p31.

$8 \cdot 10^6$ bits // 2Mbps each link

a. (1) about $\frac{8 \cdot 10^6}{2M} = 4(s)$ (2) 12 (s)

b. 800 個 10000 bits long packets

(1) $\frac{10000}{2M} = 5\,ms$ (2) 10 (ms)

c. 15 ms later the first packet reach destination

20 ms later the second ---

:

" 800th "

$(15 + 5 \times 799)ms$

Therefore it takes 4010 ms for message to reach the destination, which is much less than the result in part (a),

d. once packet loss happens, the source can retransmitted the lost packets instead of the whole message to save a large amount of time.

Furthermore, if the packet is too large, it may take too much space at routers, and hence cause higher probability of packet loss of other Internet users.