Samsung introduces EYECAN+, next-generation mouse for people with disabilities

November 26 2014

Samsung Electronics introduced EYECAN+, the company's second-generation eye mouse that allows people with disabilities to compose and edit documents as well as browse the web through simple eye movement. EYECAN+ is the first of its kind, as it does not require users to wear any device, such as glasses. Instead, EYECAN+ is a single-unit, portable box that sits below the monitor, and works by wirelessly calibrating with the user's eye.

"EYECAN+ is the result of a voluntary project initiated by our engineers, and reflects their passion and commitment to engage more people in our community," said SiJeong Cho, Vice President of Community Relations at Samsung Electronics. While Samsung will not commercialize EYECAN+, the company will manufacture a limited quantity to donate to charity organizations. Both the technology and design of EYECAN+ will soon be made open source, and made accessible to companies and organizations that wish to commercialize the eye [mouse](#).

EYECAN+ requires the user to be situated between 60cm and 70cm from the monitor, and does not require the user to be in any specific position, as it can be used while seated or lying down. Calibration is only required for first-time users, as EYECAN+ will remember each user's eye characteristics. Users can also adjust the sensitivity of EYECAN+ for both calibration and actual use.

Once calibrated, the EYECAN+ user interface (UI) will appear as a pop-up menu in one of two different modes, rectangular menu board or floating menu wheel, both of which contain 18 different commands. Both menu types can be configured to remain at the fore of the screen.

The use of all 18 commands solely requires eye movement and blinking, and each command can be selected by looking directly at the relevant icon and blinking once. The 18 commands include "copy," "paste" and "select all," as well as "drag and drop," "scroll" and "zoom in." Additional custom commands can also be created to include existing keystroke commands, such as "close program" ("Alt+F4") and "print" ("Ctrl+P").

Hyung-Jin Shin, a graduate student who has worked with Samsung to develop the EYECAN+, is demonstrating how this new eye mouse is working.

Compared to its predecessor, EYECAN, Samsung's first eye mouse that was introduced in March 2012, the calibration sensitivity and overall user experience (UX) of EYECAN+ have been significantly upgraded, in part thanks to Hyung-Jin Shin, a graduate student in computer science at Yonsei University in Seoul. Born quadriplegic, Shin had worked with Samsung on EYECAN between 2011-12, and took on a key role in developing the EYECAN+ UX by piloting the eye mouse over the course of 17 months and extensively working with Samsung engineers to ensure the burgeoning array of functions and commands remain practical and easy to access and use.

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Provided by Samsung

Citation: Samsung introduces EYECAN+, next-generation mouse for people with disabilities (2014, November 26) retrieved 6 May 2024 from https://phys.org/news/2014-11-samsung-eyecan-next-generation-mouse-people.html