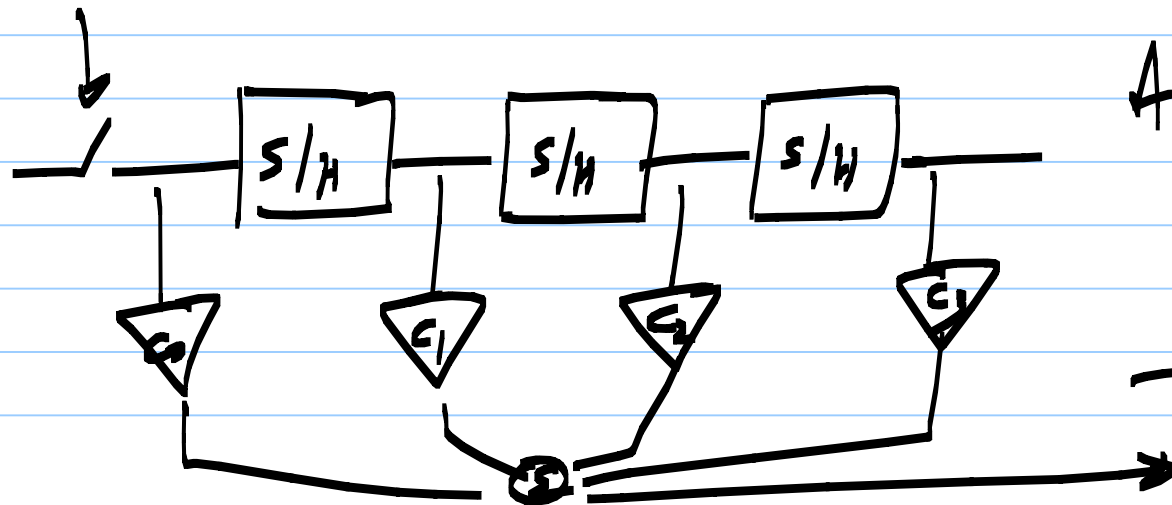




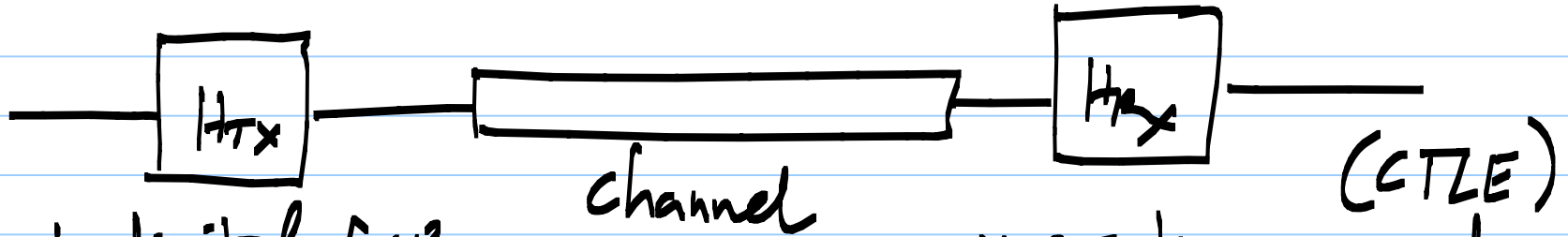
Semi digital filtering

Continuous-time linear equalizer (CTLE)



Analog FIR in the receiver

Linear equalization



- * Semi-digital FIR

- * Better controlled response

- * If Tx output is voltage-limited, dc gain has to be reduced as eq. tap weights increase

- * CT linear equalizer

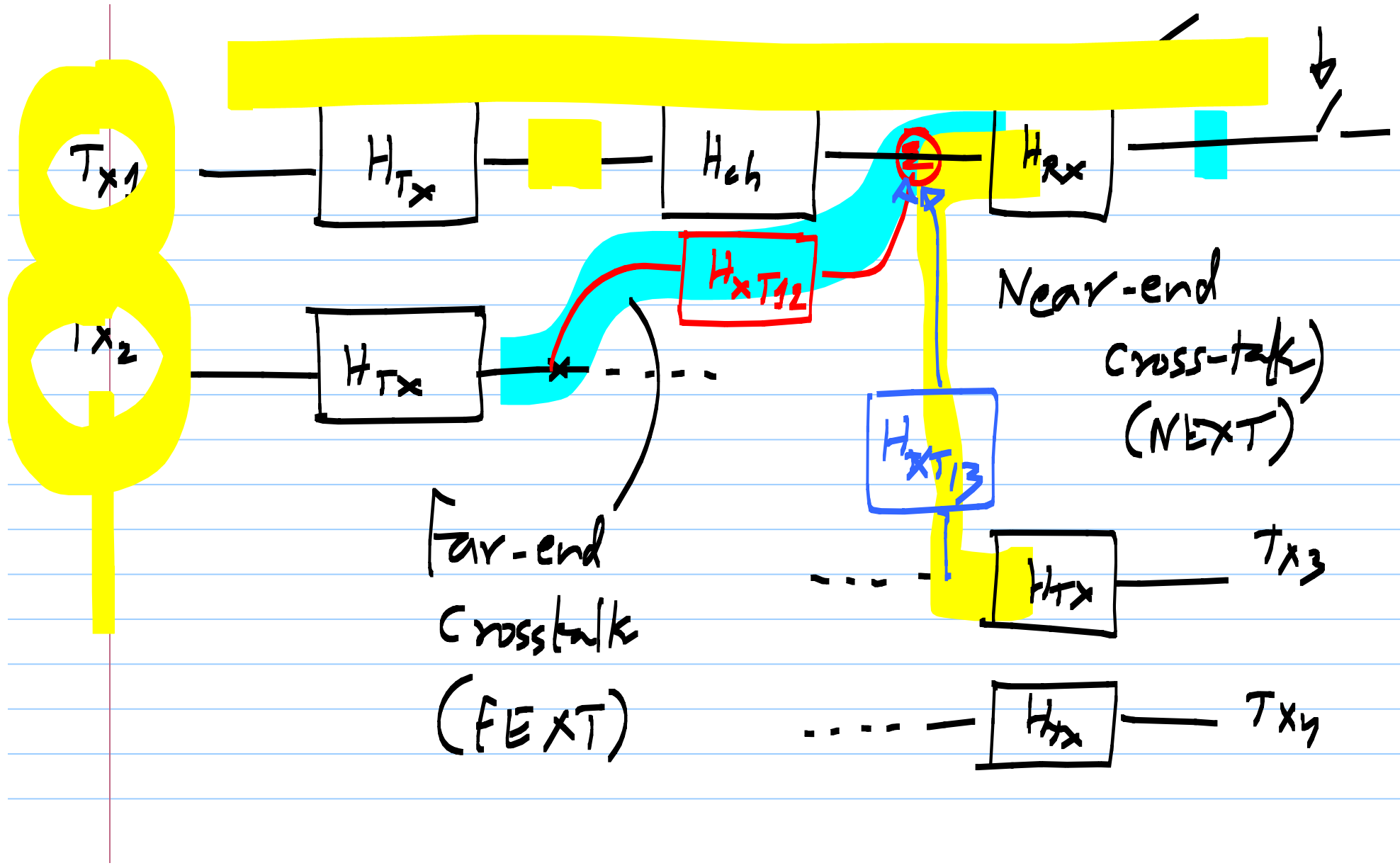
- * Simple zero/pole

→ h.f boost

- * Independent of CDR

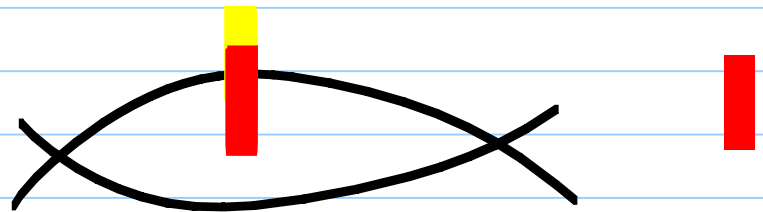
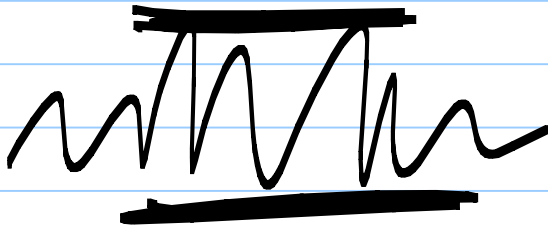
- * Can have gain

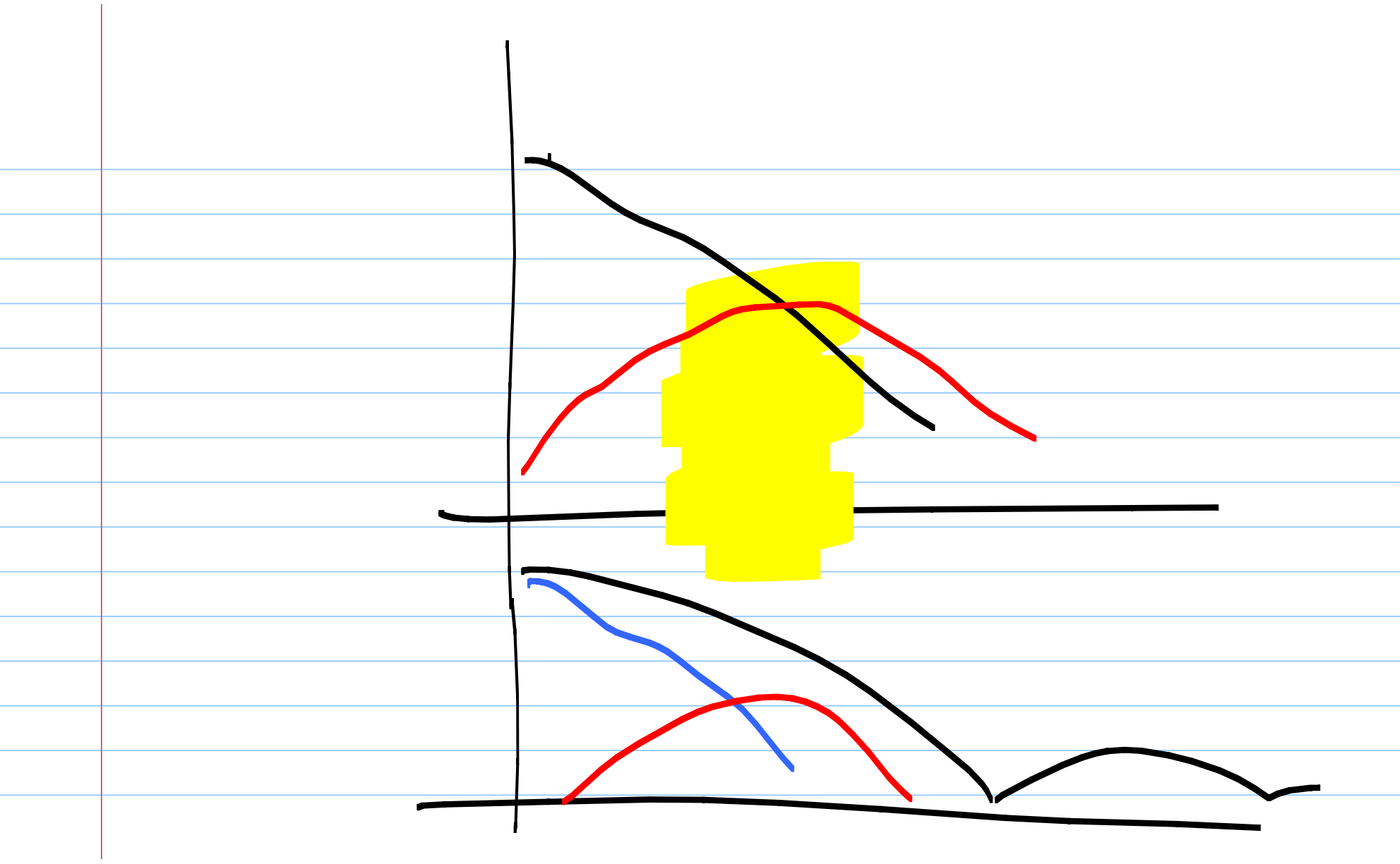
- * Amplifies HF noise & crosstalk



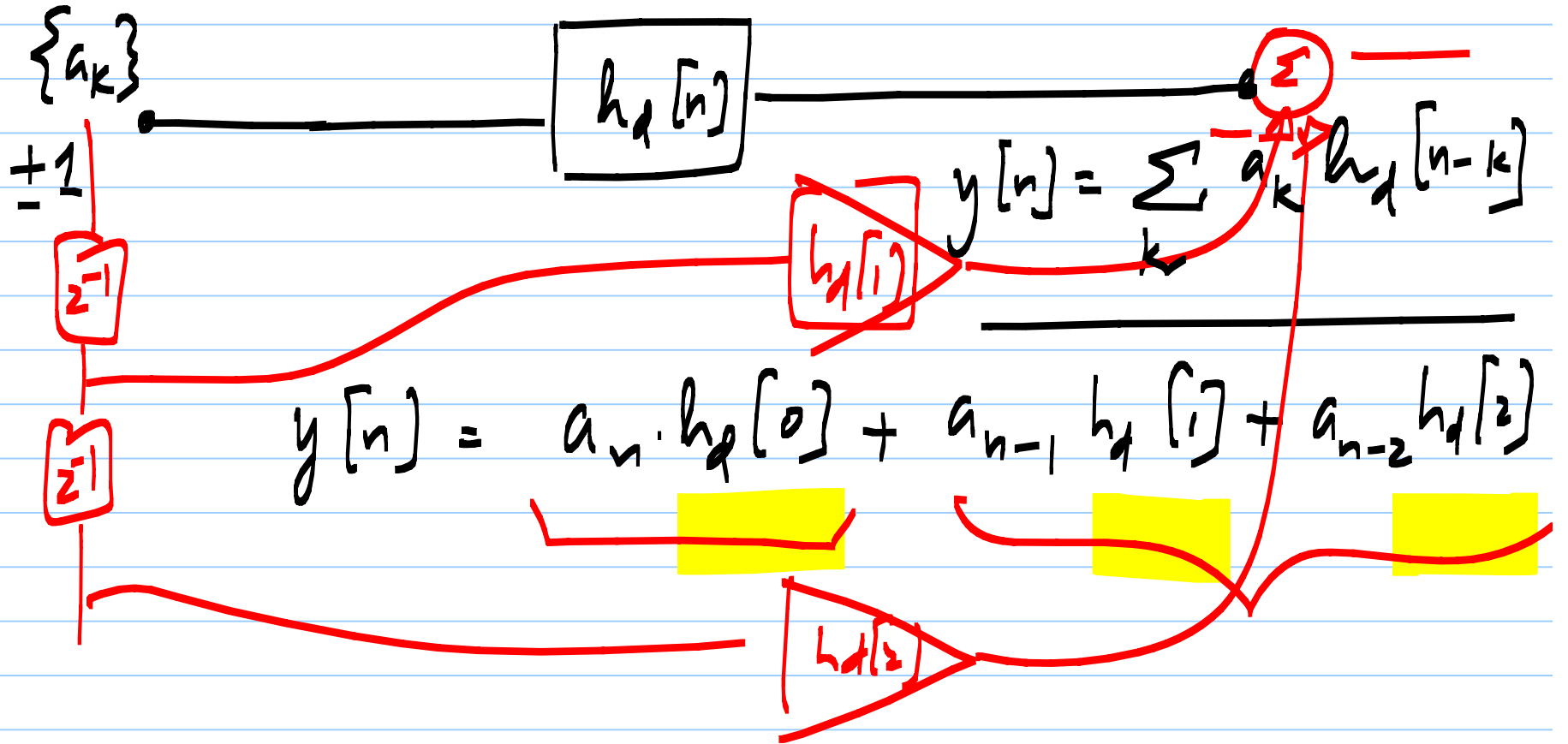
Transfer fn. for the desired signal : $H_{Tx} \cdot H_{ch} \cdot H_{Rx}$

Transfer fn. for crosstalk : $H_{Tx} \cdot H_{XT} \cdot H_{Rx}$





ISJ



Decision feedback equalizer (DFE)

