

Character Recognition:  
used in CRMA,

Rete System,

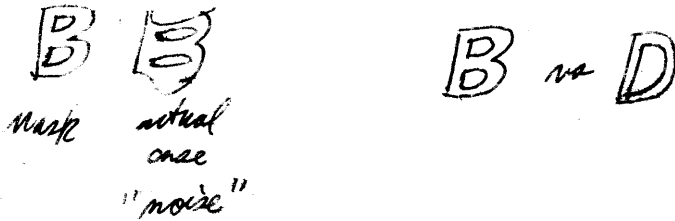
June 2, 58

IBM: 80-bit 2D raster

GE: (SRI system) 1D slit scan - analog waveform

principle

"comparison against a mask" - area-wise comparisons assumed.



Correlation Fcn:  $\phi_{rs}(x, y, t) = \iint r(x+\xi, y+\eta) s(\xi, \eta) d\xi d\eta$

$\uparrow$  mask                       $\uparrow$  signal

Correlation Coef:  $\phi_{rs} = \phi_{rs}(0, 0) = \iint r(\xi, \eta) s(\xi, \eta) d\xi d\eta$

gives one no. (or fn)

"auto correlation fn."  $r=s$

max for  $t=0$

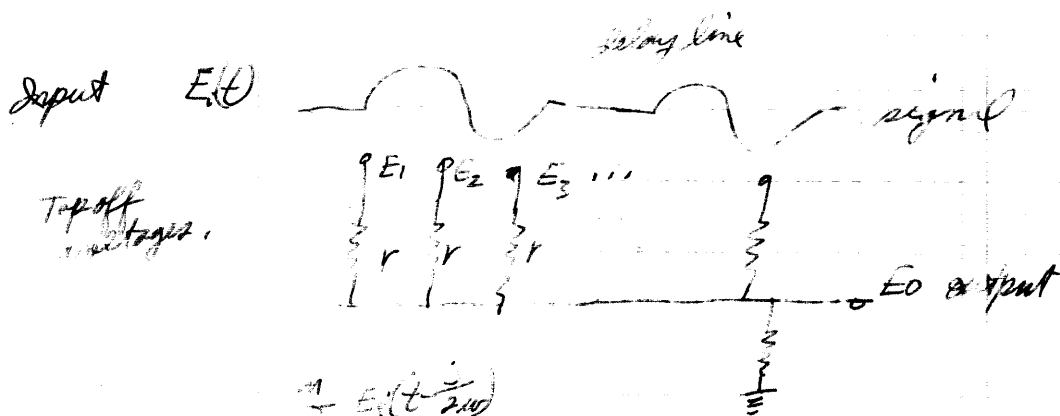
Corma system: average over  $t$

$$\phi_{rs}(t) = \int r(\tau+t) s(\tau) d\tau$$

$$s(t) \rightarrow |r(-t)| \rightarrow \phi_{rs}(t)$$

similar to a filter

when  $r^{-1} = s(t)$  "matched filter"



$$E_0(t) = \sum_{j=1}^n \frac{E_j(t - \frac{j}{2W})}{r_j} = C \sum_{j=1}^n W_j E(t_j) \quad t_j = t - \frac{j}{2W}$$

$$\frac{1}{R} + \sum_{j=1}^n \frac{1}{r_j}$$

