

Test Power Point

Presentation

$$R_T = \frac{V}{A} \times .16$$

$$R_T = 0.16 \frac{V}{A}$$

$$5m \times 5m \times 4m = \cancel{125}^{100} m^3$$

$$A_1 = 7.10 \text{ sabins}$$

$$R_T = .16 \frac{100 m^3}{7.10 \text{ sabins}} = 2.25 s$$

$$R_T = \frac{.16 V}{A + \alpha V_{am}}$$

$$\times 0.9 / 100 m^3$$

$$\alpha_{am} V = \frac{.9}{100 m^3} \times 100 m^3 = 9 \text{ sabins}$$

→ 8 sabins

$$R_T = \frac{.16(100)}{8} = 2 \text{ seconds}$$

P

5x5x4

$$I_m = \text{Watts/m}^2$$

A $\equiv$ area of window
in m^2

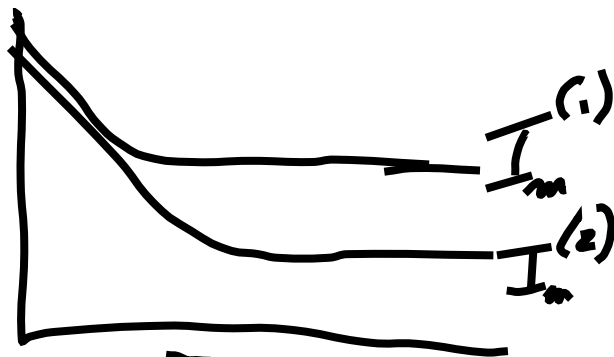
Power leaving the room

$$= I_m A_w$$

$$I_m = \frac{P}{A}$$

$$I_m^{(1)} = \frac{P}{A_1}$$

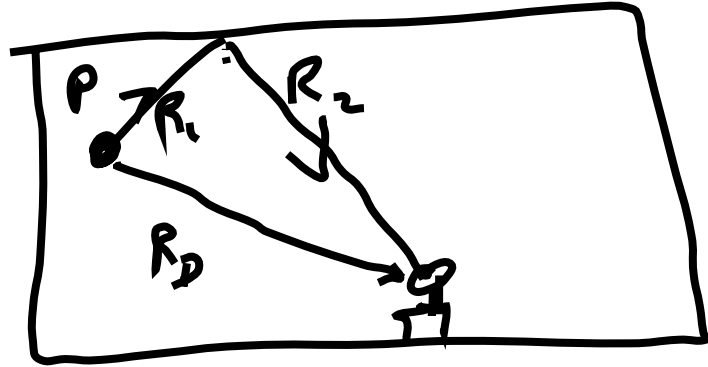
$$I_m^{(2)} = \frac{P}{A_2}$$



$$\frac{I_m^{(1)}}{I_m^{(2)}} = \frac{A_2}{A_1}$$

$$NR = 10 \log \frac{A_2}{A_1}$$

Initial time delay gap $\equiv t_r - t_D \equiv t_I$



$$\frac{R_1 + R_2}{v} = t_r$$

$$\frac{R_D}{v} = t_D$$

"intimacy" of the hall
 $t_I \gg 0.02 \Rightarrow$ it detracts from the musical quality
 $> 0.070 \Rightarrow$ room loses all "intimacy"

t_I

mid orchestra

mid balcony

V

.002s

.009s

B

.015s

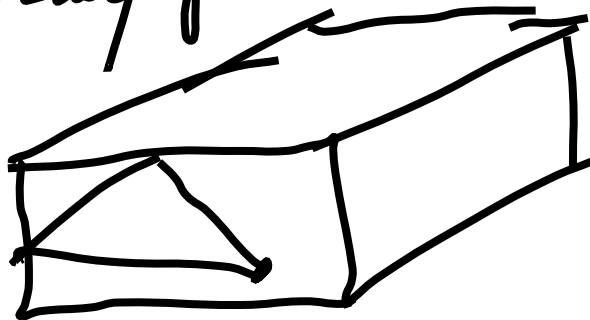
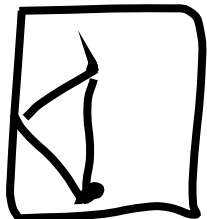
.007s

Early sound
perceived as being from the same
sound

.05-.08s

50-80ms

to be



spatial responsiveness

Fig 2

