Design With the Mind in Mind Ch 13

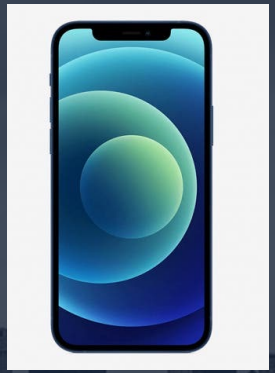
Jeff Johnson

By: Kevin Yuan

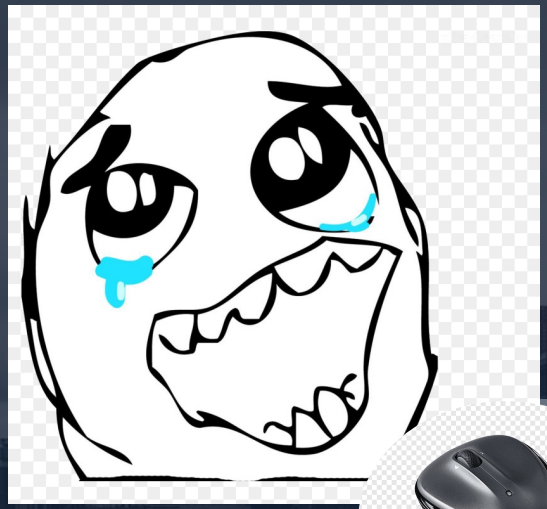
11/9/2022

1 Our Hand-eye Coordination Follows Laws

Why do we care about hand-eye coordination in UI?



BACK
START
TURBO
HOME



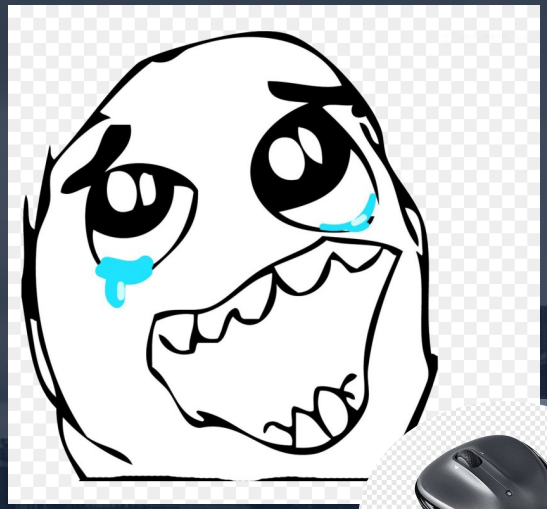
logitech

Congratulations!
WINNER WINNER WINNER
1.000.000th visitor
You have won a free new phone!
CLICK HERE TO CONFIRM
Yes
No
WINNERWINNERWINNERWINNER

Fitts' Law

Big = Easy to click
Small = Hard to click

Close = Easy to click
Far = Hard to click



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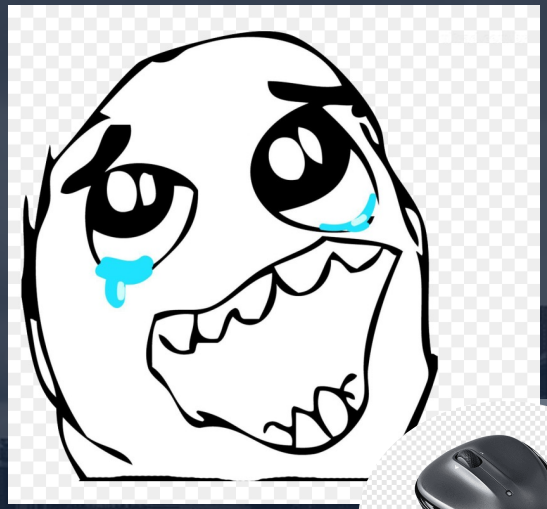
Yes
No
WINNERWINNER



Congratulations!

WINNER WINNER WINNER

1.000.000th visitor

You have won a free new phone!

CLICK HERE TO CONFIRM

No Yes

WINNERWINNERWINNERWINNER

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

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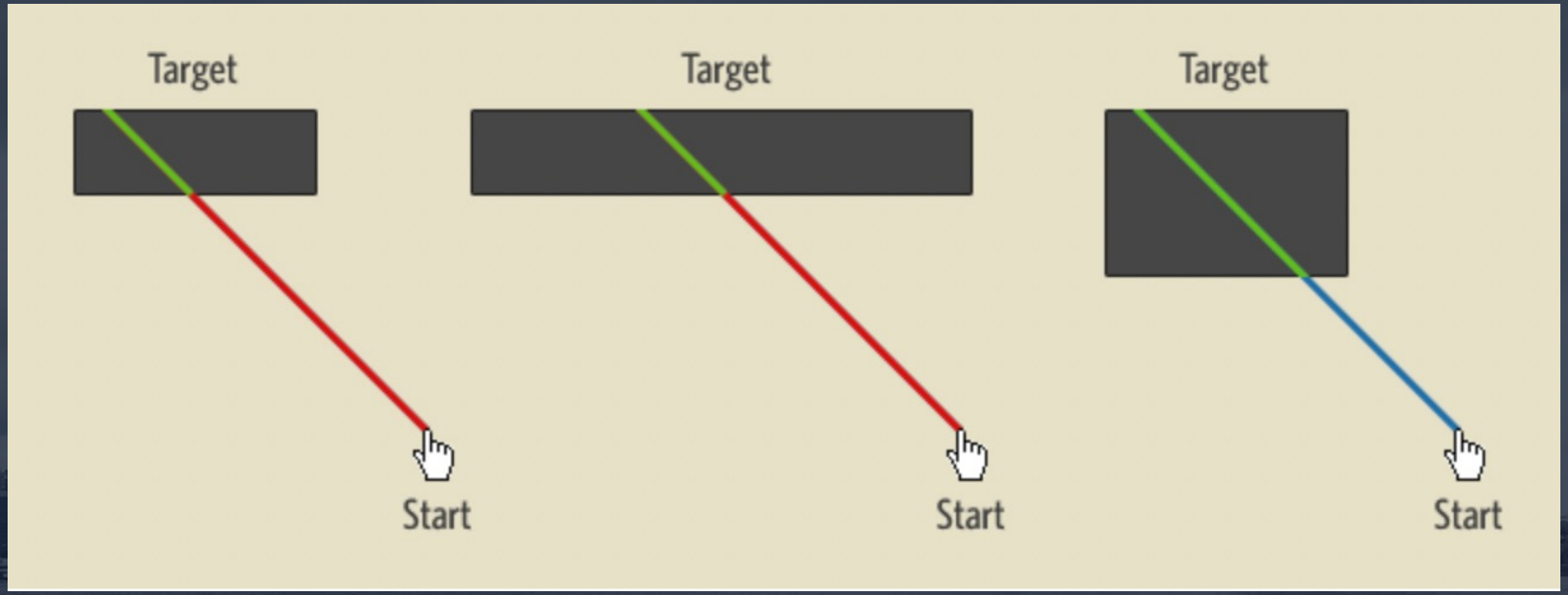
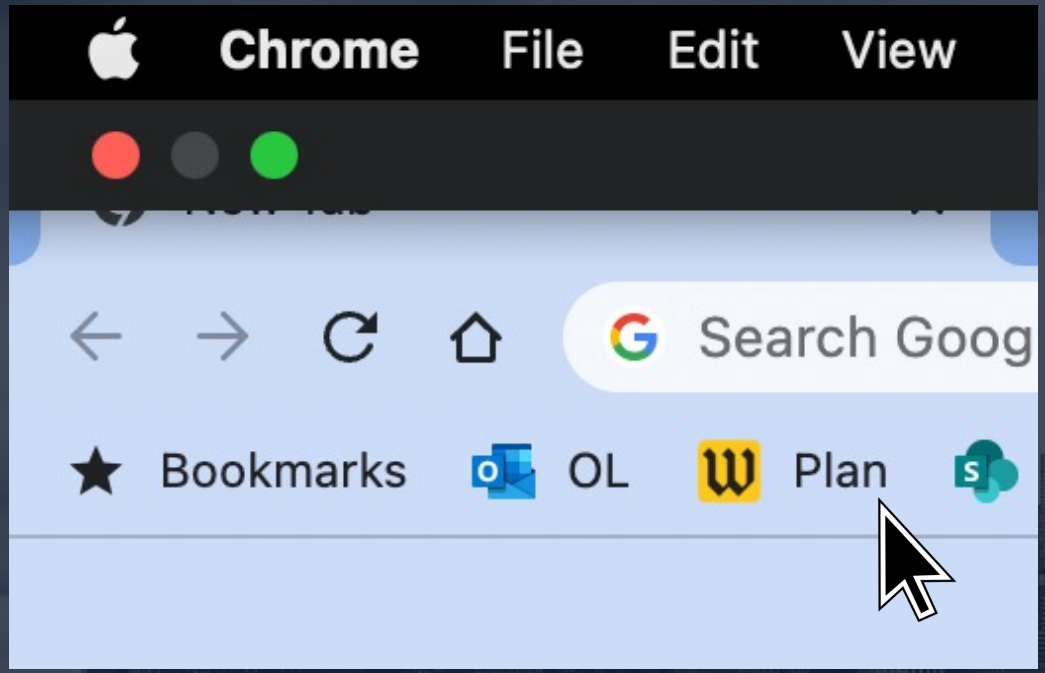
- T = Time to move to target
- D = Distance to move to target
- W = Width of target along the direction of movement of pointer
- A = Ease of starting and stopping the movement
- B = Measure of the avg difficulty of moving the hand and pointing the device

$$T = a + b * log_2(1 + \frac{D}{w})$$

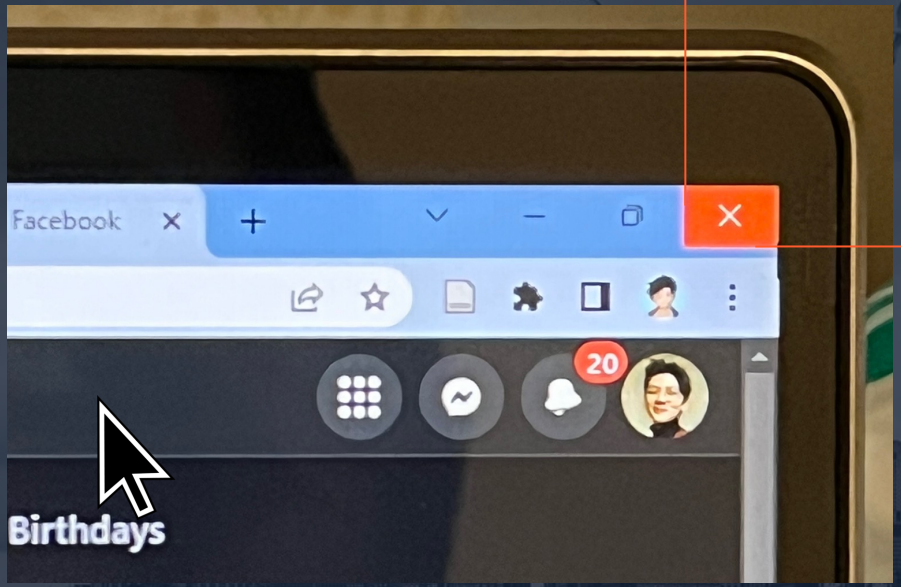




$$T = a + b * log_2(1 + \frac{D}{w})$$

$$T = 0.5 + 0.1 * log_2(1 + \frac{400mm}{5mm})$$

$$T = 1.13\ seconds$$

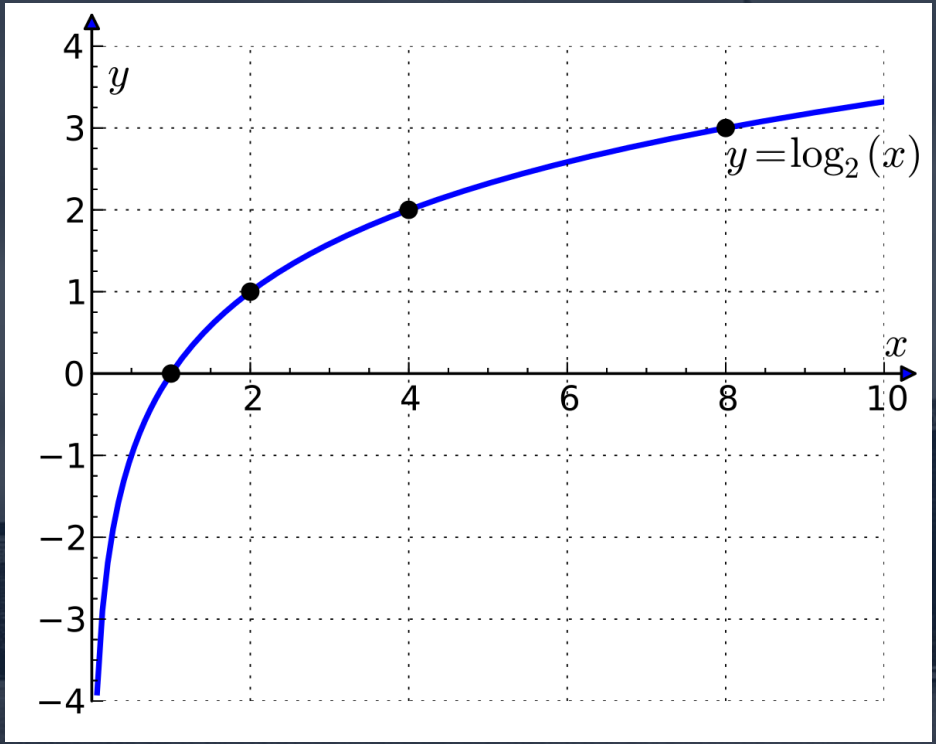


$$T = a + b * log_2(1 + \frac{D}{w})$$

$$T = 0.5 + 0.1 * log_2(1 + \frac{400mm}{\infty mm})$$

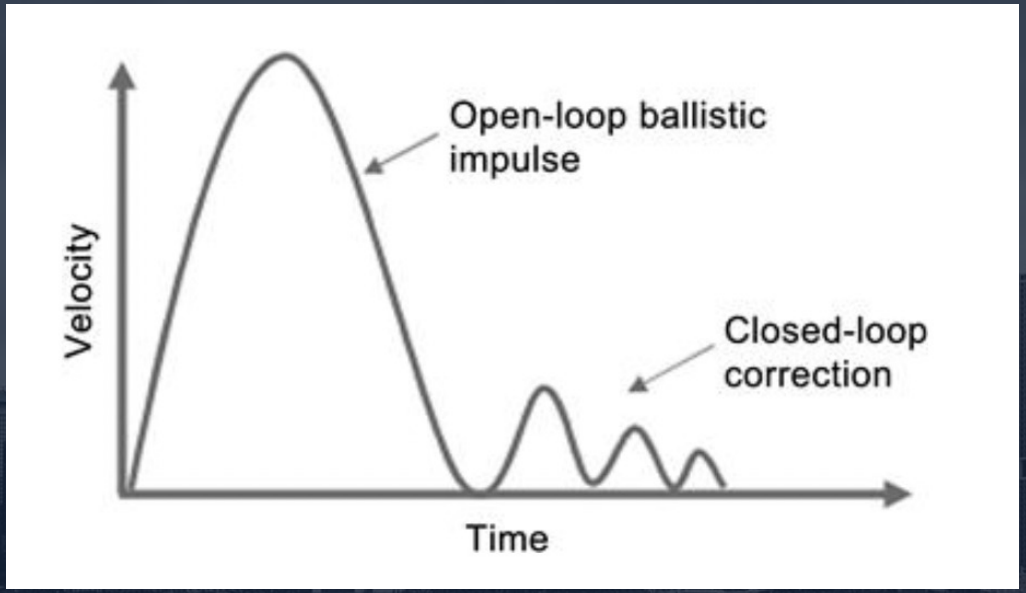
$$T = 0.5\ seconds$$

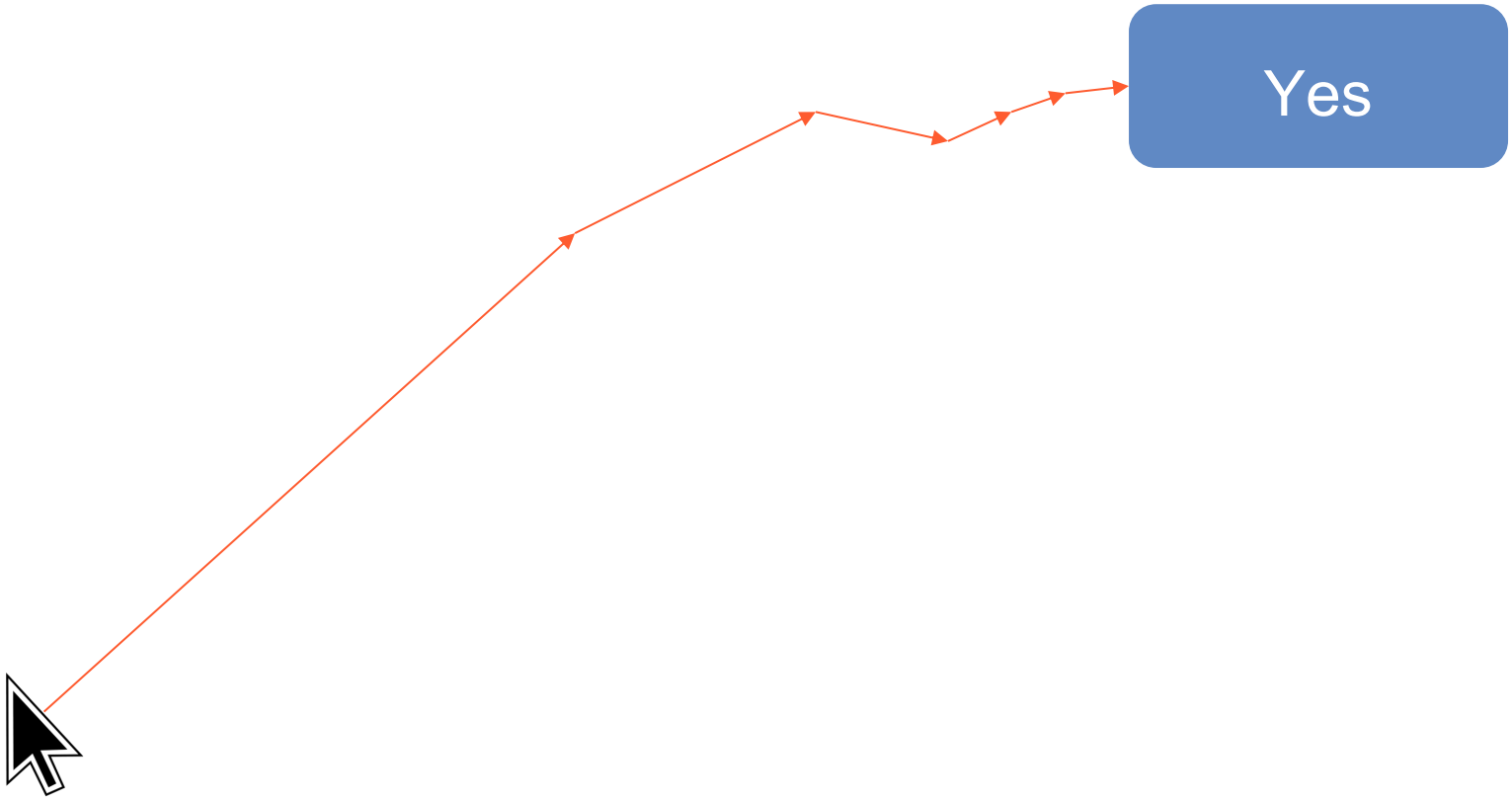
$$T = a + b * log_2(x)$$



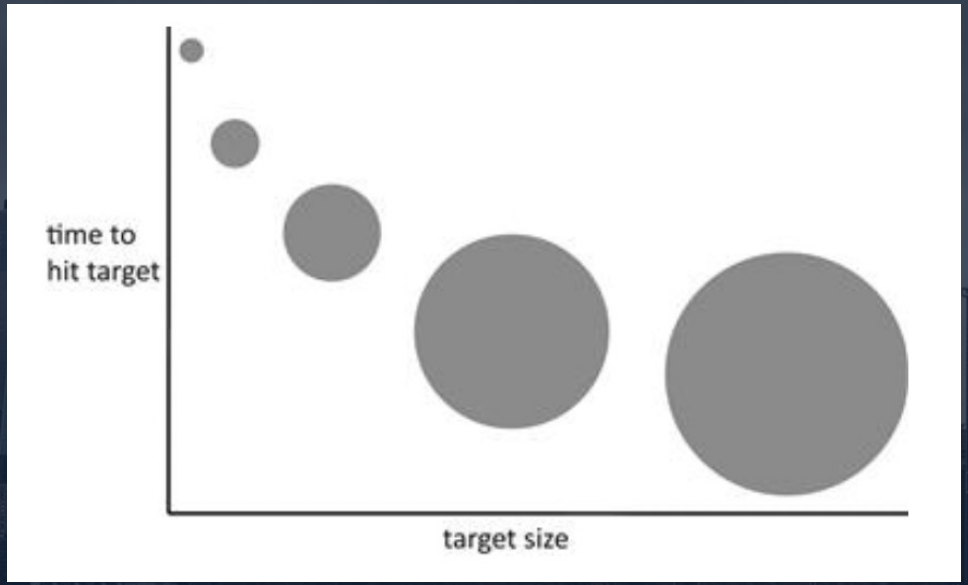
$$x = 1 + \frac{D}{W}$$

Pointer Velocity




Yes

Diminishing Returns

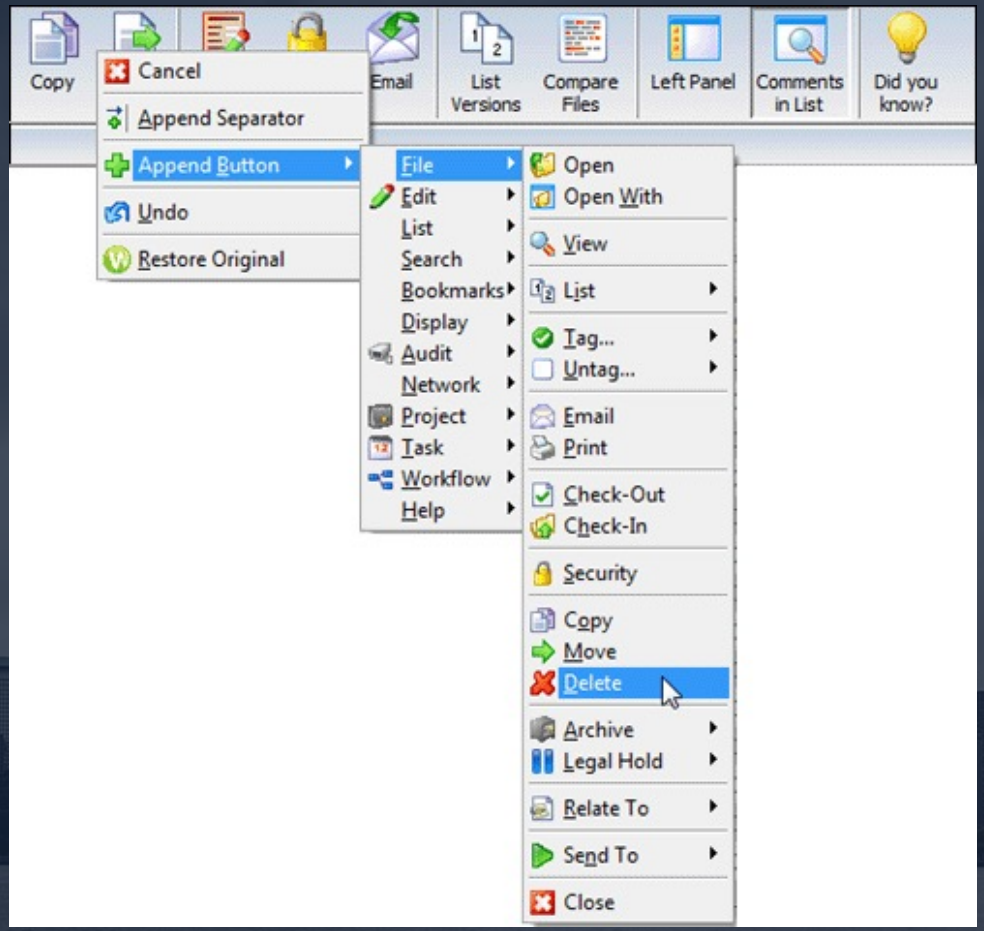


Steering Law

Big path = Easy to navigate

Small path = Hard to navigate

$$T = a + b * \frac{D}{w}$$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Comments in List
Did you know?
Cancel
Append Separator
Append Button
Undo
Restore Original
File
Edit
List
Search
Bookmarks
Display
Audit
Network
Project
Task
Workflow
Help
Open
Open With
View
List
Tag...
Untag...
Email
Print
Check-Out
Check-In
Security
Copy
Move
Delete
Archive
Legal Hold
Relate To
Send To
Close

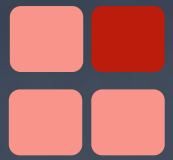
Design Implications

Don’t make clickable targets too small

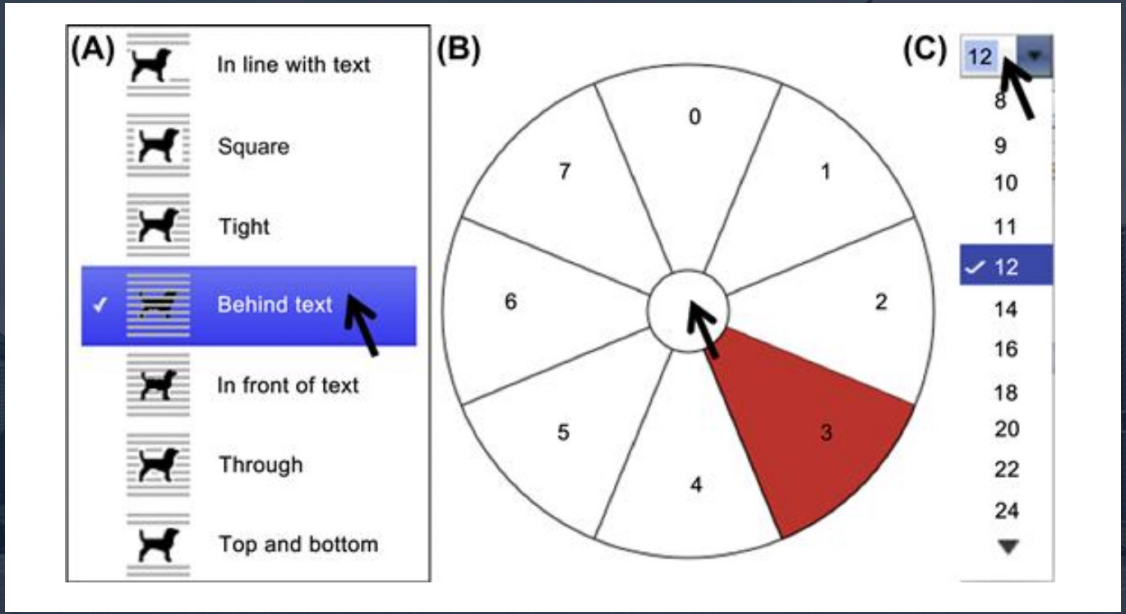
Don’t misrepresent the clickable area

Don’t forget about the target label

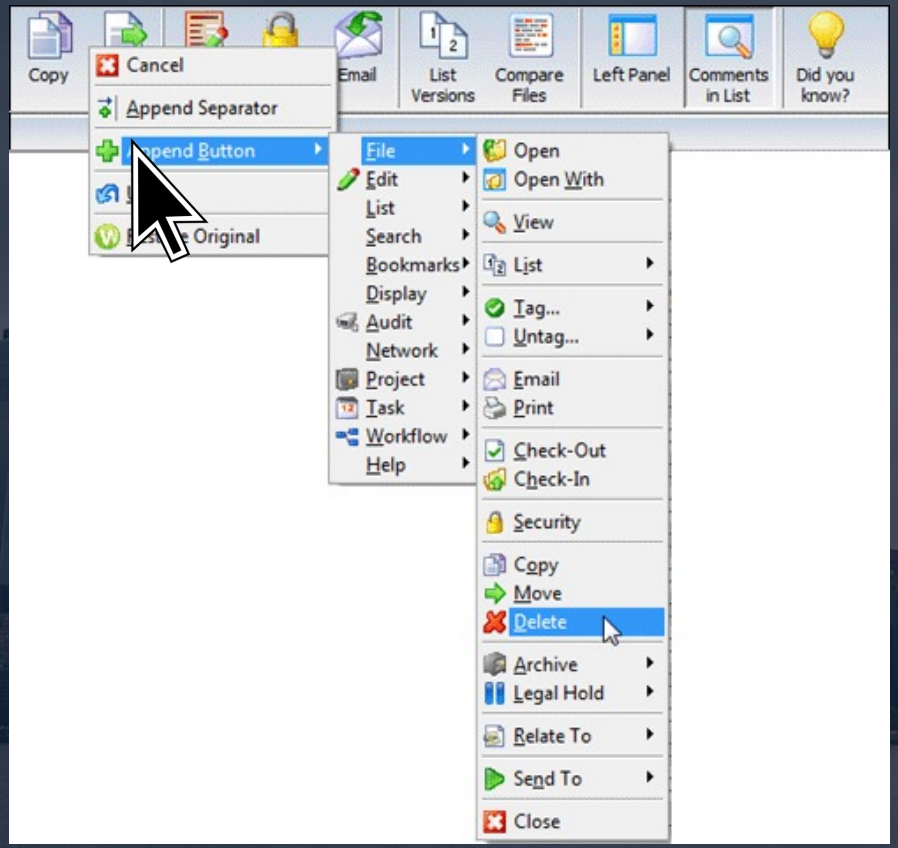
Don’t put clickable targets too close to each other



Don’t limit yourself to buttons



No... just no


Copy
Email
List Versions
Compare Files
Left Panel
Comments in List
Did you know?
Cancel
Append Separator
Append Button
Original
File
Edit
List
Search
Bookmarks
Display
Audit
Network
Project
Task
Workflow
Help
Open
Open With
View
List
Tag...
Untag...
Email
Print
Check-Out
Check-In
Security
Copy
Move
Delete
Archive
Legal Hold
Relate To
Send To
Close

Thanks!