Students develop thought-controlled, hands-free computer for the disabled

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Ben-Gurion University of the Negev software engineering students have developed innovative technology that could enable people to operate a computer without using a keyboard or mouse – only their brainwaves.

While there have been previous attempts to develop devices to read brainwaves and operate specific programs, they were cumbersome and not feasible outside of a laboratory setting.

The BGU technology features a helmet equipped with 14 EEG connect points that sense brain activity.

According to Dr. Rami Puzis, "The technology is designed to assist those who are physically disabled who might otherwise be unable to manipulate a computer mouse or keyboard."

The student team, Ori Ossmy, Ofir Tam and Ariel Rozen, developed the prototype application for their bachelor's degree project under the supervision BGU Prof. Mark Last, Dr. Rami Puzis, Prof. Yuval Lovitz and Dr. Lior Rokah. As part of a recent demonstration, a student composed and sent a hands-free e-mail using only thought combined with the adaptive hardware. The students and BGU team plan to continue research working with the disabled.

Provided by American Associates, Ben-Gurion University of the Negev

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