$f_{max} = \frac{V}{C_0} f_0$ C_0 광속 f_0 = carrier frequency

지연 (t)

$$\tilde{u}_i = \sum_{n=1}^{N_i} C_{in} \cos(2\pi f_{in} t + \theta_{in})$$

C_{in} : gain

f_{in} : 도플러 주파수

정지이고 → $\theta_{in} = 0$

$$f_{in} = \begin{cases} f_{max} \cos\left[\frac{n\pi}{2(N_i-1/2)}\right] \\ f_{max} \end{cases} \quad i = 1,2. \quad n = 1 \sim N_i - 1$$

$$C_{in} = \begin{cases} \frac{2V_0}{\sqrt{N_i - 1/2}} \sin\left(\frac{\pi n}{N_i - 1}\right) & n = 1 \sim N_{i-1} \quad i = 1 \\ \frac{2V_0}{\sqrt{N_i - 1/2}} \cos\left(\frac{\pi n}{N_i - 1}\right) & n = 1 \sim N_{i-1} \quad i = 2 \\ \frac{2V_0}{\sqrt{N_i - 1/2}} & n = N_i \quad i = 1,2 \end{cases}$$

$u_1 + j u_2 = u(t)$

$C_0 = 300\,Mm/s$

N, ∇_0 가 입력변수

$$\zeta(t) = |u(t)| = \sqrt{u_1^2 + u_2^2}$$

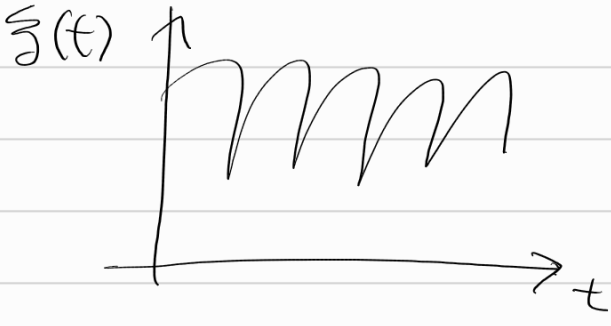
$$f_{max} = \frac{V}{C_0} f$$ → 우리가 가지고있는거

$$u_1 = \left(\sum_{n=1}^{N-1} \left(\frac{2\nabla_0}{\sqrt{N-1/2}} \sin\left(\frac{\pi n}{N-1}\right) \right) \cos\left(f_{max} \cos\left(\frac{\pi n}{2(N-1/2)}\right) t \right) \right)$$

$$+ \frac{2\nabla_0}{\sqrt{N-1/2}} \cos(f_{max} t)$$

$$u_2 = \left(\sum_{n=1}^{N-1} \left(\frac{2\nabla_0}{\sqrt{N-1/2}} \cos\left(\frac{\pi n}{N-1}\right) \right) \cos\left(f_{max} \cos\left(\frac{\pi n}{2(N-1/2)}\right) t \right) \right)$$

$$+ \frac{2\nabla_0}{\sqrt{N-1/2}} \cos(f_{max} t)$$



구현하면되겠지?

$\frac{0 \sim 100}{(ms)}$ 로 나누면되지!