Chapter6

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In general, the max length of a IP packet is 65515 byte, and the head of TCP contains 20bytes, so there is 65495 bytes left for TCP data.

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RTT = a*RTT+(1-a)M

So the result is

30*0.9+(1-0.9)*26=29.6ms,

29.6*0.9+(1-0.9)*32=29.84ms,

29.84*0.9+(1-0.9)*24=29.256ms

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We need to make sure that there is no TPDU with the same sequence number in a cycle of lifetime(here is 30s), which means we can only have no more than 255 TPDU in 30s, so the maximum data rate is :

128 * 255 *8 /30 = 8738 b/s

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Assume that the lifetime is t, just like problem 33, we get:

2^64*8/t = 75 Tbps = 75 * (2^40);

The maximum packet lifetime is t = 1.79*10^6 s

很抱歉，之前一这一个月一直在准备托福，一时间把作业的 deadline 遗忘了，这几次作业都迟交了，抱歉 T_T