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NeuroSky's Mind Developer Tools (hereafter abbreviated MDT or Developer Tools) are a set of software tools that make it easy to create innovative applications that respond to a user's brainwaves and mental state.

If you already have a NeuroSky headset (such as the MindWave or MindWave Mobile), you will be able to take full advantage of it with our Developer Tools. If you are trying out the Developer Tools before purchasing a headset, thank you for reviewing the toolset. If you have any questions, let us know at support@neurosky.com.

How can I use the Developer Tools?

The Development Tools contain a number of ways to integrate brainwave-sensing functionality into existing programs or to create new programs from scratch.

What is included in the Developer Tools for PC/Mac?

There are several API's and SDK's included: ThinkGear SDK for .NET and Mac OSX, ThinkGear Communications Driver, ThinkGear Connector, and the Serial Stream SDK. These different implementations provide varied and appropriate levels of access for your application.

Also, included with the MDT are the corresponding End User License Agreement and the Application Standards, which contain usability and design recommendations.

What headsets are the Developer Tools for PC/Mac compatible with?

MindWave, MindWave Mobile, and the MindSet are formally compatible with these tools. In addition, there are third party headsets that have different levels of compatibility. For example, Mac COM Ports are named ports; sometimes integrating with a third-party ThinkGear-based headset only requires properly reference the matching COM port. Please refer to your third-party headset's information for additional details. The MindSet is no longer available and future revisions to the tools may introduce additional compatibility changes.

For the newest information, tutorials, and more, please visit: http://developer.neurosky.com

Version History

Version 2.5:
Addition of ThinkGear SDK for Mac OSX and .NET
Inclusion of Application Standards and related images. Documentation update

Version 2.1:
 Eye-blink Detection in software API

Version 2:
 Addition of ThinkGear Connector

Folders:

Application Standards:
Document and Icon Images

ThinkGear SDK for Mac OSX:
Documentation and Code Examples

ThinkGear SDK for .NET:
Documentation and Code Examples

ThinkGear Connector:
Documentation on Socket API, Development, and the TGC User Guide
ThinkGear Connector Executable for Mac and PC

ThinkGear Communications Driver:
Documentation and Code Examples for C++, C#, Java
Deprecated as of Developer Tools 2.5

ThinkGear Serial Stream SDK:
Documentation and Code Examples

Root:
End User License Agreement
Read Me
Development Guide

ThinkGear SDK for Mac OSX and .NET

- Ideal for .NET / Objective-C
- Windows and Mac OS X executable

The ThinkGear SDK provides development documents and sample code to show how to write applications for both .NET and Mac OS X. Developers can utilize data from the NeuroSky ThinkGear family of biosensors.

ThinkGear Connector

- Ideal for scripting languages like Flash / Python / Ruby
- Uses socket APIs
- Windows and OS X application executable

The ThinkGear Connector (TGC) is a software program - analogous to a socket server - that runs as a background process on your computer and is responsible for directing data from a NeuroSky ThinkGear-enabled headset from the serial port to an open network socket. It is available on both Windows and OSX. Any language or framework that contains a socket library should be able to communicate with the socket API. TGC is an ideal option for developers working in frameworks like Adobe Flash or web-based applications.

ThinkGear Communications Driver

- Ideal for C / C++ / C# / Objective-C
- Windows and OS X shared libraries (.dll and .bundle)
- Straight-forward API

The ThinkGear Communications Driver (TGCD) is a native Windows and OS X library that handles all the "heavy-lifting" of interacting with a NeuroSky headset, from setting up the connection to interpreting the data stream received from the ThinkGear chip. The API exposed by TGCD is extremely simple.

TGCD is distributed as a .dll (for Windows) and a .bundle (for OS X), making it suitable for applications written in C or C derivatives (i.e. C++, C#, or Objective-C). The OSX .bundle is only available in 32-bit.

ThinkGear Serial Stream SDK

- Ideal for micro-controller projects, ie. Arduino
- Allows for development on platforms with Serial or Bluetooth SPP access
- ANSI C source code for a full parser

For developers who want to integrate ThinkGear functionality in an embedded environment, the Developer Tools includes full documentation of ThinkGear's communications protocol, as well as ANSI C source code for an implementation of its packet parser. Developers can utilize this source code in their projects without worrying about compilation environments.

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