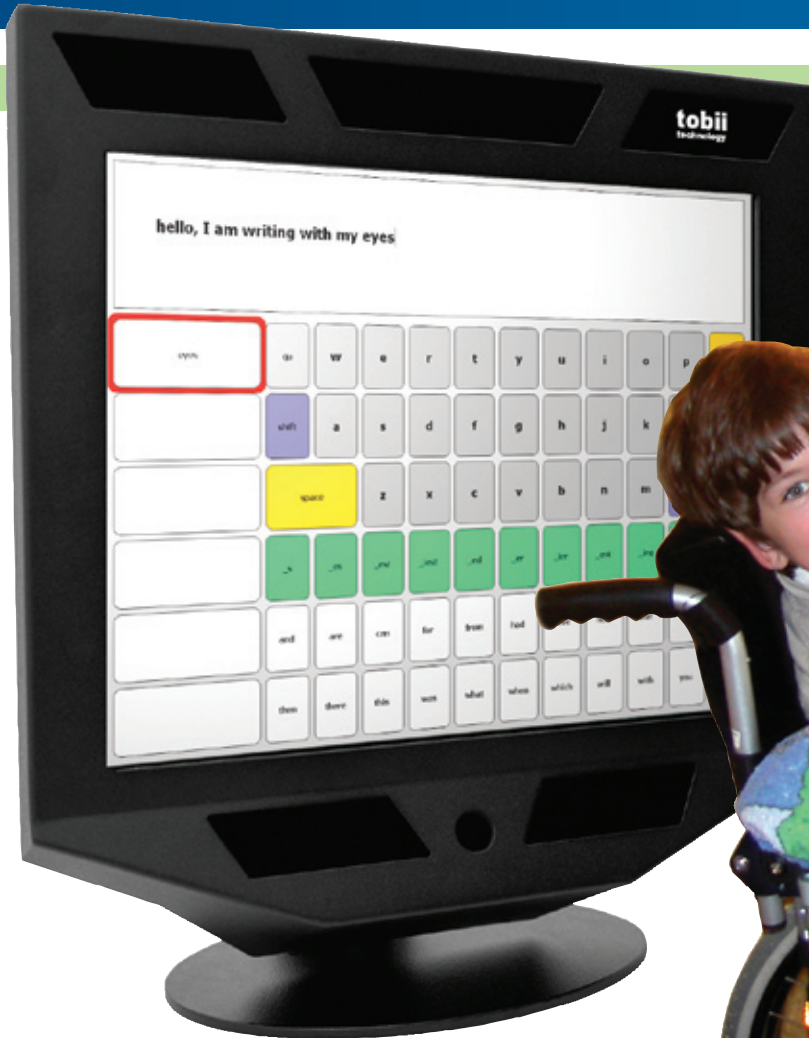


MyTobii™ EYE CONTROL SYSTEM

Control a Computer with Your Eyes

tobii technology



Eye control designed
for people with highly
limited mobility



FAST AND EASY TO USE

VERY ACCURATE AND STABLE

ALLOWS HEAD MOVEMENTS

UNIQUE METHOD OF EYE CONTROL WITH APPLICATIONS FOR

• E-MAIL • INTERNET • SPEECH SYNTHESIS • TEXT EDITOR • AND MORE...

MyTobii™ EYE CONTROL SYSTEM

The ability to communicate and interact with the world around us is a vital part of our lives. The **MyTobii™** eye control system offers easy to use and truly effective communication for people with highly limited mobility. The **MyTobii™** system consists of a specific computer display and dedicated application software. The system detects precisely where the user is looking on the screen, the suite of application software then allows the user to communicate and interact using only his or her eyes.

MyTobii™ presents a major leap forward in the power of eye control, by combining great advancements in underlying eye tracking technology with new concepts for communicating using the eyes.

For people with highly limited mobility

MyTobii™ is designed for users with highly limited mobility. This includes those who have limited capabilities to move at all, but also those who have difficulties with involuntary movements of their head and hands.

Examples of conditions where **MyTobii™** may greatly assist in the ability to communicate include:

- **ALS** – also known as *Lou Gehrig's Disease*
- **SPINAL CORD INJURY**
- **CEREBRAL PALSY**
- **MULTIPLE SCLEROSIS**
- **BRAIN INJURY**



MyTobii™ HARDWARE

The MyTobii™ hardware is a computer display that contains a built-in eye tracker, based on Tobii Technology's world leading eye tracking technology. The eye tracker estimates with extreme accuracy where the user is looking on the screen.

TRULY EASY TO USE

- Fully automatic - does not require the user to "do" anything to get it to work
- Tracking begins automatically when a user is in front of the system
- Quick and automatic calibration

COMPLETELY NON INVASIVE

- Tolerance to head-movements allows the user to move freely in front of the tracker
- No helmet, head tracker or markers required
- Calibrations are long-lasting so new sessions do not require recalibration

VERY ACCURATE AND STABLE

- Works on nearly all users
- Works well on users with glasses or contact lenses
- Works under varying light conditions
- Works on users with spasmodic head movements
- Eye gaze position is estimated with very high accuracy



THE MYTOBII CAN BE PLACED ON A TABLE OR OVER A BED.

MyTobii™ SOFTWARE

The **MyTobii™** eye control system allows the user to interact directly with objects on the screen by looking at them. This removes the need for trying to control a mouse pointer with the eyes, which is difficult and stressful. This way of directly controlling the computer with the eyes is enabled through the *Tobii Control Framework*, which has been designed from the ground up to be eye controlled. It keeps track of the user's eye gaze as well as the locations of all objects on the screen. The system estimates which object the user is looking at and the action the user intends to initiate. For instance, when the user looks at a button the correct object is highlighted, without showing the mouse pointer. Selection can be initiated either using a switch or dwell time.

Benefits of this new technique for eye control is that **MyTobii™** becomes:

- EASY AND INTUITIVE TO USE
- ROBUST AND PRECISE
- MUCH LESS STRESSFUL

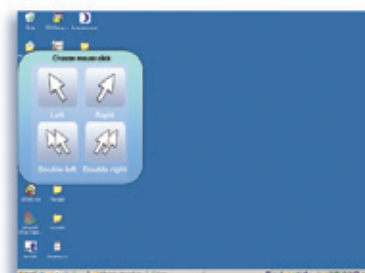
MyTobii™ contains a suite of applications designed using the *Tobii Control Framework*, including eye controlled:

- E-MAIL
- SPEECH SYNTHESIS
- WEB BROWSING
- TEXT EDITING

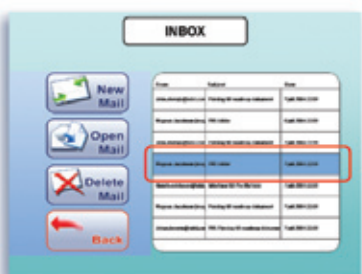
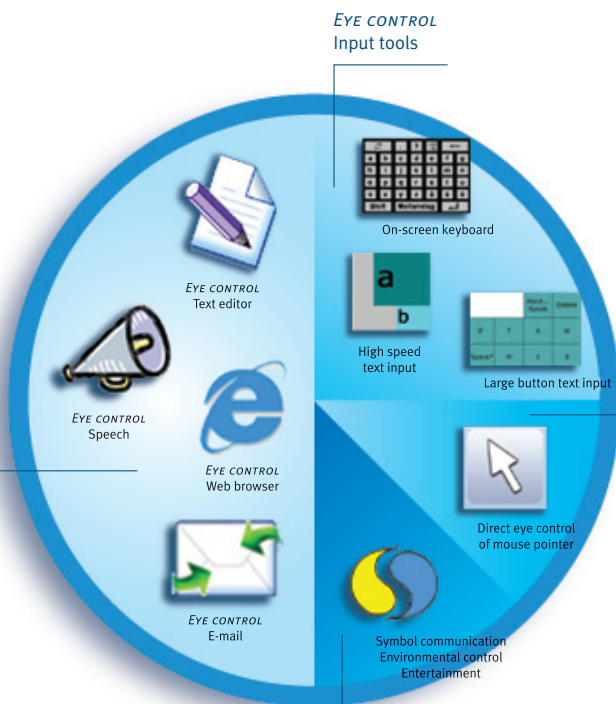
In addition to this, the system is compatible with third party communication and interaction software, which have been modified to integrate with **MyTobii™**. Examples include *The GRID* from *Sensory Software* and *Dasher* from *The Inference Group* at *Cambridge University*. **MyTobii™** also allows the user to control the mouse pointer using eye gaze to facilitate the use of the normal *Windows™* environment. This allows users to access applications that are not modified to be eye controlled.



ACCESSING A RANGE OF APPLICATIONS FROM THE MYTOBII DESKTOP



CONTROLLING THE MOUSE POINTER WITH THE EYES



EYE CONTROLLED E-MAIL



EYE CONTROLLED THE GRID

USER SCENARIOS*

ALEX

Alex has developed ALS and suffers from a progressive loss of his motor control. Alex has limited ability to move his head and can communicate verbally though with some difficulty.

Alex has tried to use a head-mouse to communicate through a computer. This solution is becoming more difficult as his control of his neck muscles deteriorates.

With a **MyTobii™** Alex is able to increase his quality of life, by being able to read, write, surf the web and maintain email communication.

As his disease progresses, the **MyTobii™** system will allow Alex to continue communicating with his friends and family using speech synthesis.

CINDY

Cindy has cerebral palsy. Cindy is 14 years old and of a high cognitive level. She has large uncontrollable body movements which limit both her gross and fine motor skills. She also has great difficulties speaking, and can only utter sounds which to a very limited extent can be interpreted only by those closest to her.

Up until now Cindy has communicated using rough pointing tools. These have only allowed very limited communication which has been slow and cumbersome.

With a **MyTobii™** Cindy is able to learn to communicate using intuitive symbols. This, for the first time, allows her a means of effective and meaningful communication.

* The above descriptions are only illustrative

MyTobii™ TECHNICAL SPECIFICATION

The **MyTobii™** system is based on world leading eye tracking technology.

DISPLAY	17" TFT 1280x1024 PIXELS
OPERATING SYSTEM	WINDOWS XP
COMPUTER REQUIREMENT	INTEL CENTRINO LAPTOP WITH BUILT-IN FIREWIRE
WEIGHT	9 KG
MONITOR ARM MOUNT	INDUSTRY STANDARD VESA MOUNT
WORKING DISTANCE	50-70 CM
FREEDOM OF HEAD-MOVEMENT	30 X 15 X 20 CM
TOP HEAD-MOTION SPEED	10 CM/S
GAZE DATA RATE	40 GAZE DATA POINTS / S
ACCURACY OF GAZE ESTIMATION	0.5 DEGREES (~ 0.5 CM)
MAX HEAD MOVEMENT COMPENSATION ERROR	APPROX 1.0 DEGREE
MAX LONG-TERM DETERIORATION OF ACCURACY	APPROX 1.0 DEGREE
INCLUDED CORE APPLICATIONS	E-MAIL, SPEECH SYNTHESIS, TEXT EDITOR, WEB BROWSER
AVAILABLE LANGUAGES	TRANSLATION INTO VARIOUS LANGUAGES IS UNDERWAY. PLEASE CONTACT SALES@TOBII.COM FOR DETAILED INFORMATION
ACCESSORIES	ADJUSTABLE MONITOR ARM



Read more about the product on our website: www.tobii.com



Tobii Technology provides products and solutions for eye tracking and eye control for a range of different applications. Please contact Tobii directly or your local reseller for more information and a discussion on your particular needs.

Tobii Technology AB - Sweden

Address Saltmätargatan 8a, SE-113 59 STOCKHOLM, SWEDEN

Web www.tobii.com | E-mail sales@tobii.com | Phone + 46 (0) 8 663 69 90

Tobii Technology, San Francisco - USA

Web www.tobii.com | E-mail sales@tobii.com | Phone + 1 415 336 34 34