Fitts' Law

— or —

why bigger is better

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Outline

Background - What is Fitts' Law?

Implication – What does that mean for me?

Examples – How is this used in real life?

Background

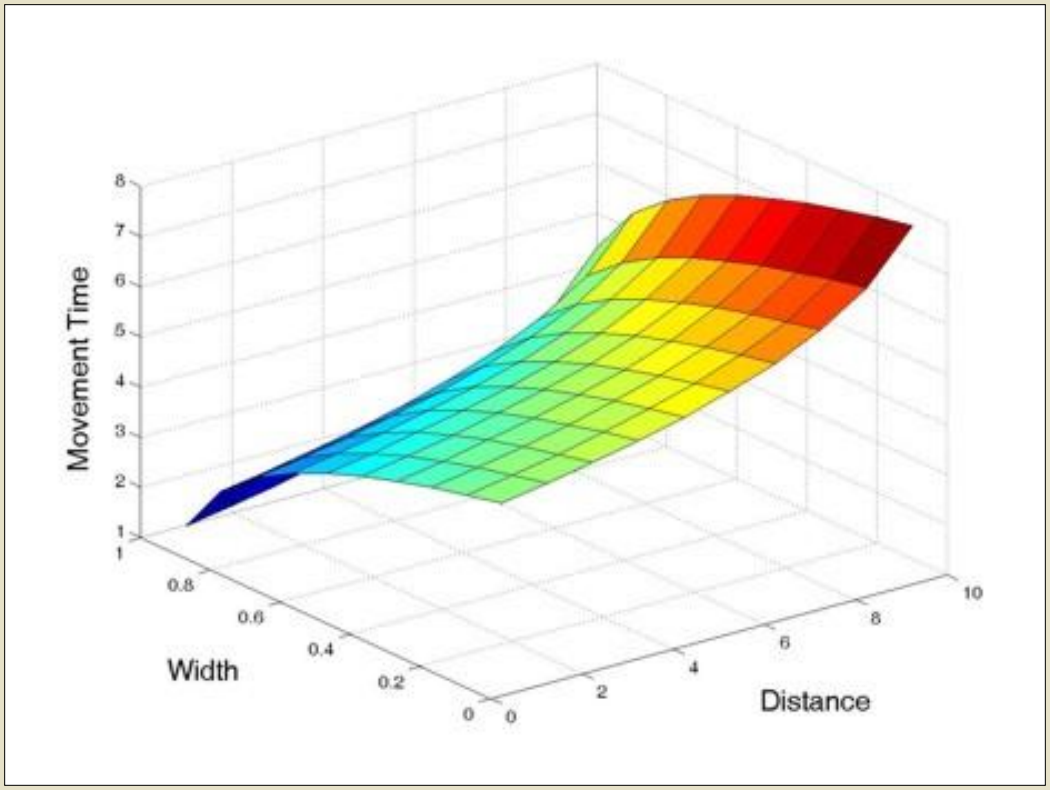
$$T = a + b \log_2 \left(1 + \frac{D}{W} \right)$$

Background

$$T = a + b \log_2\left(1 + \frac{D}{W}\right)$$

Time is a function of distance and the size of the target

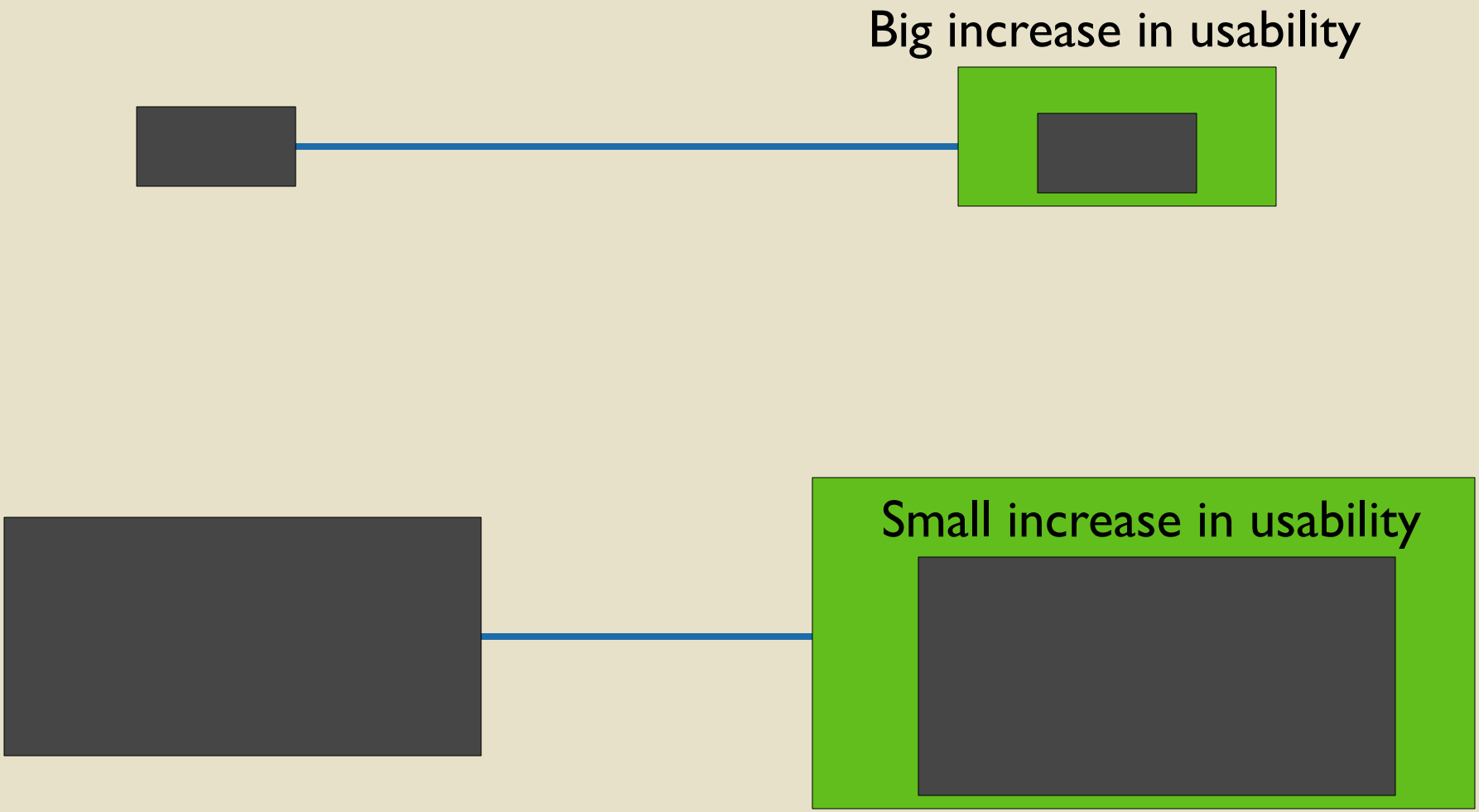
Background



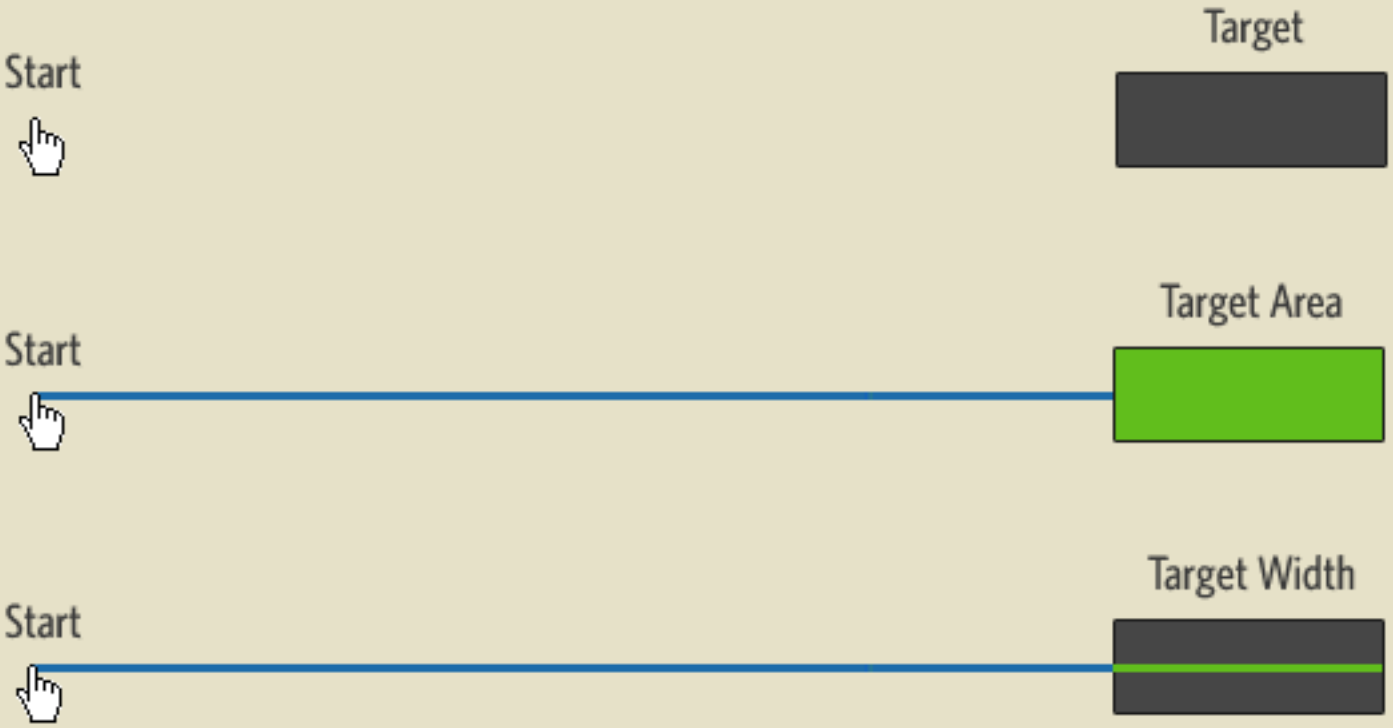
Fitts' Law is logarithmic

Differences are more apparent with smaller areas

Background



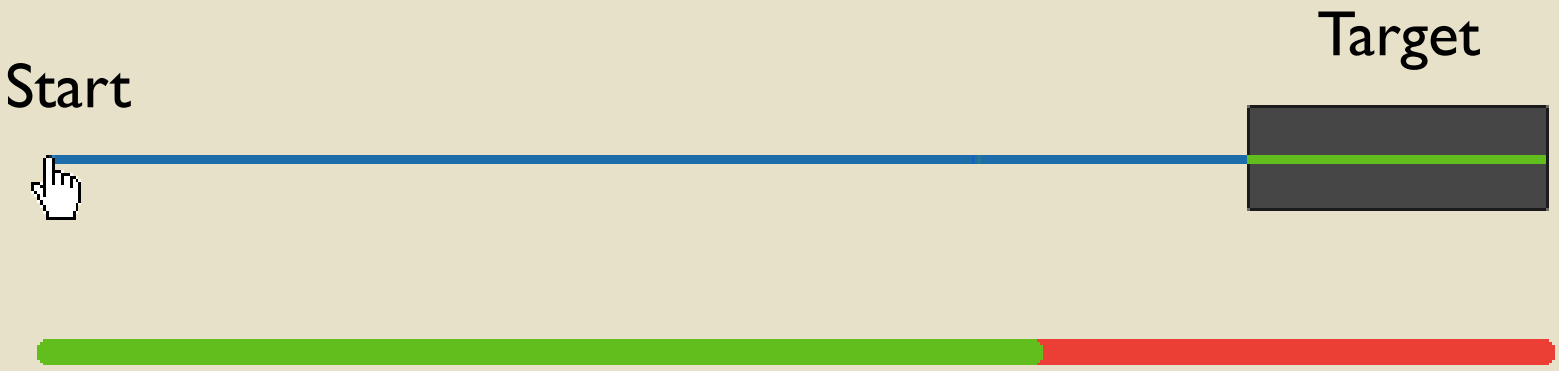
Implication



Implication

Which of these targets would be easier to click?

Problem



Initial Movement Phase

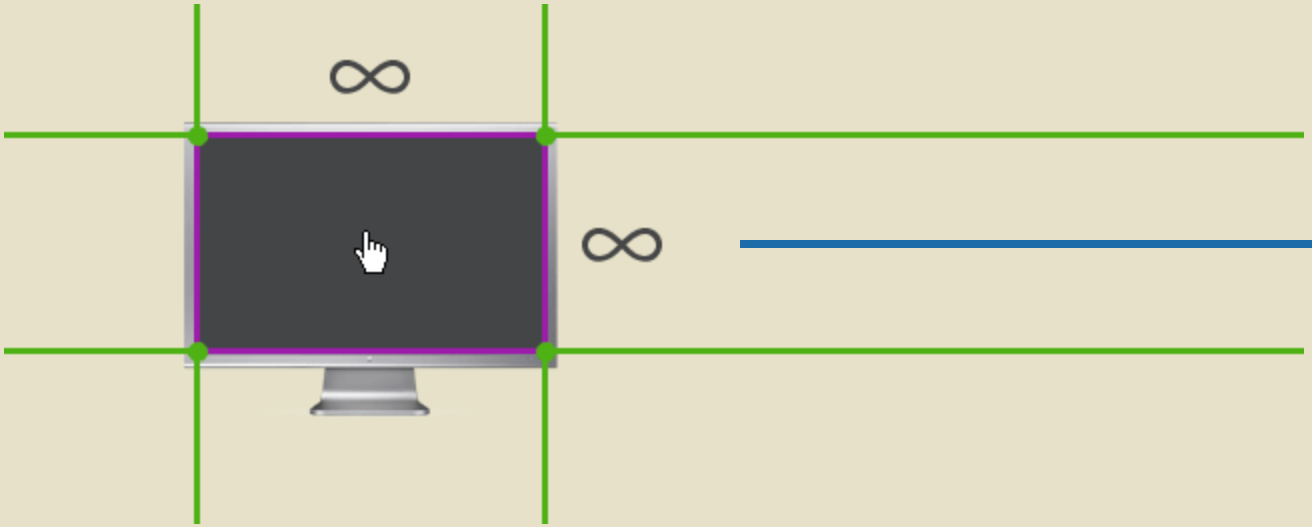
HIGH VELOCITY

Final Movement Phase

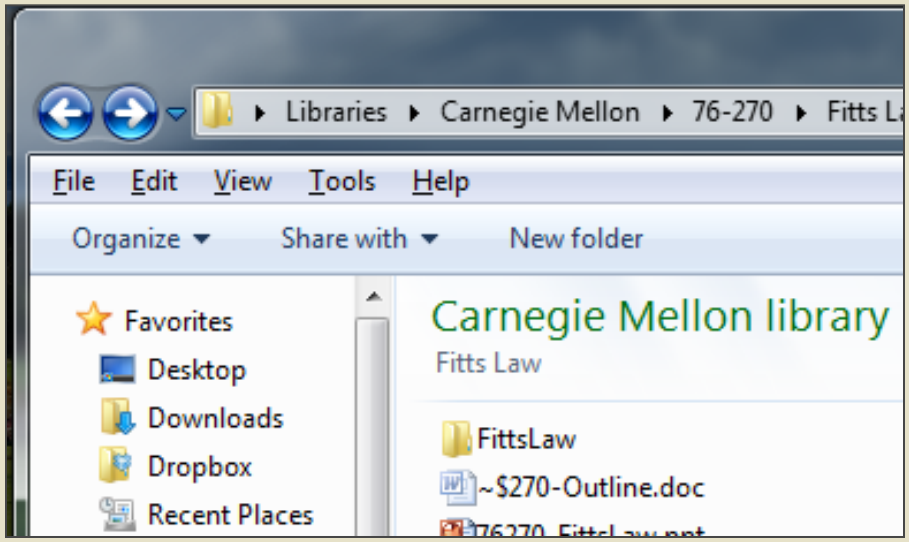
DECELERATION

Implication

Edges have *infinite depth*

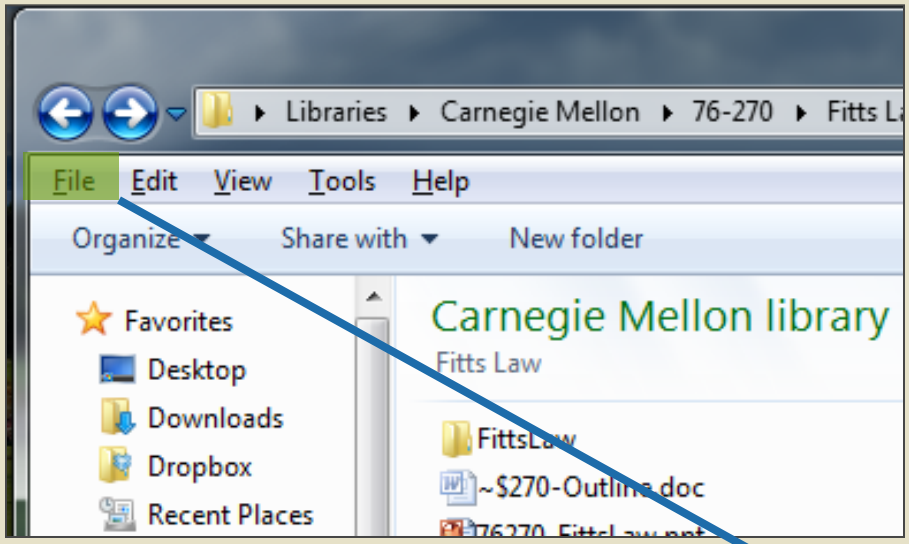


Mac vs Windows



Try to quickly click on "File" without clicking the back button.

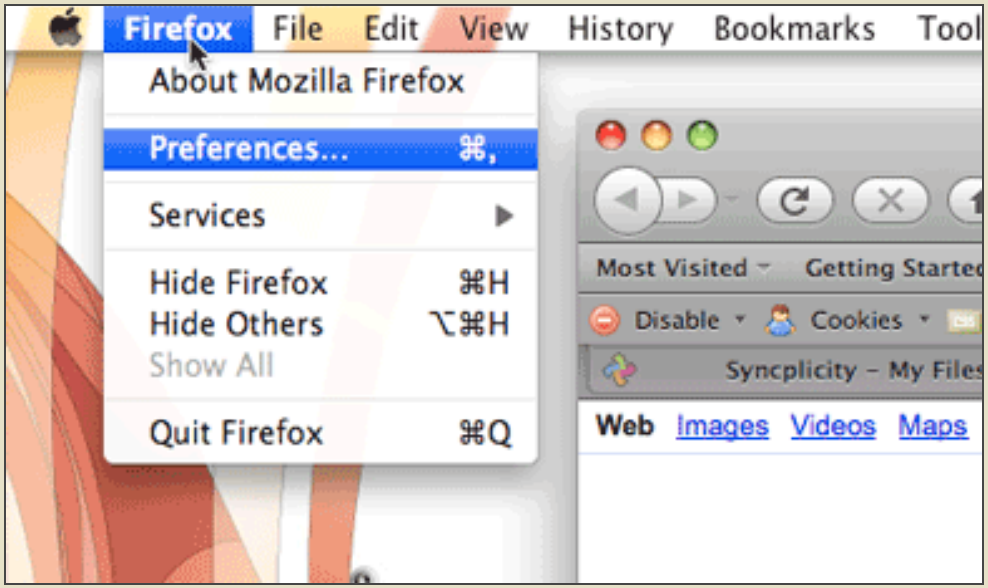
Mac vs Windows



Try to quickly click on "File" without clicking the back button.

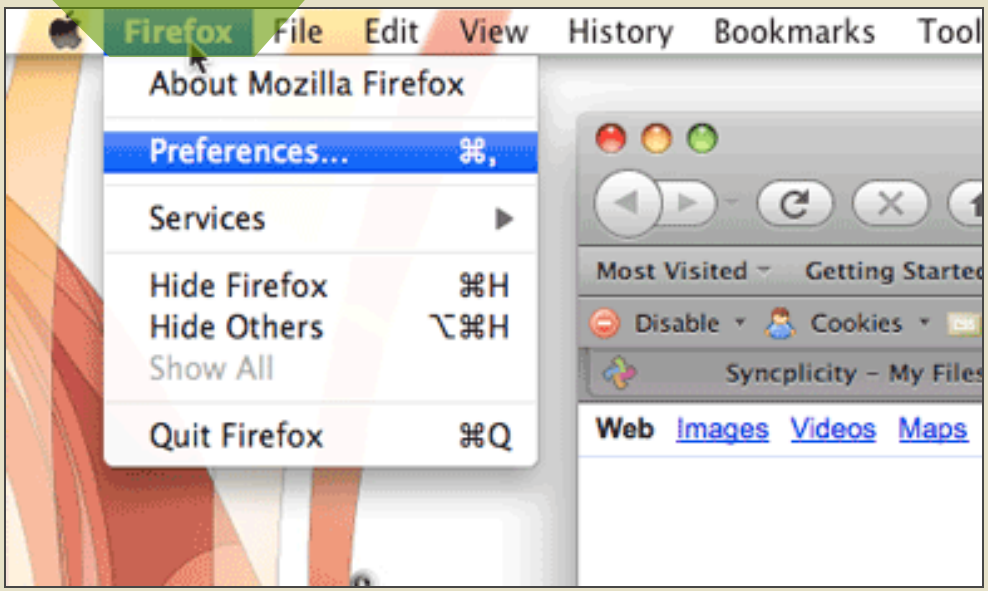
Small target area makes selection difficult

Mac vs Windows



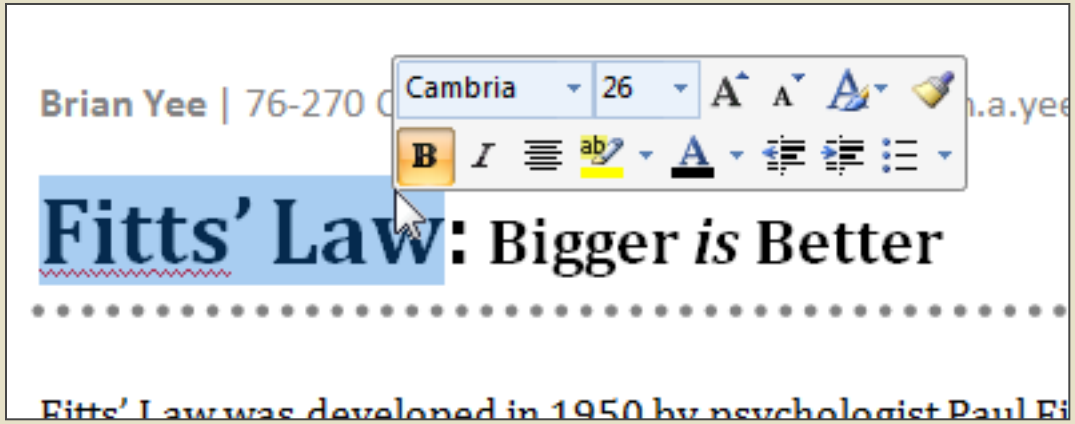
Try to quickly access the "Firefox" menu

Mac vs Windows



Target area is much larger, increasing usability

Mac vs Windows



Pop-up menu appears directly below cursor, distance to target is 0

Conclusion

Fitts' Law provides guidelines for interface designers

- Make buttons and selectors a reasonable size
- Edges and corners are easiest for a user to select
- Pop-up menus are easier than drop-down menus