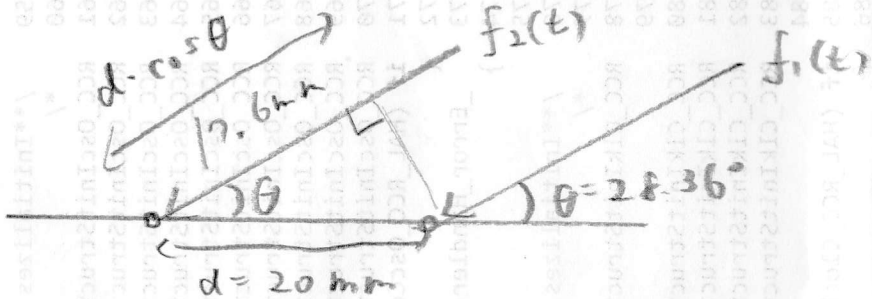

Broad side mode

Response of a two-mic array

$$\int_0^T \left(f_1(t) + f_1\left(t - \frac{d \cdot \cos\theta}{c}\right)\right)^2 dt$$

⇩

$$\sum_{n=0}^{N-1} \left(f_1[n] + f_2[n]\right)^2$$

$\omega = 2\pi f$, $t = \frac{n}{f_s}$

$$f_1[n] = \sin\left(\omega \frac{n}{f_s}\right)$$

$$f_2[n] = \sin\left(\omega\left(\frac{n}{f_s} - \frac{d \cdot \cos\theta}{c}\right)\right)$$

$f_s = 19.5\,kHz$

$c = 343\,m/s$

$d = 20\,mm$

$N = 1024$