

Extended Sight with an EOG

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For the 6.111 project we propose a digitally augmented EOG. The wearer of this device will have their eye muscle movement tracked by electrodes which will control the view in either a virtual reality or a camera in an alternate location. If there is time, more complex applications can be developed, for example a moving camera in a real world or a more complex virtual reality to explore (such as a maze). The user will be able to choose program options through blinking.

Control scheme: To allow the user to see the screen while controlling the camera's view we will implement an incremental movement system. If the user wants to pan the camera to the right they can simply look right and then look back at the screen - the degree of turning will depend on the length of time they're looking right.

A more advanced interface could allow the user to scroll through options between multiple settings, and click with deliberate blinking. Similar systems to this have played a key role in communicating with people who have limited movement capabilities. This system can help expose others to how this technology and interface works.