

# Release Notes Tobii Dynavox Gaze Interaction Software

### Introduction

The Tobii Dynavox Gaze Interaction Software is a software solution for controlling Windows applications using gaze with Tobii Dynavox eye trackers. The software consists of the following major parts:

- Gaze Interaction Server
- Gaze Interaction Settings application
- Windows Control

### System Requirements

- Windows 7, 8.1 or 10
- .NET Framework 4 Full
- DirectX 9.0c

## **Supported Tobii Dynavox Eye Trackers**

<b>Discontinued Support</b>	Final Version
C-Series	2.6.0
Supported Products	From version
PCEye	1.3.0
PCEye Go	2.2.0
I-Series	2.3.0
EyeMobile	2.4.0
I-Series+	2.6.4
I-Series+ with IS4	2.8.0
PCEye Mini	2.8.1
PCEye Explore	2.8.1
EyeMobile Mini	2.8.1

Customer support: For more information or support, please visit www.TobiiDynavox.com.

### Release Version 2.9.1

**Release date:** 2019-12-03

#### **Improvements**

Fixed a bug where eye tracking in certain situations would stop functioning (TASK-13989)

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### Release Version 2.8.9

**Release date: 2018-10-22** 

### Improvements

- Added statistics (NESDK-2777)
- Updated how learned words are loaded in the word prediction engine for Gaze Selection (NESDK-2780)
- Fixed a bug where sending input could fail with error '5' on Windows 10 devices (NESDK-2781)

### Release Version 2.8.8

Release date: 2018-04-18

### Improvements

 Removed the settings synchronization between the TecSDK and Gaze Selection introduced in 2.8.6 (NESDK-2737), as it caused a delay and sometimes crashes when opening, closing or moving the Gaze Selection keyboard (NESDK-2770)

### Release Version 2.8.7

Release date: 2018-04-13

### Improvements

- Fixed a bug where Gaze Interaction Settings froze when showing the firmware upgrade notification (NESDK-2765)
- Fixed a crash in startup of Gaze Selection if the setting for taskbar width was missing or zero (NESDK-2766)

### Release Version 2.8.6

**Release date:** 2018-04-12

### Improvements

- Avoid crash in Windows Control related to Windows Aero Peek functionality (NESDK-2732)
- Improved stability of writing to keyboard word prediction store (NESDK-2733)
- Added support for command line calls to open the Windows Control keyboard (NESDK-2736)
- Some Windows Control settings are now exposed through the TecSDK (NESDK-2737)
- Fixed a bug where drawing using Mouse Emulation's drag & drop in e.g. Paint did not work (NESDK-2738)
- Fixed a bug where it was possible to get stuck with the Windows Control keyboard taskbar open without a keyboard (NESDK-2746)
- Updated keyboard keys in Icelandic keyboard (NESDK-2748)
- Fixed a bug where Arabic word prediction was not available for the keyboard, Language Pack 1.7.10 needed (NESDK-2753)
- Migrated from .NET 4 to 4.5 to mitigate out of memory problems (NESDK-2757)
- Using software rendering to mitigate out of memory problems (NESDK-2758)
- Added possibility to launch Windows Control in hidden mode (TGP-2791)

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### Release Version 2.8.5

Release date: 2017-10-16

### Improvements

- Updated licensing window user interface (NESDK-2711)
- Added user notification when running Windows Eye Control at the same time as TGIS (NESDK-2721)
- Fixed a bug where the feedback window's size was set to infinite value (NESDK-2727)

### Release Version 2.8.4

Release date: 2017-05-17

### Improvements

- Fixed a bug where TGIS server could not wake Windows 10 when screen is off (NESDK-2654)
- Added functionality for recovering from corrupted word prediction data files (NESDK-2665)
- Fixed a bug where an eye tracker disconnect during calibration could cause the calibration window to stay open indefinitely (NESDK-2667)
- Included new PCEye Mini and I-Series IS4 firmware version 2.9.0 (NESDK-2671)
- Added detection and remove corrupted calibration files, if a backup calibration exists it can be restored if the user requests it (NESDK-2684)
- Fixed a bug where Wake-on-Gaze on the I-Series using Windows 10 stopped working (NESDK-2687)
- IS4 drivers for Windows 7 are no longer included when installing TGIS, those are moved to the PCEye package installer (NESDK-2708)

### Release Version 2.8.3

Release date: 2016-11-03

#### **Improvements**

- Added possibility through settings files to fine tune timing for mouse up when performing clicks (NESDK-2592)
- Fix to Arabic keyboard for some letters that were not typed correctly (NESDK-2632)
- Fixed a bug where the Tracked Eye setting did not become effective until the TGIS server restarted (NESDK-2639)
- Fixed punctuation errors in Gaze Interaction Settings' Information panel for French, Japanese and Chinese (NESDK-2641)
- Version check of Tobii Service before upgrading to new firmware for affected eye tracker models (NESDK-2642)
- Includes new firmware for IS4 eye trackers (NESDK-2643)
- Disable option to improve and remove points to calibrations done using IS4 Eye Tracker with firmware version prior to 1.10, if the current firmware is 1.10 or above, to avoid a cleared calibration (NESDK-2644)
- The Gaze Interaction server will start PCEye Notifier in case it has not been auto started by Windows (NESDK-2645)

### Release Version 2.8.2

**Release date:** 2016-08-15

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### Improvements

- Fixed a bug where the window control buttons would become highlighted on gaze over (NESDK-2591)
- Licensing translated to Hebrew (NESDK-2554)
- Offline activation for licensing added (NESDK-2564)
- Removed a call to Eye Tracker in cases where the USB was disconnected (NESDK-2567)
- Improved installer logic for upgrades (NESDK-2596)
- Fixed a bug where PCEye Mini calibration crashes after one point fails (NESDK-2598)
- More robust license handling when license server is unresponsive (NESDK-2601)
- Fixed a bug where the server communication was aborted due to concurrency issues (NESDK-2604)
- Fixed a bug where an outline of the mouse cursor could be shown while zooming in Gaze Selection (NESDK-2607)
- Improvements to the PCEye Mini driver for Windows 7 (NESDK-2615)

### Release Version 2.8.1

Release date: 2016-05-12

### **New Features**

- Added support for PCEye Explore, PCEye Mini and EyeMobile Mini (NESDK-2169)
- Added support for licensing (NESDK-2513)

### Improvements

• Removing option to mute new firmware notification to guide more users to perform the upgrades (NESDK-2546)

### Release Version 2.8.0

Release date: 2016-05-12

### **Improvements**

- Support for I-Series+ IS4 eye tracker (NESDK-2066)
- Excluded Flash from Mouse Emulation scrolling in Firefox to avoid a crash (NESDK-2228)
- Improved interaction when using the mouse in the Gaze Selection task overlay Snap/Close function (NESDK-2295)
- Fixed a bug where the TGIS tray icon could be closed using Alt+F4, with no way of getting it back (NESDK-2334)
- Fixed a bug where the mouse cursor was not shown after using the place cursor task if using switch (NESDK-2373)
- Gaze Selection Word Prediction added support for Japanese (NESDK-2383)
- Gaze Selection keyboard layouts added for Turkish, Hungarian, Persian/Farsi, Slovenian, Estonian, Russian, Icelandic. Romanian (NESDK-2406. NESDK-2409)
- Fixed a bug where Gaze Selection was displayed in the Windows Task View (NESDK-2411)
- Improved robustness of Gaze Selection overlay task selection (NESDK-2427)
- Fixed a bug where Gaze Selection could affect the z-order of windows so that windows were not brought to top when activated (NESDK-2428)
- Mouse Emulation dwell allowing larger gaze movement from the initial gaze point if the movement is not rapid (NESDK-2429)
- Mouse Emulation dwell activation is performed where the gaze point is fixated at the end of the dwell instead of where the initial fixation was done (NESDK-2430)
- Support for 1-point calibration for I-Series+ using IS4 eye tracker (NESDK-2431)
- Fixed a bug where the Gaze Selection keyboard was not possible to close if Windows had previously been closed with the keyboard was open (NESDK-2443)
- Fixed a crash in Gaze Selection (NESDK-2457)

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- Added an exception to allow pressing Ctrl and Shift on the physical keyboard without overriding gaze input (NESDK-2461)
- Fixed a bug where learnt predictions were not properly stored when shutting down Gaze Selection (NESDK-2484)
- Improved behavior so that media playback controls are not intermittently shown as frequently while watching fullscreen video (NESDK-2486)
- Applying a default color to the Gaze Selection Taskbar tasks in cases where the difference in background color and the accent color from Windows is considered too small (NESDK-2498)
- Allowing Gaze Selection overlay to stay active longer without inactivity timeout in cases where only mouse or touch is used (NESDK-2499)
- Keyboard layout improvements to Check and Slovak (NESDK-2503, NESDK-2508)
- Fixed a bug in scrolling for Windows 10 UWP apps (NESDK-2534)

### Release Version 2.7.5

Release date: 2016-03-01

### Improvements

- Fixed WMI exceptions on TobiiEyeControlServer startup (NESDK-2433)
- Fixed a bug where Windows 7 touch devices' system off screen menu was not possible to activate using gaze (NESDK-2455)

### Release Version 2.7.4

Release date: 2016-01-25

### Improvements

- Added keyboard shortcuts for calibration (Ctrl+Shift+F9), track status (Ctrl+Shift+F10) and pause gaze interaction (Ctrl+Shift+F11) (NESDK-2424)
- Fixed a bug where gaze data would be repeatedly interrupted while typing on the Gaze Selection keyboard (NESDK-2426)
- Fixed a bug where Gaze Selection would show the mouse cursor after mouse click tasks (NESDK-2434)

### Release Version 2.7.3

**Release date:** 2016-01-11

### **Improvements**

- Reduce usage of WMI to lower WMI provider host CPU usage (NESDK-2352)
- Gaze Interaction Settings' color picker custom colors preserved after closing/opening (NESDK-2356)
- Fix to avoid crash when changing Gaze Selection keyboard language (NESDK-2323)
- Gaze Selection is paused when the user is typing on the physical keyboard (NESDK-2363)
- The Gaze Selection keyboard now allows region interaction when opened (NESDK-2364)
- Gaze Selection keyboard next and previous page buttons have modified active area to reduce accidental activations (NESDK-2366)
- Faster Gaze Selection startup and fix for UI freeze when changing certain settings (NESDK-2367)

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### Release Version 2.7.2

**Release date:** 2015-11-05

#### **New Features**

 TobiiDynavox.ReLaunch crash recovery tool will make sure Gaze Selection is restarted in case of an application crash (NESDK-2323)

### **Improvements**

- Removed possibility to close the tray icon that controls Gaze Interaction, which could leave the user without option to properly exit (NESDK-2334)
- Presence detection should wake turned off screen (NESDK-2359)

### Release Version 2.7.1

Release date: 2015-09-21

### Improvements

- Fixed a bug where Gaze Selection would crash if settings were opened after Gaze Selection had been deactivated once (NESDK-2326)
- Improved behavior of restoring mouse cursor on the secure desktop (NESDK-2327)
- Mouse cursor visibility behavior improved for Gaze Selection startup and clicking (NESDK-2328)

### Release Version 2.7.0

Release date: 2015-09-15

#### **New Features**

- Support for Windows 10 including a Windows 10 specific overlay task in Gaze Selection. (NESDK-1874)
- Word prediction with the keyboard. (NESDK-765)
- Keyboard specific taskbar to move and to close the keyboard, and to do left click. (NESDK-1887, NESDK-1888, NESDK-2040)
- Button in the keyboard to clear text word by word. (NESDK-1890)
- Small and large size of the keyboard. (NESDK-1892)
- Additional keyboard languages. (NESDK-1997, NESDK-2240)

### Improvements

- Improved filtering of gaze data where the individual eyes' gaze have different precision (NESDK-1895)
- Fixed a bug where changes in the system clock of a device would cause fixations to stop working. (NESDK-2023)
- Improved translations in some languages. (NESDK-2031, NESDK-2032, NESDK-2033, NESDK-2034, NESDK-2056)
- Improved scrollable area detection for Mouse Emulation. (NESDK-2210)
- Fixed a bug where the Mouse Emulation magnifier would be hidden by Windows Peek. (NESDL-2212)
- Fixed a bug where the Mouse Emulation feedback would be hidden by Windows Peek. (NESDK-2213)
- Fixed a bug that could potentially lead to an infinite loop. (NESDK-2223)

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- Calibration calculation progress dialog is placed in the center of the screen also when Gaze Selection is running. (NESDK-2236)
- Fixed a bug where the custom cursor in Mouse Emulation would unintentionally switch back to the regular cursor. (NESDK-2237)
- Fixed an incorrect text regarding secondary stimuli in Gaze Interaction Settings. (NESDK-2241)
- Fixed a bug where Mouse Emulation would show incorrect window state after Windows sleep (NESDK-2242)
- Improved stability of the user positioning guide (NESDK-2243)
- Fixed a bug where changing the "Size of all items" setting in Windows would not update the space that the taskbar should reserve on the desktop until Windows was rebooted (NESDK-1388)
- Fixed a bug where some keyboard keys, e.g. '@' and '£', would not work. (NESDK-1952)
- The settings page to select keyboard language can accommodate more languages. (NESDK-2000)
- Changed behavior so Gaze Selection taskbar do not cover Windows taskbar when in desktop mode in Windows 8.1. (NESDK-2029)
- Fixed a bug where the arrows to change the keyboard page would not be visible until the page had been changed once. (NESDK-2042)
- Fixed the sizing of the left and right arrow keyboard buttons to match the up and down arrows' size (NESDK-2058)
- Improved the process of opening the keyboard. (NESDK-2059)
- Removed the black area at the top of the screen when using the Gaze Selection keyboard at the top of small screens. (NESDK-2137)
- When starting Gaze Selection the splash screen is shown until the taskbar is fully loaded (NESDK-2139)
- Fixed a bug where changing the "Size of all items" setting in Windows would cause the zoom screen shots to be shown incorrectly until Windows was rebooted (NESDK-2164)
- Fixed a bug where the taskbar would cover the windows taskbar in Windows 7. (NESDK-2173)
- Fixed the visual representation of the Arabic keyboard (NESDK-2174)
- Improved management of non-default Windows DPI settings. (NESDK-2177)
- Improved management of resolution changes for the Gaze Selection keyboard. (NESDK-2178)
- Improved management of resolution changes for the placement of the arrows to bring back the hidden Gaze Selection taskbar. (NESDK-2179)
- Replaced one of the two Windows-keys in the 1:st page of the Polish and Arabic keyboards with Alt (NESDK-2196)
- Fixed a bug where the mouse pointer would not be visible when using the physical mouse in conjunction with Gaze Selection. (NESDK-2222)
- Fixed a bug where the Snap&Close feature of overlay would sometimes not work. (NESDK-2231)
- Fixed a bug where clicking on the Windows start button by use of Gaze Selection would sometimes not work.
   (NESDK-2232)
- Improved the responsiveness when changing settings. (NESDK-2238)
- Improved layout of the French keyboard (NESDK-2250)
- Fixed a bug where the lowest row in the Polish keyboard would not show the preview of the current word. (NESDK-2270)
- Fixed a bug where the keyboard could not be used to type into the Windows Command prompt window. (NESDK-2299)
- Fixed a bug where the memory consumption would increase when changing keyboard language. (NESDK-2307)
- Fixed a bug where it was possible to activate the inactive tasks on the overlay, which then made them look active (NESDK-2312)
- Gaze Selection settings window is now excluded from Aero peek, avoiding situations where the settings window
  was open and active but not visible (NESDK-2313)
- Gaze Selection keyboard window is now excluded from Aero peek, avoiding situations where the keyboard window was open and active but not visible (NESDK-2314)

### Release Version 2.6.5

Release date: 2015-07-10

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#### **New Features**

• G5 eye tracker firmware version 1.2.4 (NESDK-2140)

### Improvements

- Solved possible timeout issue when switching between Mouse Emulation and Gaze Selection (NESDK-2175)
- Fixed a bug were the keyboard language label could be empty if the keyboard file specified by the settings file did not exist (NESDK-2086)
- Fixed a bug where migrating from 1.6.2 (TGIS 2.6.3) or earlier to 1.6.3 (TGIS 2.6.4) cleared the selected keyboard file (NESDK-2130)
- Fixed a bug where migrating from 1.6.2 (TGIS 2.6.3) or earlier to 1.6.3 (TGIS 2.6.4) showed "???" for some keyboard buttons (NESDK-2133)

### Release Version 2.6.4

Release date: 2015-06-08

#### **New Features**

- Changed "Tobii" for "Tobii Dynavox" (NESDK-1894)
- G5 Eye tracker Firmware version 1.2.3 (TITI-335)

### Improvements

- Added an "é" key to the French layout of the Gaze Selection keyboard (NESDK-1169)
- Fixed a bug where the Gaze Selection dock side setting was not preserved between sessions (NESDK-1929)
- Fixed a bug where the user could get trapped after showing the Gaze Selection keyboard and simultaneously hiding the Gaze Selection taskbar (NESDK-1978)
- Fixed a bug with the Gaze Selection keyboard where the function keys would not "lock" if selected by switch (NESDK-2024)
- Fixed a bug where Gaze Selection did not properly restore desktop icon placement after closing (TITI-76)
- Fixed a bug where Mouse Emulation scroll would not work when the "size of all items" setting in Windows was set to larger than 100 % (NESDK-1867)
- Lower usage of WMI queries for server because the WMI host process is consuming lots of CPU resources on some computers (NESDK-1930)
- Fixed a bug in Mouse Emulation using the Magnifier function, where an error message was displayed saying that "a generic error occurred in GDI+" (NESDK-1932)
- Fixed a bug where the Mouse Emulation scroll marker would not display in the correct location when the "size of all items" setting in Windows was set to larger than 100 % (NESDK-1958)
- Fixed a bug where the "Pause" icon would not display in the correct location when the "size of all items" setting in Windows was set to larger than 100 % (NESDK-1959)
- Fixed a bug where the server would incorrectly think that there is a driver issue, when connecting and disconnecting the eye tracker rapidly (NESDK-1977)
- Fixed a bug where the server would block gaze data due to believing that the secure desktop was visible (NESDK-1979)
- Fixed a bug where the server could fail to correctly register a client application when two clients where started at the same time (NESDK-1984)
- Fixed a bug where it was possible for a client application to call Register with the server, after server has begun to shut down (NESDK-1985)
- New error massage when there is a timeout in the communication between the server and a client application Improvements have also been made to lower the risk of having a communication timeout (TITI-85)

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- Improved, more robust, behavior of the Eye Tracker connection when USB temporarily detaches and attaches (TI-TI-200)
- Fixed a bug where a client application would get an insufficient memory exception after waking from sleep mode (TITI-244)

### Release Version 2.6.3

Release date: 2015-02-03

### **Improvements**

- Fixed a graphical bug regarding a frame in Gaze Selection settings. (NESDK-1868)
- Fixed a bug where the user could get stuck when selecting keyboard language in Gaze Selection settings. (NESDK-1870)
- Fixed a bug where the mouse cursor would indefinitely remain invisible after using the secure desktop. (NESDK-1871)
- Fixed a bug where Windows Control would still be active when using the secure desktop. (NESDK-1872)

### Release Version 2.6.2

Release date: 2014-12-17

#### **New Features**

- Auto repair functionality for IS Driver state for cases when the device has been associated with an incompatible driver. (NESDK-1863)
- Publisher policy files now added for each major and minor version of TGIS. (NESDK-1853)

### Improvements

- The interaction feedback dot is sometimes shown over menus that are opened using keyboard commands. (NESDK-1846)
- Illuminators go dark and eye tracker stops working due to exception Gaze Interaction Server. (NESDK-1850)

### Release Version 2.6.1

Release date: 2014-09-15

### **New Features**

- Japanese keyboard layout (NESDK-928)
- Eye Tracker firmware 1.2.2 included (NESDK-1825, NESDK-1837)

#### **Improvements**

- Resolved issues where the Mouse Emulation menu position is reset on reboot (NESDK-1414)
- Resolved issue where two calibrations started in quick sequence caused the calibration background to remain (NESDK-1835)

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### Release Version 2.6.0

Release date: 2014-06-23

### **New Features**

- Translated into Hebrew (NESDK-1521)
- Hebrew keyboard layout in Gaze Selection (NESDK-991)
- Greek keyboard layout in Gaze Selection (NESDK-849)
- Arabic keyboard layout in Gaze Selection (NESDK-790)
- Polish keyboard layout in Gaze Selection (NESDK-1781)
- New firmware for I-Series and PCEye eye trackers, 1.1.5 (NESDK-1517)
- Possibility of hiding the Mouse Emulation menu (NESDK-590)
- Gaze Selection keyboard names are now defined in the keyboard definition file and not translated (NESDK-1694)

### Improvements

Fix for crash that could occur while using Scroll in Gaze Selection (NESDK-1571)

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