

Fitts' Law

The time required to move to a target depends on

1. the distance to the target
2. the target size

Explanation:

Rapid pointing movements consist of

1. ballistic movement
2. homing movement



two factors:

obvious: distance

the further away the longer it takes

applies to all movements except beaming

less obvious: target size

...

why?

ballistic movement

rather coarse, fast

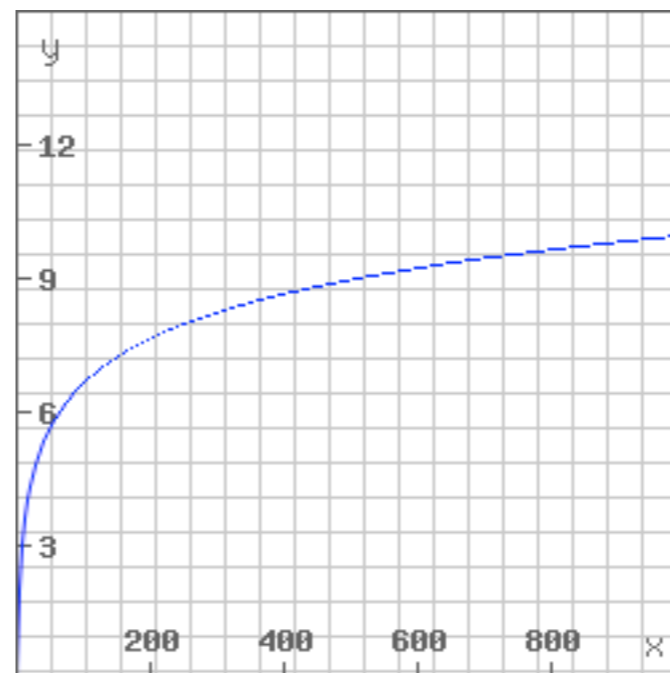
homing movement

fine, but slow and error prone

The math

$$MT = a + b \cdot \log_2 \left(\frac{d}{s} + 1 \right)$$
$$a = 0.230 \text{ sec}$$
$$b = 0.166 \text{ sec}$$

(Shannon 1992)



Let the distance to the target be *15 cm*.
Then it takes twice as long to get to the target if it has *1 cm* diameter (*0.89 sec*) than for a *10 cm* diameter (*0.45 sec*).

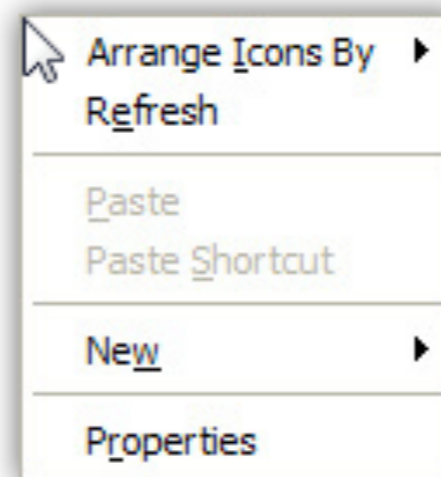
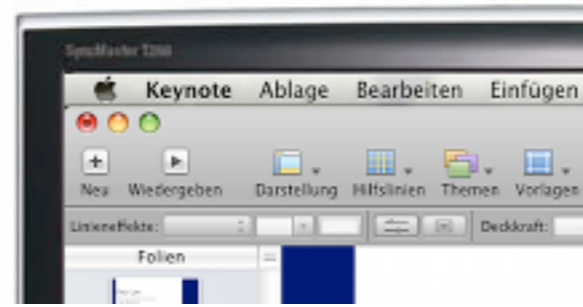


not want to talk much about the formular – pretty interesting, but you're not gonna be able to pick up on it in the 3 minutes we got.

but example

Application & Examples

- Interface Elementes at the edge of the screen
- Context Menues
- Break and gas pedals



Buttons at the edge of screen have „infinite size“ like OS X title bar or Windows X for closing

Context Menues have distance 0 => not need to move at all

Break pedal should be on the right and gas pedal even further