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NEO TANDEM TECHNOLOGIES



User Manual

V0.1

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DOCUMENT REVISIONS

Version: Version 0.0:Initial creation of document

Version: Version 0.1:Added basic content relating to Introduction,Processes and
Appendix.

1 Introduction

1.1 Scope and Purpose

The purpose of this eye-tracking software is to provide the user with a eye-tracking software which will allow for the tracking of the eye on 2D and 3D models and videos. The system is centred around making eye-tracking possible for all media types.

1.2 Process Overview

There are a few core process that have been implemented and that will allow for more effective eye-tracking across mediums. The process are as follows:

- Eye tracking on 2D and 3D models and videos.
- Creation of heat maps from eye-tracking.
- Saving heat map on specific media.

The following process listed are the core of this program as they carry out the basic and most important functionality of this software.

2 Configuration

2.1 System Configuration

2.1.1 Minimum Hardware requirements

- 1.6 GHz or faster processor
- 4GB of RAM
- 1GB of available hard disk space
- 5400 RPM hard drive
- DirectX 9-capable video card
- Internet connection required

2.1.2 Recommended Hardware requirements

- 2.6 GHz or faster processor
- 8GB of RAM
- 2GB Graphics Card

- 1GB of available hard disk space
- 5400 RPM hard drive
- DirectX 9-capable video card running at 1024 x 768 or higher display resolution
- Internet connection required

2.1.3 Recommended Software requirements

- The EyeTribe software. That comes with the EyeTribe camera.
- Windows Media Player Version 12

2.1.4 Recommended External Devices

- The EyeTribe eye-tracking camera. The camera can be purchased here ...

2.2 Installation

Please ensure that you meet the minimum requirements. It is recommended that you meet the recommended requirements as this will ensure that the best performance is achieved.

Installation instructions will be filled in later.

3 Getting Started

The program is made to run with as little configuration as possible. There are no authentication processes that are associated with the program. The user will be able to just run the application and use it if the minimum requirements have been met.

3.1 Basic use

Once the application is run the user will be presented with a screen which will allow them to select the option to start a new recording session or use a previously created session. A new form will pop up with options to navigate to different sections of the application. The calibration button will navigate to the calibration page which will allow the setup of the EyeTribe eye camera. This form will allow you to calibrate the camera to ensure that the data recorded is correct. The calibration process will be discussed further in section The recording button on the main page will open the recording setup. This page will allow the user to select the type of recording which will then take them to the appropriate pages to do the recording. The recording page will allow for recording on the selected media. You would select the appropriate media and then start the recording. The data will then be saved and then used to make the heatmaps and all

the associated files.

The application can be exited easily by just pressing the exit button (red cross) on the top right of the application. This will end the application and end all its accompanied processes. This will ensure that the application does not cause harm to the computer.

4 Using the System

The following section will go in to in depth detail about the system and how to use it. This section of the user manual will show you how to perform actions throughout the application. There will also be sections on what to expect from each action. Certain troubleshooting sections will be referenced in this text and if you encounter any of these errors please refer to the troubleshooting section to try and solve the error.

4.1 Starting the program

The program will allow you to perform eye-tracking on different kinds of media. Different media can be recorded and so the program will allow for multiple recordings of the same or different media. The program allows you to create what is known as an eye-tracking recording project. This project is used to keep all the information of your recordings for a specific session. You can always return to the session and continue recording in that project which allows you to move between recording projects.

When the user runs the Eye tracking software a form will appear. The form is split into two sections, start a new recording or to open an existing project. Below are the execution of both methods

4.1.1 Start a new project

To start a new project you will need to specify a name for the project and location to store all the files. A default name will be given to the project called "project". This will create 3 files and a series of folders in the location selected. The 3 files created are the .eye file which contains all the information about the recording project. This information is all that is needed to continue recordings. The two other files that are created are the settings files for general user settings and then settings for 3D recording. The folders that are created are just the folders for the recording data and the results. Once this all the folders are created then the program will proceed to the main menu.

4.1.2 Open existing project

This will allow you to select an existing project and continue recording. Press the open button to select a file. The only file that will be accepted are .eye files. Once you select the file the settings are loaded up from the files and then the program moves to the main menu for you to continue recording.

5 Troubleshooting

The program is made to run with as little configuration as possible. There are no authentication processes that are associated with the program. The user will be able to just run the application and use it if the minimum requirements have been met.

5.1 Basic use

Once the application is run the user will be presented with a screen which will allow them to select the option to start a new recording session or use a previously created session. A new form will pop up with options to navigate to different sections of the application. The calibration button will navigate to the calibration page will allow the setup of the EyeTribe eye camera. This form will allow you to calibrate the camera to ensure that the data recorded is correct. The calibration process will be discussed further in section The recording button on the main page will open the recording set up. This page will allow the user to select the type of recording which will then take them to the appropriate pages to do the recording. The recording the page will allow for recording on the selected media. You would select the appropriate media and then start the recording. The data will then be saved and then used to make the heatmaps and all the associated files.

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6 Appendices

6.1 EyeTribe

The EyeTribe is a low cost development kit this is used with the OGAMA project to track the movement of the eye. The Eyetribe eye tracker includes a SDK (Software Development Kit) that allows the integration of eye tracking on multiple applications on multiple platforms. More information on the EyeTribe and its various components can be found at <http://www.theeyetribes.com>.

7 Index

This is where the index will be located. Here the user will be able to look for specific words and see where they are located