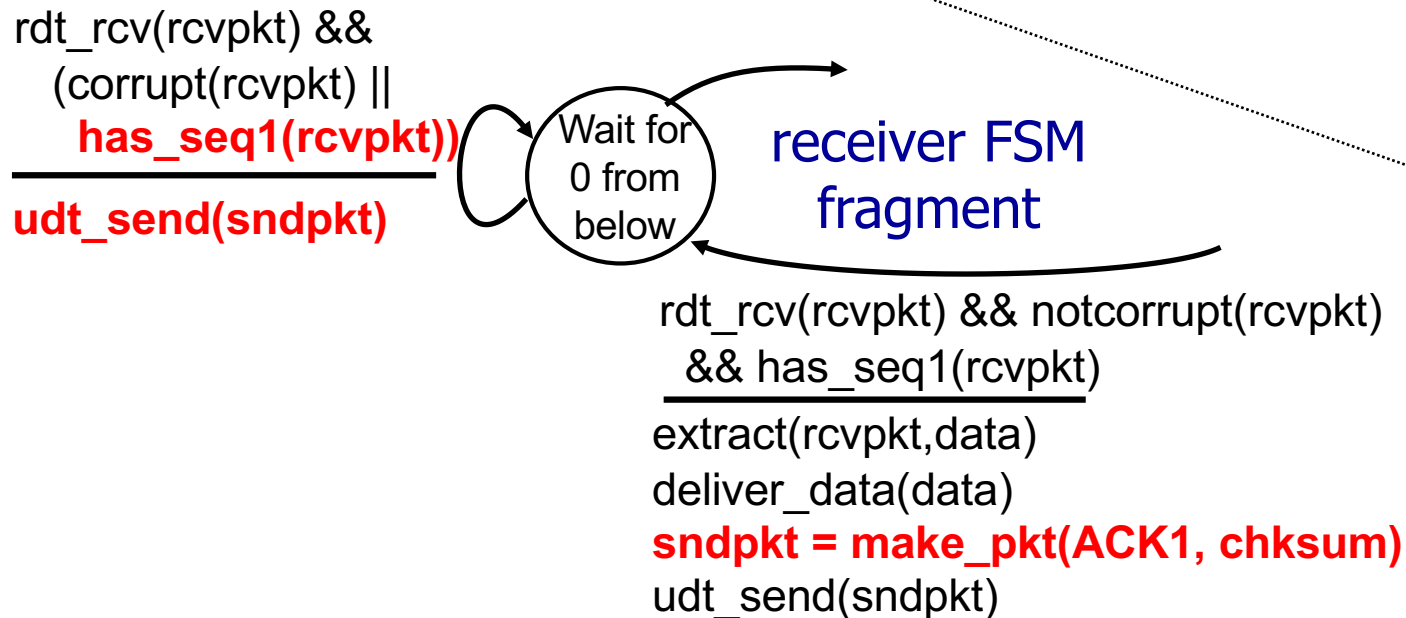
Today

Project 2

Mid-term review

rdt3.0 sender

rdt_send(data)
_____
sndpkt = make_pkt(0, data, checksum)
udt_send(sndpkt)
start_timer

rdt_rcv(rcvpkt)
_____
Λ

Wait for call 0 from above

rdt_rcv(rcvpkt) &&
(corrupt(rcvpkt) ||
isACK(rcvpkt,1))
_____
Λ

Wait for ACK0

timeout
_____
udt_send(sndpkt)
start_timer

rdt_rcv(rcvpkt)
&& notcorrupt(rcvpkt)
&& isACK(rcvpkt,1)
_____
stop_timer

rdt_rcv(rcvpkt)
&& notcorrupt(rcvpkt)
&& isACK(rcvpkt,0)
_____
stop_timer

timeout
_____
udt_send(sndpkt)
start_timer

Wait for ACK1

Wait for call 1 from above

rdt_rcv(rcvpkt)
_____
Λ

rdt_rcv(rcvpkt) &&
(corrupt(rcvpkt) ||
isACK(rcvpkt,0))
_____
Λ

rdt_send(data)
_____
sndpkt = make_pkt(1, data, checksum)
udt_send(sndpkt)
start_timer

rdt3.0 receiver ?

rdt3.0: receiver fragments

rdt_rcv(rcvpkt) &&
  (corrupt(rcvpkt) ||
    has_seq1(rcvpkt))
——————————————
udt_send(sndpkt)

Wait for
0 from
below

receiver FSM
fragment

rdt_rcv(rcvpkt) && notcorrupt(rcvpkt)
  && has_seq1(rcvpkt)
——————————————
extract(rcvpkt,data)
deliver_data(data)
sndpkt = make_pkt(ACK1, chksum)
udt_send(sndpkt)

Project 2

Rdt 3.0 = ABP (alternating bit protocol) is required

GBN (Go-Back-N) is encouraged

Mid-term exam

6 questions in the exam,

50 minutes

32 points + 3 bonus points.

Closed book, 1 A4 2-sided cheat sheet.

Mid-term exam

Q1: Network performance: packet delay

Q2: HTTP

Q3: RDT

Q4: Transport layer protocol intro, UDP

Q5: Network performance: packet delay

Q6: DNS

Q4 in Sample Questions: Message Segmentation

- Without Message Seg
- 1. If there is a *single bit error*, the whole message has to be retransmitted
- 2. huge packets are sent into the network. Smaller packets have to queue behind enormous packets and *suffer unfair delays*
- With Message Seg
- 1. Packets have to be put in sequence at the destination
- 2. The total amount of header bytes is more (1 point).
- 3. Lower total delay

Good Luck to your mid-term exam