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CS3516 Project2
Alternating Bit Protocol Trace
---- Network Simulator Version
                                      2.3 -----
Enter the number of messages to simulate: 50
Packet loss probability [enter number between 0.0 and 1.0]: 0.2
Packet corruption probability [0.0 for no corruption]: 0.2
Packet out-of-order probability [0.0 for no out-of-order]: 0
Average time between messages from sender's layer5 [ > 0.0]: 1000
Enter Level of tracing desired: 2
Do you want actions randomized: (1 = yes, 0 = no)? 1
Do you want Bidirectional: (1 = yes, 0 = no)? 0
Input parameters:
Number of Messages = 50 Lost Packet Prob. =
                          0.200 Out Of Order Prob. =
Corrupt Packet Prob. =
                                                          0.000
Ave. time between messages = 1000.00 Trace level = 2
Randomize = 1 Bi-directional = 0
                  Layer 5 to 4 Message = !fEVhy->Pbs'2J3m~2DU
Α:
      1166.3862,
B:
                  Layer 4 to 5 Message = !fEVhy->Pbs'2J3m~2DU
      1235.9387,
                                 Message = \#i.Qt9]!Eh-Ps8[~Dg,
Α:
      2619.3233,
                  Layer 5 to 4
                                 Message = \#i.Qt9]!Eh-Ps8[~Dg,
B:
      2625.9929,
                  Layer 4 to 5
                  Layer 5 to 4 Message = X$d:oFzQ(]3h>sJ\sim U,a
Α:
      3453.8946,
      3476.0441,
                  Layer 4 to 5
                                 Message = X$d:oFzQ(]3h>sJ\sim U,a
В:
                  Layer 5 to 4 Message = %kS%$jR:#iQ9!hP8~g07
      4363.6015,
Α:
                  Layer 4 to 5 Message = %kS%$jR:#iQ9!hP8~g07
B:
      4387.5839,
      6268.9972,
Α:
                  Layer 5 to 4 Message = &\wq&e_XRLF?93-'~xrl
                  Layer 4 to 5 Message = &\wq&e_XRLF?93-'~xrl
      6275.0572,
В:
                  Layer 5 to 4 Message = '2=IT'kv$x:FQ]hs~,7C
Α:
      7798.8134,
                                 Message = '2=IT'kv$x:F0]hs\sim,7C
B:
      7812.6338,
                  Layer 4 to 5
                                 Message = (Eb~=Z(6SpxLi(Eb~=Zw
Message = (Eb~=Z(6SpxLi(Eb~=Zw
      9758.5664,
                  Layer 5 to 4
Α:
B:
      9788.2682,
                  Layer 4 to 5
                                 Message = dW(V'U\&)%S$R2Q!P~0\}N
Α:
     10655.1617,
                   Layer 5 to 4
                  Layer 4 to 5
                                 Message = dW(V'U\&)%S$R2Q!P~O\}N
B:
     10666.4439,
                  Layer 5 to 4 Message = *jL.nP2r*6vX:z]>~aC%
     11591.0565,
Α:
     11613.1367,
                  Layer 4 to 5
B:
                                 Message = *jL.nP2r*6vX:z]>~aC%
                  Layer 5 to 4 Message = +fpdWK>2&+k_RF3-~rfY
Α:
     11811.7186,
                  Layer 4 to 5 Message = +fpdWK>2&+k_RF3-~rfY
B:
     11815.2067,
     12836.2051,
                  Layer 5 to 4
                                 Message = ,16;AFKPUZ,ejoty~&+0
Α:
     12848.2548,
                                 Message = ,16;AFKPUZ,ejoty\sim&+0
Message = -DZq*AWn'=T-$:Qh\sim7Ne
                  Layer 4 to 5
B:
     14433.1572,
                  Layer 5 to 4
Α:
                  Layer 4 to 5 Message = -DZq*AWn'=T-$:Qh~7Ne
Layer 5 to 4 Message = .V~Iq;d.V~Iq.d.V~Iq;
B:
     14513.3358,
     14969.2503,
Α:
B:
     15144.1145,
                  Layer 4 to 5 Message = .V~Iq;d.V~Iq.d.V~Iq;
     16611.7202,
Α:
                  Layer 5 to 4 Message = xiE~Z6pL(b=wSxiE~Z6p
B:
     16666.9268,
                  Layer 4 to 5 Message = xiE\sim Z6pL(b=wSxiE\sim Z6p
                  Layer 5 to 4 Message = d{iVD1|jWE2}2X03\sim lYG
Α:
     18534.0319,
B:
     18539.0931,
                  Layer 4 to 5 Message = d{iVD1|jWE2}2X03~lYG
Printing the contents of the Simulation Event Q
Event Time = 18584.032 A: Timer
Event Time = 18659.512 A: LAYER 5
Printing the contents of the Simulation Event 0
Event Time = 18659.512 A: LAYER 5
```

Printing the contents of the Simulation Event Q

Event Time = 18634.032 A: Timer Event Time = 18659.512 A: LAYER 5

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Printing the contents of the Simulation Event Q
Event Time = 18634.032 A: Timer
Event Time = 18659.512 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 18659.512 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 18659.512 A: LAYER 5
Event Time = 18684.032 A: Timer
Printing the contents of the Simulation Event Q
Event Time = 18675.803 A: LAYER 3 Seq/Ack/Check = 0/0/32844: d{iVD1|jWE2}2X03~lYG
Event Time = 18684.032 A: Timer
     18659.5121, Layer 5 to 4 Message = 10x.-,+*)('\&%$#1~)|{
Printing the contents of the Simulation Event Q
Event Time = 18684.032 A: Timer
Event Time = 19249.720 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 18725.803 A: Timer
Event Time = 19249.720 A: LAYER 5
                  Layer 4 to 5 Message = 10x.-,+*)('&\$\$1\~}|{
Layer 5 to 4 Message = 2CSdt'7HXiy,<M^n21BR
B:
     18683.6797,
Α:
     19249.7199,
     19261.2915,
                                  Message = 2CSdt'7HXiy,<M^n21BR</pre>
B:
                   Layer 4 to 5
                                  Message = 3Uw;^!Df*Ln2Tv:]~3e)
Message = 3Uw;^!Df*Ln2Tv:]~3e)
Α:
     20667.9254,
                   Layer 5 to 4
B:
     20678.8808,
                   Layer 4 to 5
                   Layer 5 to 4
                                  Message = 4f=qGzP&Yxc8lB3K~T4^
     21938.6181,
Α:
B:
     21963.8125,
                   Layer 4 to 5
                                  Message = 4f=qGzP&Yxc8lB3K~T4^
                   Layer 5 to 4
Α:
     22444.8879,
                                  Message = 5zbI0u]D+pW>&kR9~fM5
                   Layer 4 to 5
B:
     22508.8611,
                                  Message = 5zbI0u]D+pW>&kR9~fM5
     23744.9655,
                   Layer 5 to 4
Α:
                                  Message = 6x(\sim wpibZSLE=6x(\sim wpi
B:
     23749.8063,
                   Layer 4 to 5
                                  Message = 6x(\sim wpibZSLE=6x(\sim wpi
                                  Message = d7LVaku!,6AK2`jt~+5?
Message = d7LVaku!,6AK2`jt~+5?
Α:
     25011.4055,
                   Layer 5 to 4
     25035.6039,
B:
                   Layer 4 to 5
Α:
     26409.3665,
                   Layer 5 to 4
                                  Message = 8T8.Jf$?[w5Qm+Gc~<Xt
                                  Message = 8T8.Jf$?[w5Qm+Gc~<Xt
                   Layer 4 to 5
B:
     26513.0356,
     27608.1687,
                   Layer 5 to 4
                                  Message = 9g693a0^-Z*W'T$Q~N{K}
Α:
B:
     27627.8120,
                   Layer 4 to 5
                                  Message = 9g693a0^-Z*W'T$Q~N\{K
                                  Message = :yZ;:[<{]=|^>}_?\sim`A!
Α:
     28974.0028,
                   Layer 5 to 4
                   Layer 4 to 5 Message = :yZ;:[<{]=|^>}_?\sim`A!
B:
     29003.2953,
     30273.3914,
                   Layer 5 to 4
                                  Message = ;.~qd;I;.~qdVI;.~qdV
Α:
B:
     30279.3277,
                   Layer 4 to 5
                                  Message = ;.~qd;I;.~qdVI;.~qdV
                   Layer 5 to 4
                                  Message = <AEIMQ<Y^bfjnrvz~%)-</pre>
Α:
     30609.3137,
B:
     30814.1940,
                   Layer 4 to 5
                                  Message = <AEIMQ<Y^bfjnrvz~%)-</pre>
                   Layer 5 to 4
     31413.7546,
                                  Message = = fi \sim 6Lb = xEZp(=3i \sim 6Lb)
Α:
                   Layer 4 to 5
B:
     31493.0685,
                                  Message = =fi\sim6Lb=xEZp(=3i\sim6Lb
                   Layer 5 to 4
     33008.6949,
                                  Message = dfxV}Gn7>(0v2g0W~Ho8
Α:
     33126.2622,
B:
                   Layer 4 to 5
                                  Message = dfxVGn7>(0v2g0W~Ho8
Α:
     34264.4959,
                   Layer 5 to 4
                                  Message = ?xS.gBzU0?D|W2kF\sim Y4m
B:
                   Layer 4 to 5
     34266.7195,
                                  Message = ?xS.gBzU0?D|W2kF\sim Y4m
Α:
     35211.4271,
                   Layer 5 to 4
                                  Message = A-wdP<)s`LA%o[H4~kWD
     35221.6952, Layer 4 to 5 Message = A-wdP<)s`LA%o[H4~kWD
```

Printing the contents of the Simulation Event Q

```
Event Time = 35261.427 A: Timer
Event Time = 35799.314 A: LAYER 5
Printing the contents of the Simulation Event Q
Α:
        35799.3138, Layer 5 to 4 Message = B?=;97531x-B)'%\#\sim|zx
Printing the contents of the Simulation Event Q
Event Time = 36956.930 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 35899.314 A: Timer
Event Time = 36956.930 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 35899.314 A: Timer
Event Time = 36956.930 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 36956.930 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 35949.314 A: Timer
Event Time = 36956.930 A: LAYER 5
                             Layer 4 to 5 Message = B?=;97531x-B)'%\#\sim|zx
B:
        35921.5364.
        36956.9299,
                             Layer 5 to 4
                                                     Message = CRbg#2BQap!1CP`o~0?0
Α:
B:
        36972.1298,
                             Layer 4 to 5
                                                     Message = CRbq#2BQap!1CP`o~0?0
        37814.1702,
                                                     Message = De(Ij-No2St7XD<^{R})
Α:
                              Layer 5 to 4
B:
        37815.5966,
                              Layer 4 to 5
                                                     Message = De(Ij-No2St7XD<^{R}C\&
Α:
        38786.2018,
                              Layer 5 to 4
                                                     Message = EwL\sim S(Zxb6i=pEEL\sim S(Zxb6i=pEEL) )))
                                                     Message = EwL\sim S(Zxb6i=pEEL\sim S(Zxb6i=pEEL) )))
                              Layer 4 to 5
B:
        38809.7913,
                             Layer 5 to 4
        39007.4504,
                                                     Message = d,pV<\#gM3w^D2nTF\sim eK1
Α:
                             Layer 4 to 5
B:
        39027.6840,
                                                     Message = d,pV<\#gM3w^D2nTF\sim eK1
                             Layer 5 to 4
Α:
        39774.3299,
                                                     Message = Gf6.&{skcZRJB93)Gvnf
                             Layer 4 to 5
B:
        39794.9545,
                                                     Message = Gf6.&{skcZRJB93)Gvnf
        41507.8066,
                             Layer 5 to 4
                                                     Message = HQZdmv!+4=GPYclu~H3<
Α:
                             Layer 4 to 5
B:
        41538.1487,
                                                     Message = HQZdmv!+4=GPYclu~H3<
        42211.3629,
                             Layer 5 to 4
                                                     Message = Id~;Vq.Id~;Vq.Id~;Iq
Α:
B:
        42228.0576,
                              Layer 4 to 5
                                                     Message = Id~;Vq.Id~;Vq.Id~;Iq
        42429.7610,
                              Layer 5 to 4
                                                     Message = JvEq?l:g5b0]+W&R~MyJ
Α:
        42434.5136, Layer 4 to 5
                                                     Message = JvEq?l:g5b0]+W&R~MyJ
R:
                             Layer 5 to 4
Α:
        43279.0098.
                                                     Message = K+iI)gG'eE%cC#aA~_>|
        43296.9062,
                                                     Message = K+iI)gG'eE%cC#aA~_>
B:
                             Layer 4 to 5
Α:
        45217.3184,
                             Layer 5 to 4 Message = LLx~pbSE6(wiZL=x~pbS
B:
        45221.9674,
                             Layer 4 to 5
                                                     Message = LLx~pbSE6(wiZL=x~pbS
                                                     Message = dPMVY]`cfilo2ux{~$'*
Message = dPMVY]`cfilo2ux{~$'*
Α:
        47201.5167,
                             Layer 5 to 4
                             Layer 4 to 5
        47222.4029,
В:
        49053.3026.
                              Layer 5 to 4
                                                     Message = NcwNCWl#7Lau,AUj~5J_
Α:
                              Layer 4 to 5
        49062.7436,
                                                     Message = NcwNCWl#7Lau,AUj~5J_
В:
                              Layer 5 to 4
                                                     Message = 0u=d0RxAgxU{Dj2X\sim Gm5}
        50321.1806,
Α:
B:
        50326.4402,
                              Layer 4 to 5
                                                     Message = Ou=dORxAgxU{Dj2X~Gm5
        52308.5984.
                              Layer 5 to 4
                                                     Message = Pfb;sP'_8pJ$[53G~X2j
Α:
                             Layer 5 to 4 Message = Q<(q]HQ[hS>*s J5\sim jUA]
Α:
        52310.8557,
        52311.4990, Layer 4 to 5 Message = Pfb;sP'_8pJ$[53G_X2]
В:
B:
        52605.4333, Layer 4 to 5 Message = Q<(q]HQ|hS>*s_J5\sim jUA
Printing the contents of the Simulation Event Q
Event Time = 52639.624 A: Timer
```

```
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 52689.624 A: Timer
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 52689.624 A: Timer
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 52739.624 A: Timer
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 52741.600 A: LAYER 3 Seq/Ack/Check = 0/0/56293: Q<(q]HQ|hS>*s_J5~jUA
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 52758.140 B: LAYER 3 Seq/Ack/Check = 1744830464/1/56357: Q<(q]HQ|
S>*s_J5~jUA
Event Time = 52789.624 A: Timer
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Event Time = 53562.143 A: LAYER 5
Printing the contents of the Simulation Event Q
Α:
     53562.1427, Layer 5 to 4 Message = ROLIFC?R9630-*'$\sim{xu}
Printing the contents of the Simulation Event Q
Event Time = 53612.143 A: Timer
Event Time = 55123.565 A: LAYER 5
     53590.0257,
B:
                 Layer 4 to 5 Message = ROLIFC?R9630-*'$~{xu
     55123.5647, Layer 5 to 4
                               Message = Sbp~x=LZSw(6ESbp~x=L
Α:
B:
     55402.9666, Layer 4 to 5
                               Message = Sbp~x=LZSw(6ESbp~x=L
     56526.5164, Layer 5 to 4 Message = dt6Vv8Xx:Tz<2|>_~Aa#
Α:
B:
     56546.9874, Layer 4 to 5 Message = dt6Vv8Xx:Tz<2|> ~Aa#
```

Simulator terminated at time 56559.967007 after receiving 50 msgs at layer5 Simulator Analysis:

```
Number of messages sent from 5 to 4: 50

Number of messages received at Layer 5, side A: 0

Number of messages received at Layer 5, side B: 50

Number of messages incorrectly received at layer 5: 0

Number of packets entering the network: 198

Average number of packets already in network: 0.000

Number of packets that the network lost: 36

Number of packets that the network corrupted: 31

Number of packets that the network put out of order: 0
```