Test Procedures

Test Case#	Description	Precondition	Steps	Test Data	Expected Results	Actual Results (Pass/Fail)
TC1	Starting the program	1. Wireless transceiver is plugged in	1. Press “connect” on the main menu 2. Choose default settings on the menu that just popped up 3. Confirm setting and click connect	N/A	Program is connected	Pass
TC2	Idle state	1. Wireless transceiver is plugged in 2. Program is connected (TC1 success)	1. Press “UPLOAD” on the main menu 2. Select “test.txt” from file selection dialog	N/A	Program displays Data frames sent: 0 Data frames left to send: 0 Number of resends: 0 ACK received: 0 NAK received: 0 Good data frame received: 0 Bad data frames sent: 0 ENQ received: 0 EOT received: 0	Pass
TC3	Start upload (multiple data frames)	1. Wireless transceiver is plugged in 2. Program is connected (TC1 success)	1. Press “UPLOAD” on the main menu 2. Select “test.txt” from file selection dialog	test_big.txt (25kB)	Program displays Data frames sent: **6** Data frames left to send: **19** Number of resends: various ACK received: **7** NAK received: various Good data frame received: 0 Bad data frames received: 1 ENQ received: 0 EOT received: various	Pass
TC4	Disconnect while in transfer	1. Wireless transceiver is plugged in 2. Program is connected (TC1 success) 3. Data is currently being streamed	1. Unplug power to transceiver	test_big.txt (25kB)	Program displays Data frames sent: 0 Data frames left to send: 0 Number of resends: various ACK received: 0 NAK received: 0	Pass

					Good data frame received: 7 Bad data frames received: 0 ENQ received: **various** EOT received: **various** Main menu will re-activate connect button after 30s has elapsed if no more data received.	
TC5	Simultaneous ENQ and upload	1. Wireless transceiver is plugged in 2. Program is connected (TC1 success) 3. Data is currently being streamed out	On another computer with another transceiver connected with same settings: 1. Press “UPLOAD” on the main menu 2. Select “test_big.txt” from file selection dialog	test_huge.txt (1306kB)	ENQ received, but keep sending frames until	Pass
TC6	Stop sending after set amount of frames sent	1. TC6 in progress			After 10 frames sent from each side, pause and allow the other side to send 10 frames.	Pass
TC7	Resend bad frame	1. Wireless transceiver is plugged in 2. Program is connected (TC1 success) 3. Data is currently being streamed out		test_larger.txt (37kB)	If bad frame, frame should be resent <u>Sender:</u> # of resends: n # of NAK: n <u>Receiver:</u> Bad data frames received: n	Pass

TC1 – Starting the program

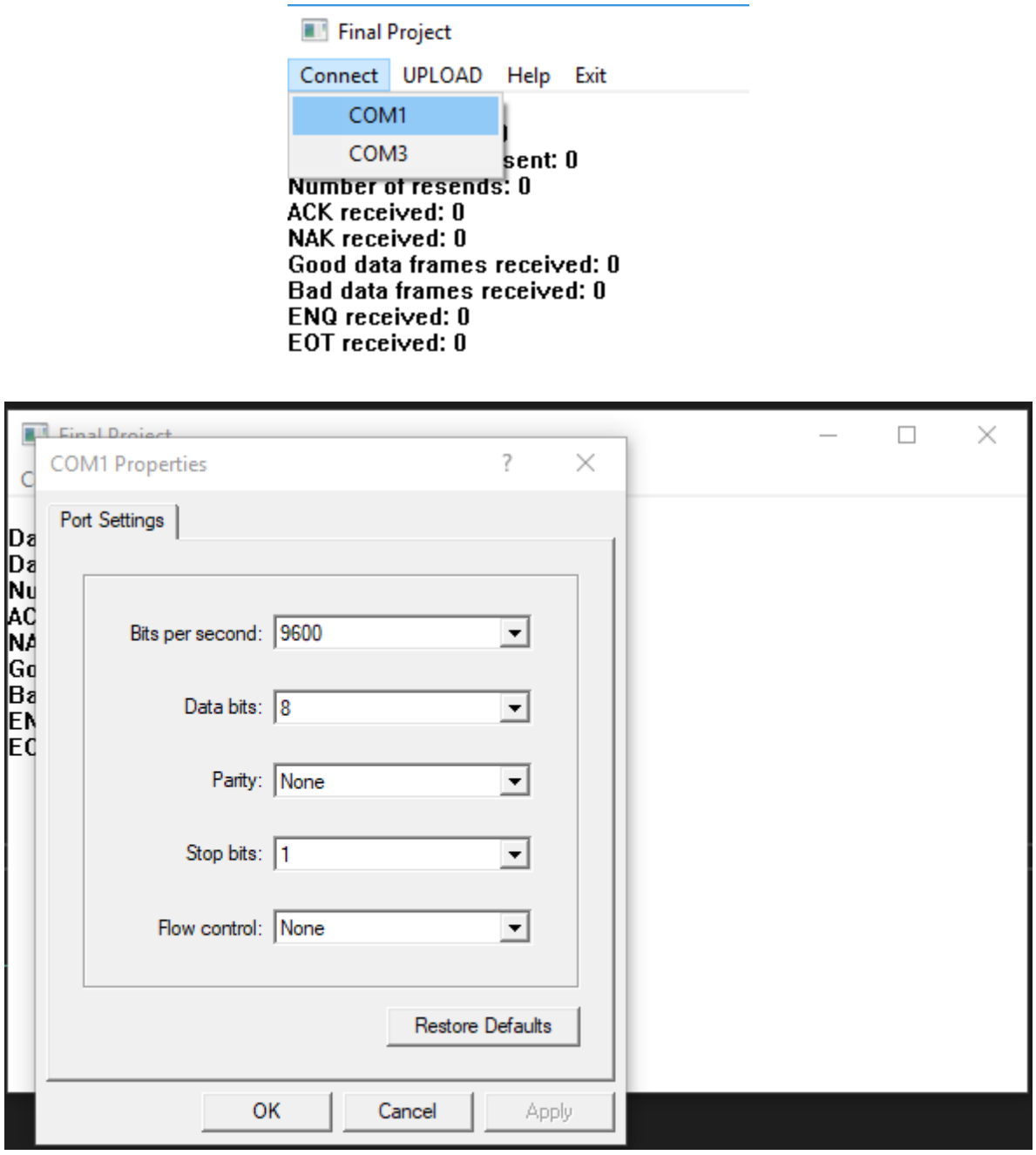

Figure 1- Starting the program and connect interface

TC2 – Idle state

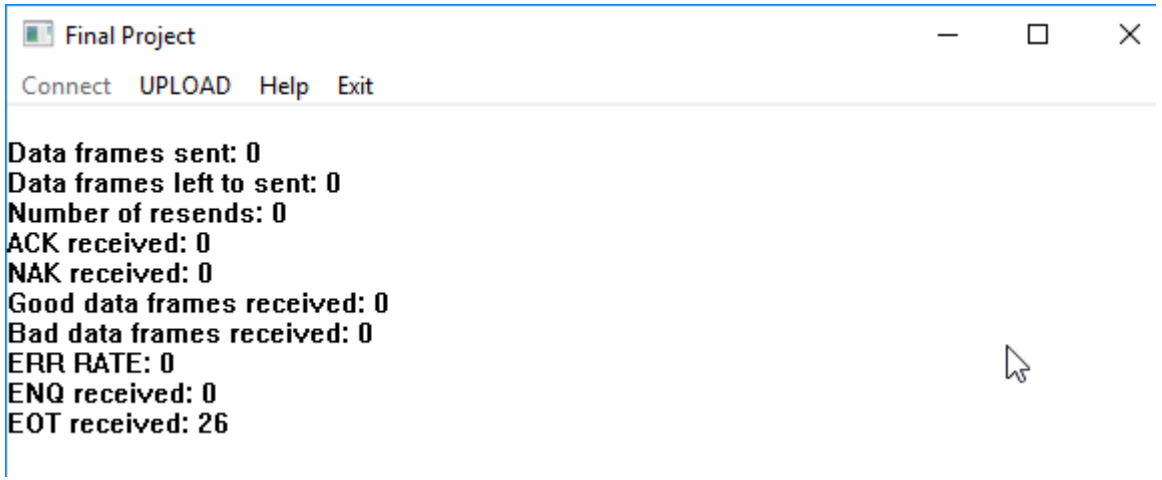

Figure 2- Idle state, EOTs being sent

TC3 – Start upload – One side

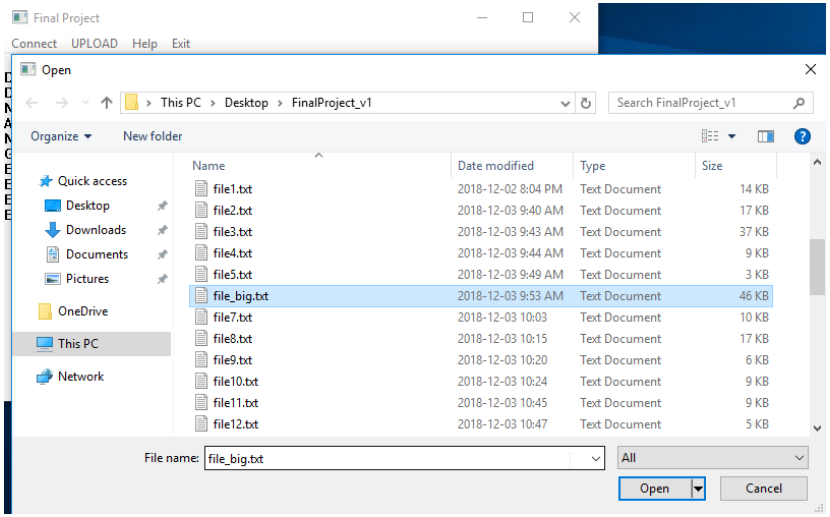

Figure 3- File upload interface

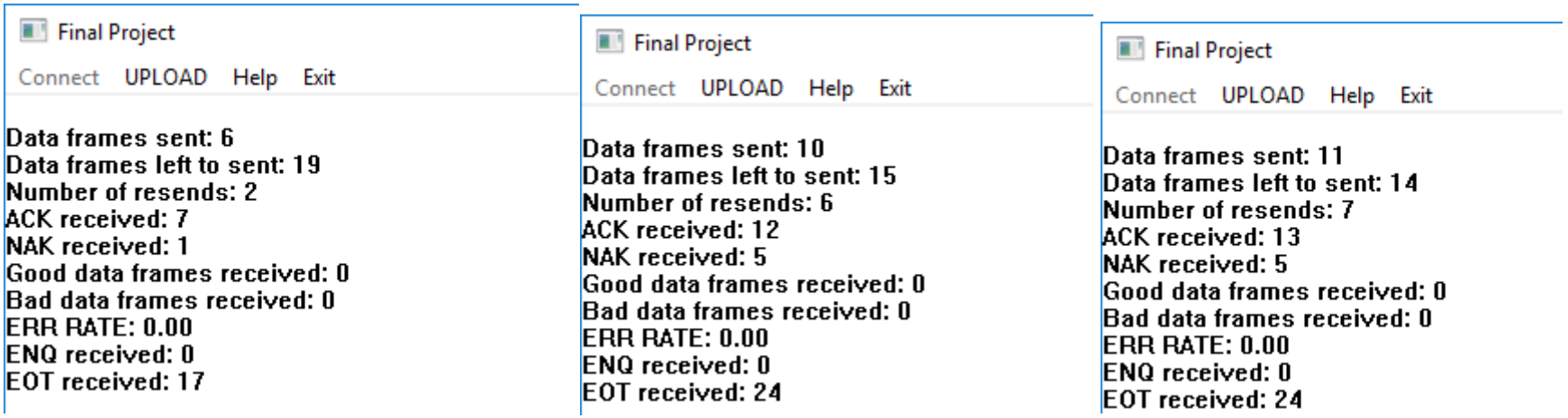

Figure 4 - One side send, continually send

TC4 – Disconnect while receiving data

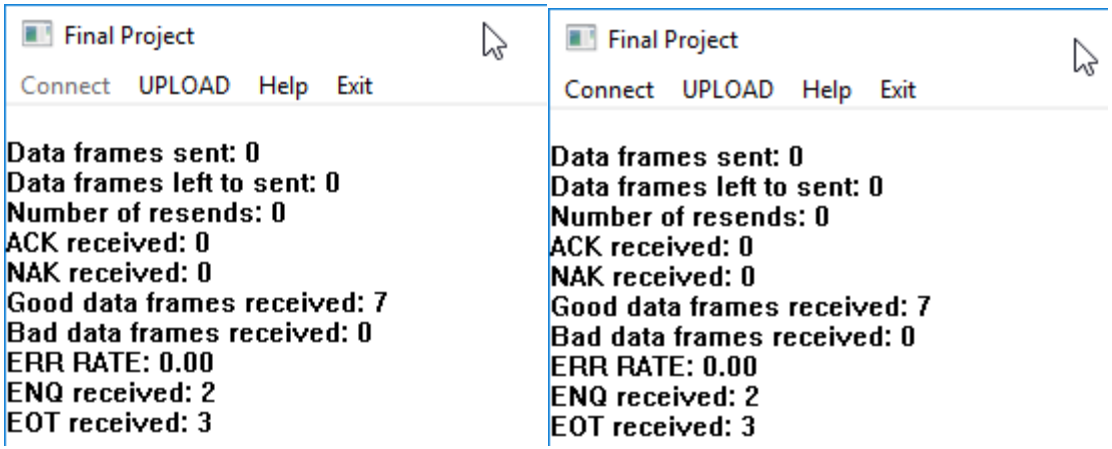

Figure 5- Disconnected while transfer in-progress

TC5 – Simultaneous ENQ and upload

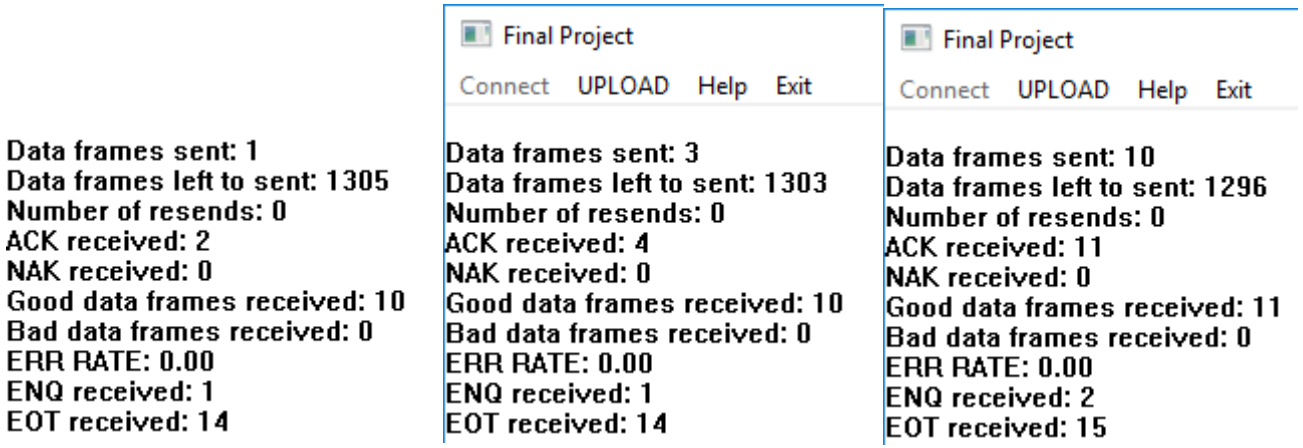

Figure 6 – Simultaneous upload from both sides.

Left: after receiving 10 frames, start sending.

Middle: in progress of sending 10.

Right: after sending 10, allow other side to send.

TC6 – Stop sending after max allowed frames sent, if in simultaneous upload

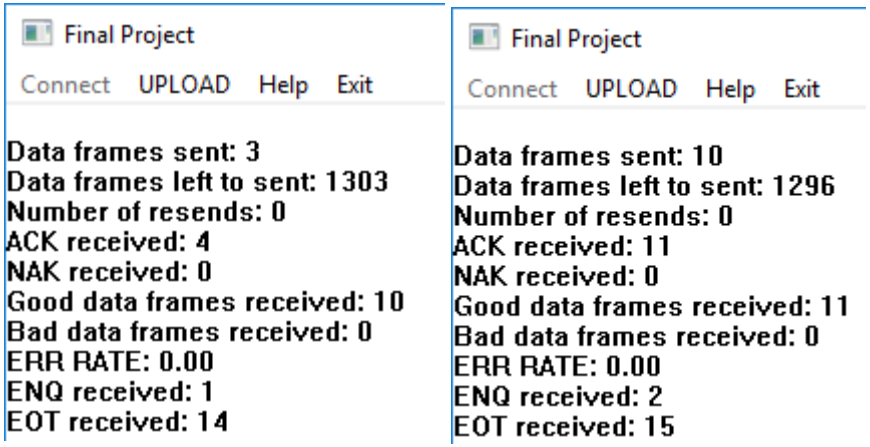

Figure 7- Allow other side to send. Left: before taking turn, Right: after 10 frames sent, other side starts sending

TC7 – Resend if bad frame

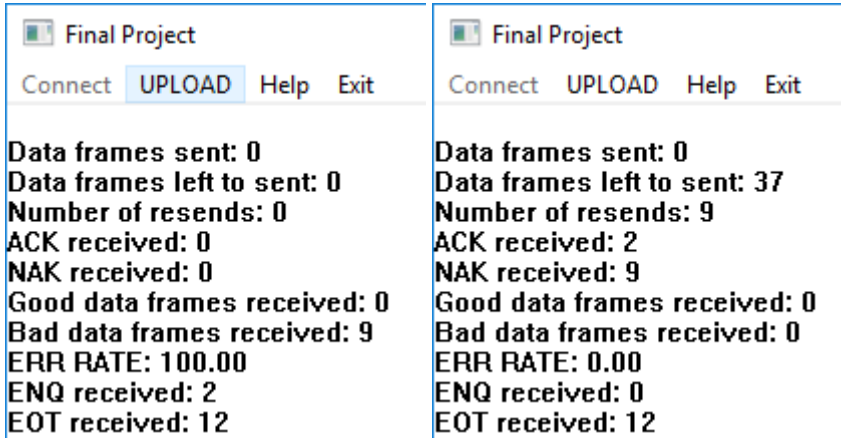

Figure 8- Resend if frame is corrupted. Left: Receiver, Right: Sender