

DUNNING FIVE-THIRTY EYE-OS

GAZE-BASED INTERACTION

“Seeing is believing!”

“A sight to behold!”

Eye-OS is a concept operating system that uses eye-tracking as a primary form of interaction. Like the introduction of the mouse, a new form of interaction requires a new paradigm. We set out to create this paradigm: a UI that was made for eye-tracking — not mouse.

To keep people from feeling overwhelmed while using this new form of interaction, no large changes are made when looking at an item (opening a video, etc.) Furthermore, we utilize motion to clearly define where new information comes from.

Information, such as title and description, are only revealed when looking at the item. This reduces the amount of time required to perceive the system.

The borders of the page create a cardinal navigation system, both maximizing the button's size (Fitts' law), and allowing the operator to maintain spatial awareness of their location.



A Changing colour scheme helps reinforce the operator's current location, without the needing to read a title or rescan a page.

OUR SETUP

- 1 In our controlled environment, improved lighting increases the accuracy of the eye-tracking.
- 2 A more expensive webcam gives also improves accuracy, providing a higher-quality image to work with.
- 3 The larger the display, the smaller the perceived range of inaccuracy.
- 4 In the future, viewers of the system will “click” via a nod gesture. For now, a one-button remote is used.

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