

## Lecture 3 - Asynchronous Serial Interfaces

**Exercise 1:** Is the "Transmit Data" (TxD) signal an input or an output? How about "Receive Data" (RxD)? Is a computer a 'modem' or a 'terminal'?

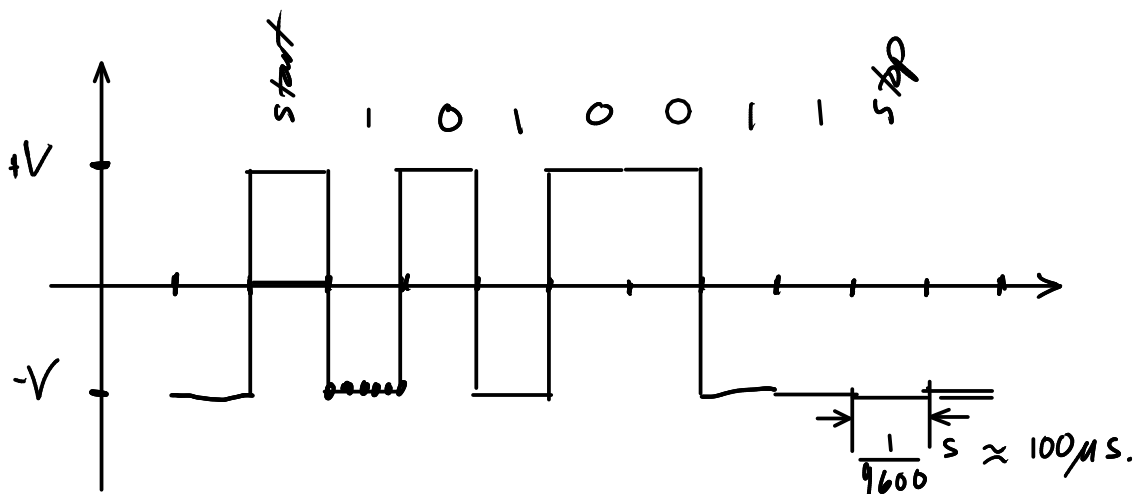
neither: TxD is pin name. on DTE - o/p  
DCE - i/p.

RxD: i/p on DTE  
o/p on DCE

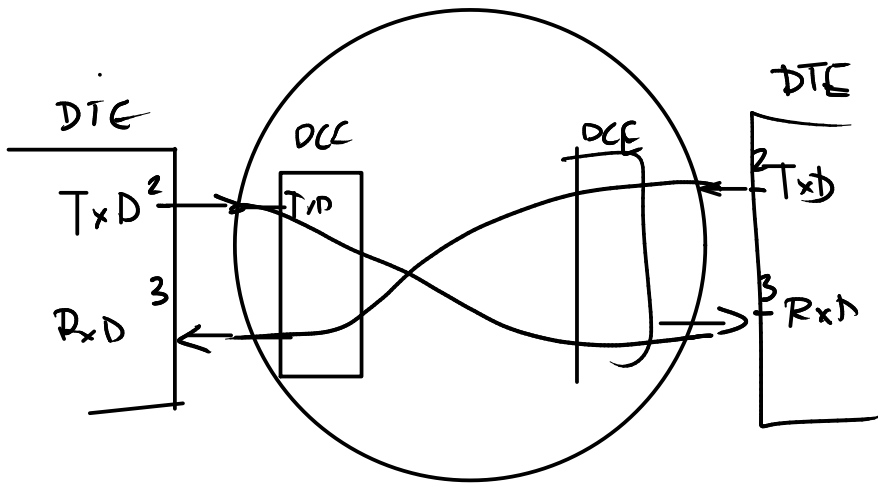
computer: most PC serial ports are wired as DTEs for connection to a modem (DCE).  
mainframes & "mini computers" are (were) wired as DCEs for connection to terminals or PCs.

**Exercise 2:** Draw the waveform used to send the ASCII character 'e' (hex 65) at 9600 bps with seven data bits and no parity.

0x65 = 0110101







Null Modem