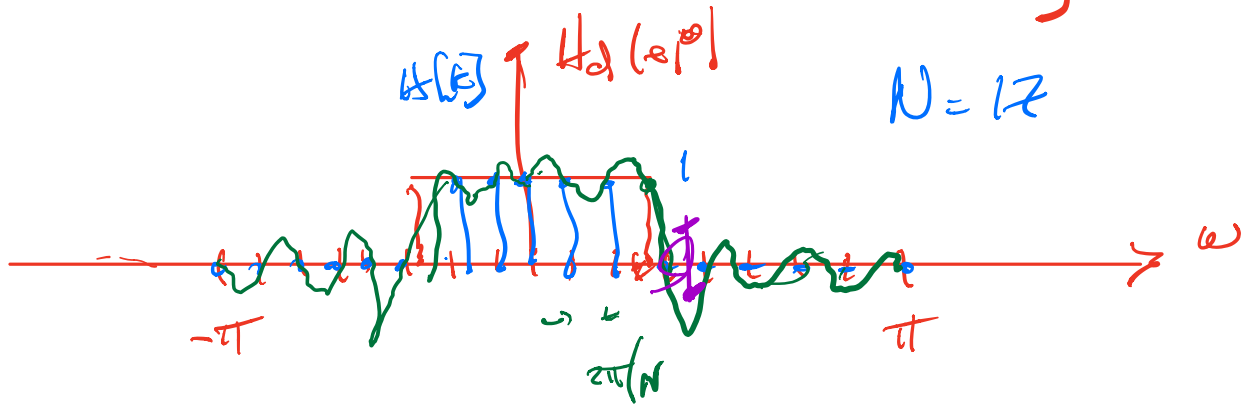


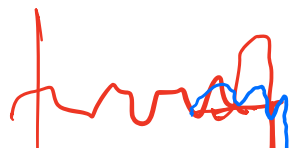
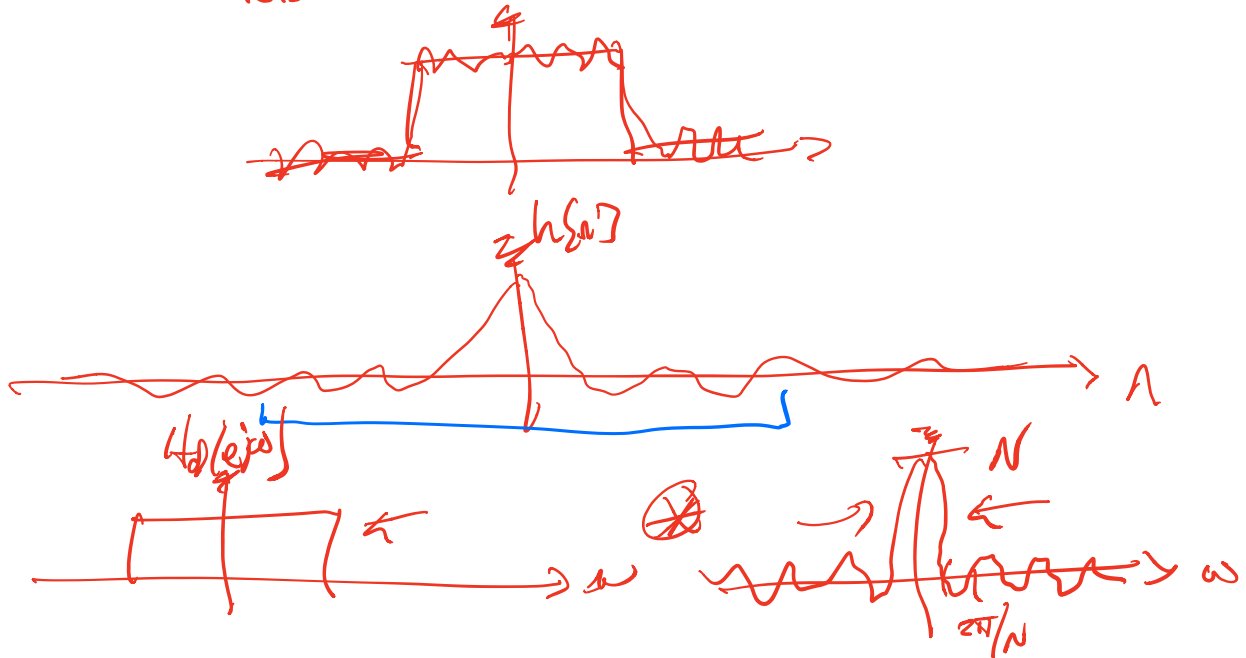
FREQUENCY-SAMPLED^{FIR} FILTER DESIGN

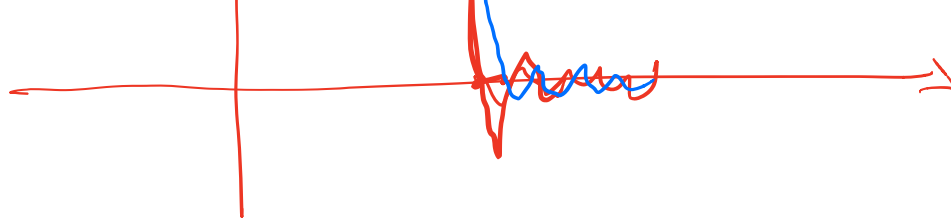
COMPARISON OF FILTER DESIGN PROCEDURES (OS 75 NOTES)



1. SET INITIAL DFT COEFFICIENTS TO EQUAL 1 OR 0 ACCORDING TO WHETHER $X[k]$ LIE IN PASSBAND OR STOPBAND
 $\omega = \frac{2\pi k}{N}$
2. ADJUST SAMPLES OR SAMPLES AT TRANSITIONS TO MINIMIZE RIPPLE

FILTER DESIGN





MULTS NEEDED FOR FILTER IMPLEMENTATIONS

KAISER ≈ 207

EQUIRIPPLE ≈ 104

FREQ SAMPLES 256

11R. ELIPICAL
9

DIRECT IMPLEMENTATIONS MULTS (OUTPUT PT.

KAISER 207

EQUIRIPPLE 104

FREQ. SAMPLE 190

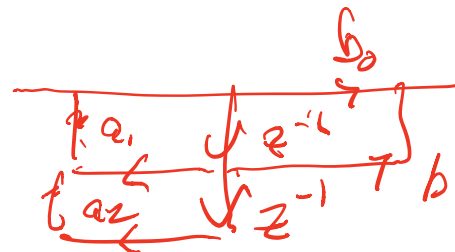
(26)(4) ≈ 104

* 11R

(20)

USING

DCT, ELLIPTICAL FILTERS



$L = 1024$

$N \approx 104$

PARKS McCLELLAN
w OHA/OVS

$1024 - 103 = 921 \Rightarrow 11$ SECTIONS

$$1 \left(2 \underbrace{\frac{L}{2} \log_2(L)}_{5120} + L \right) + \frac{L}{2} \log_2(L)$$

$$\begin{aligned} & 10,240 + 1024 \\ & \quad (11264) \\ & 123904 + 5120 \end{aligned}$$

$\rightarrow 129024$

(129) PTS / OUTPUT PT.