Computer Networking

Consider two physically-separated entities A and B. B has been supplied messages that will be sent to A following these conventions:

- A gets a request from the layer above to retrieve the next data (D) message from B.
- A must send a request (R) message to B on the A-to-B channel.
- Upon receipt of an R, B will send D back to A on the B-to-A channel.
- A should deliver exactly one copy of each D message to the layer above.
- R messages may be lost (but will not be corrupted) in the A-to-B channel.
- D messages are always delivered correctly (no loss or corruption).
- The delay along each channel is unknown and variable.

Give the FSM describing a protocol employed by A and B.

This FSM must compensate for the loss-prone channel between A and B, as well as implementing message passing to the layer above at entity A. Your FSM must not use more mechanisms than is necessary.

[20 marks]