

intendiX[®]

User-Ready Brain-Computer Interface Applications

intendiX[®]

SPELLER

Personal EEG-based Spelling System

A complete patient-ready system for spelling, communication and control. Based on the visual P-300 approach.

intendiX[®]

SOCI

Screen-Overlay Control Interface

Control games and other applications on a PC screen with an SSVEP-based overlay control interface.

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PAINTING

Paint by Thoughts

A tool to be creative without even moving a finger. Artwork manufactured by your mind!

www.intendiX.com

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SPELLER

intendiX SPELLER is designed to be installed and operated by caregivers or the patient's family at home. The system is based on visual evoked EEG potentials (VEP/P300) and enables the user to sequentially select characters from a keyboard-like matrix on the screen just by paying attention to the target for several seconds. This requires only a few minutes of training. Most subjects can use the system after only 10 minutes with a reasonable performance, spelling 3 to 10 characters per minute at their first trial.

intendiX SPELLER uses an intelligent algorithm to determine whether the user wants to use the system, so it doesn't spell accidentally. In addition to writing text, the patient can also use the system to trigger an alarm, let the computer speak the written text, print out or copy the text into an e-mail or to send commands to external devices.



g.tec provides intendiX SPELLER systems for rent to test the system at the patient's site before deciding about a purchase.

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SOCI

In 2012 g.tec released another new intendiX application called "SOCI" - Screen-Overlay Control Interface. The system allows to overlay the PC screen with a mask that contains icons used to control the program running on the screen. The technology uses the Steady-State Visual Evoked Potential (SSVEP) approach for Brain-Computer Interfaces (BCI). The different icons on the monitor each flicker at certain frequencies. As soon as the user pays attention to one of the icons, it's flickering frequency can be detected in the EEG, which is picked up by a few sensors on the back of the user's head. Then, the system executes a command that is assigned to that certain icon, such as a certain key on the keyboard. Using its advanced sensors and recently upgraded signal processing algorithms, the intendiX SOCI can detect these different brain signals with an accuracy of up to 98%.



In March 2012, g.tec debuted its new module to control Blizzard Entertainment's World of Warcraft®, one of the most popular computer games in the world.

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PAINTING

intendiX Painting is a user-friendly system based on intendiX SPELLER technology which makes it possible to draw without using any muscle activity. Based on visual evoked EEG potentials (VEP/P300), it allows the user to paint by paying attention to symbols that flash on a computer screen. With intendiX Painting, users can design different color shapes, modify the color gradient, select different transparencies or change figures' sizes. And, of course, users can perform these actions at any position on the screen by controlling the painting cursor. intendiX Painting allows infinite combinations of creation, limited only by imagination. In addition to paint, the user can also undo and redo actions, save the current artwork, load previous files to continue drawing and print the finished artwork. A picture is "worth a thousand words"!



Special thanks to Prof. Dr. Andrea Kübler and Adi Hoesle, the "parents" of brain painting! (see: www.pingo-ergo-sum.com)