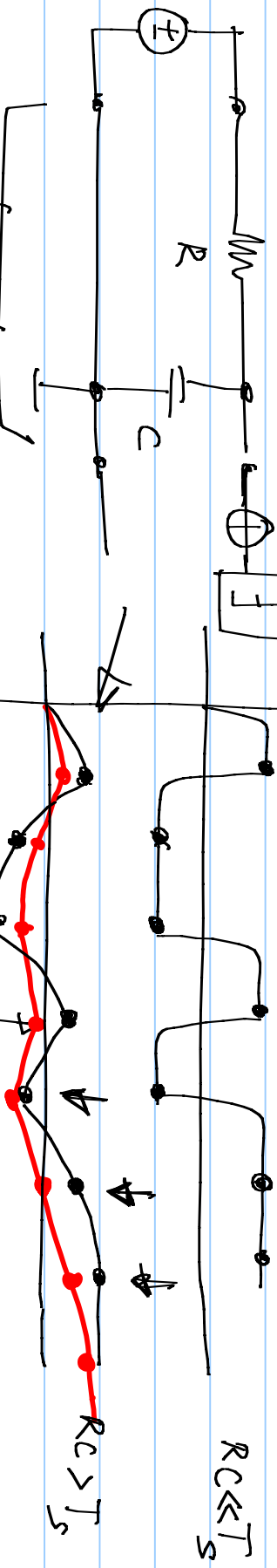
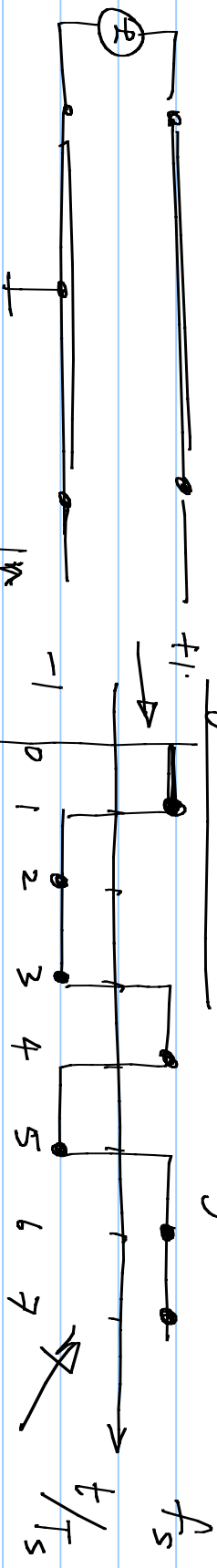


Digital data transmission over a wire

Note Title

Digital data: Binary: $-V, +V$

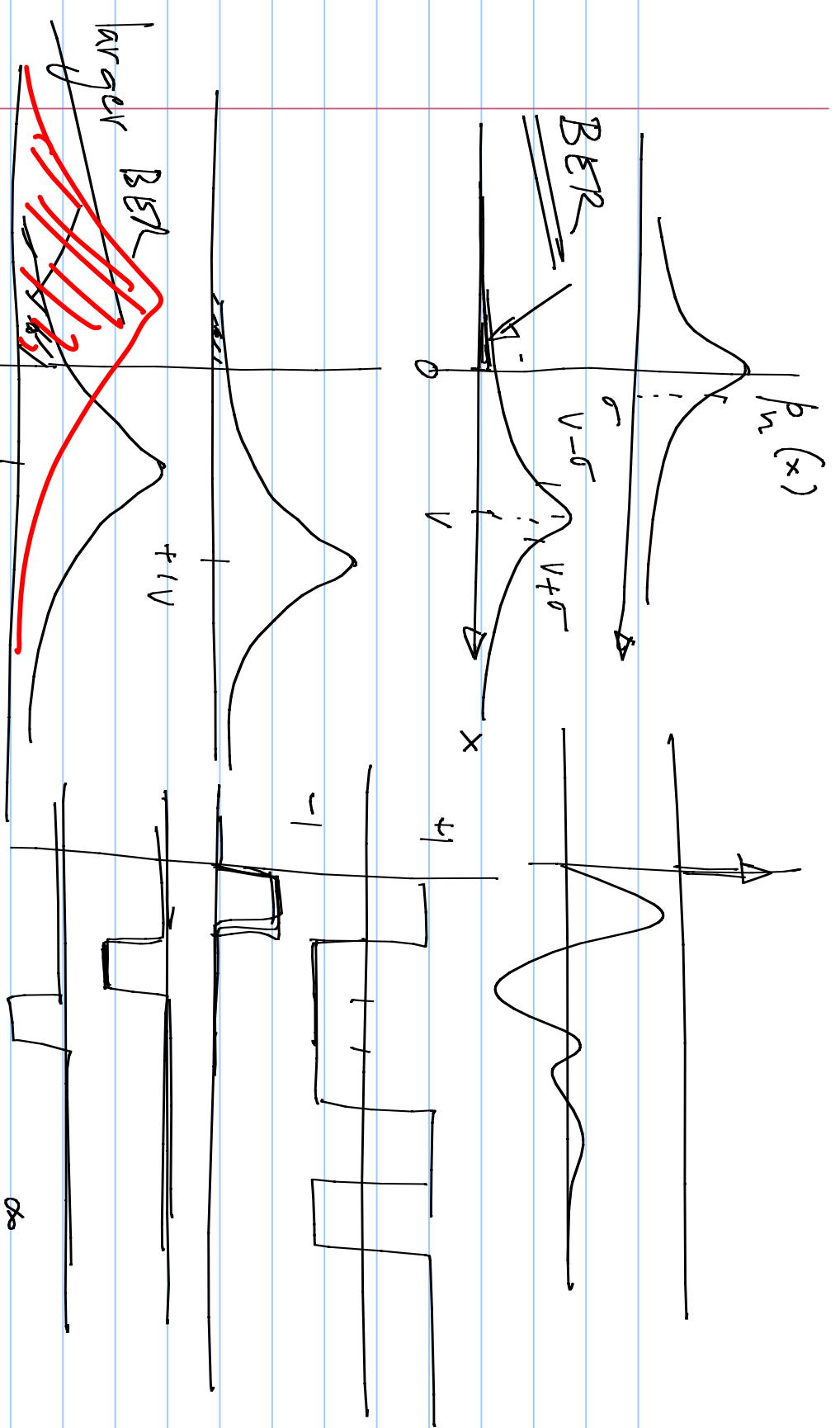
17-08-2007



$$P(N + n < 0 \mid V > 0) = \text{BER}$$

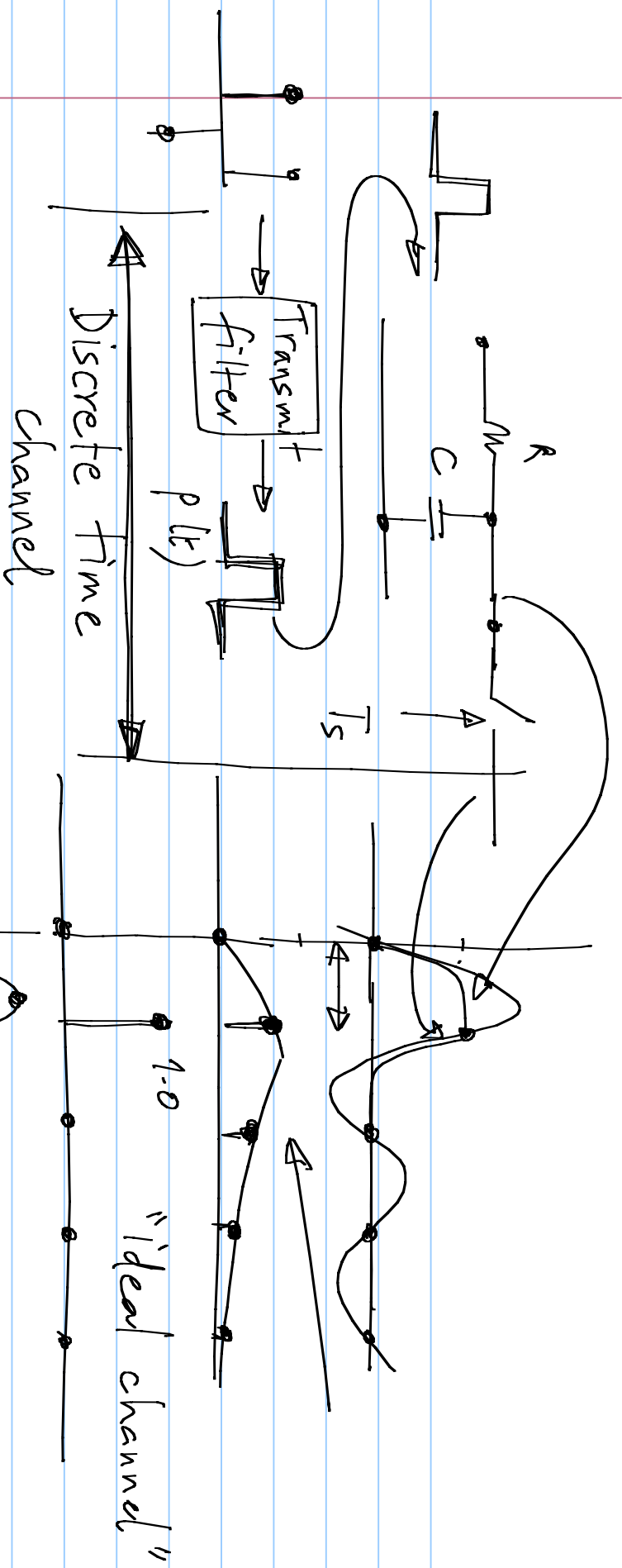
$$N(0, \sigma)$$

Values depend on previous symbols
 Intersymbol interference (ISI)

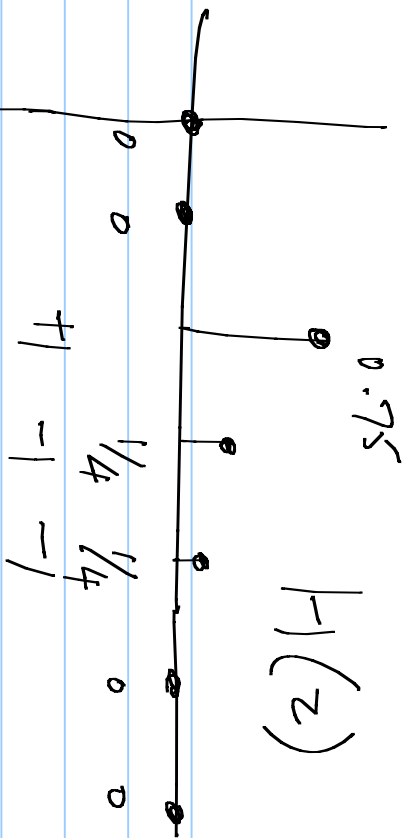
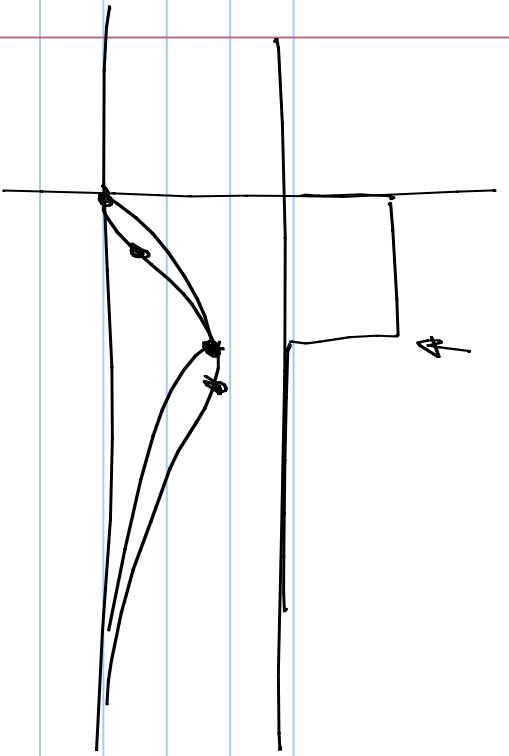


$$Q\left(\frac{V}{\sigma}\right) = \frac{1}{\sqrt{2\pi}} \int_{\frac{V}{\sigma}}^{\infty} e^{-\frac{t^2}{2}} dt$$

$$x(t) = \sum_{k=-\infty}^{\infty} a_k p(t - kT_s)$$



$n < 0$: pre
 $n > 0$: post



$$y[n] = \sum_k a_k h[n-k]$$

3
8

n	a_{n-1}	$n-2$	
-1	-1	-1	-1.25
-1	-1	1	-0.75
-1	1	-1	-0.75
-1	1	1	-0.25
	-1	-1	0.25
		-1	0.75
			0.75
			1.25

(-)

(+)