
MDT for iOS Instruction

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Introduction to MDT

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 **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. However, please note the NeuroSky headset is needed while using the developer tools to develop your own app. Our headset is available on Amazon store. To your convenience, here's the direct link to it

http://www.amazon.com/NeuroSky-MindWave-Mobile-BrainWave-Starter/dp/B00B8BF4EM/ref=cm_cr_pr_product_top?ie=UTF8 .

If you have any questions, let us know at support@neurosky.com.

Introduction to MDT for iOS

The **MDT for iOS** includes: **Application Standards**, **Stream SDK for iOS**, **EEG Algorithm SDK for iOS** and **EULA**.

- **Application Standards** Document and Icon Images
- **EULA** End User License Agreement
- **Stream SDK for iOS** is used to help connect your iOS app to a NeuroSky headset via bluetooth, and receive data from headset. It contains the follows file:
 - README.txt
 - StreamSDKForiOS.pdf
 - lib
 - * StreamSDK.a
 - * TGSEEGPower.h
 - * TGStream.h
 - * TGStreamDelegate.h
 - * TGStreamEnum.h
 - SampleProject
 - * Default-568h@2x.png
 - * OneChecksumFail.txt
 - * sample_data.txt
 - * StreamSDKDemo.xcodeproj
 - * TGStreamSDK
 - * AppDelegate.h
 - * AppDelegate.m
 - * Base.lproj
 - * Images.xcassets
 - * Info.plist
 - * main.m
 - * StreamSDK
 - * ViewController.h
 - * ViewController.m
- **EEG Algorithm SDK for iOS** is used to analyze and further interpret EEG data from NeuroSky's headset or TGAM module. It includes Attention, Meditation and Eye Blink Detection. These three algorithms are free to use within your application. It contains the follows file:
 - README.txt

- eeg_algorithm_sdk_for_ios_development_guide.pdf
- Algo SDK Sample
- AlgoSdk.framework

If you want more information about other EEG algorithms, please contact us at support@neurosky.com.

For details, please check within each package.

Usage

Each SDK includes a sample project and documents which teach you how to use them.

In order to make the integration progress for SDKs more smooth, please review the documents of SDKs. For example, review “**StreamSDKForiOS.pdf**” to start with the Stream SDK. For EEG Algorithm SDK for iOS, please review “**eeg_algorithm_sdk_for_ios_development_guide.pdf**”.

“**ApplicationStandards.pdf**” is very useful. It tells you how to use the icons to mark the status of connection in your project.

Here is a code snippet which shows how to use these SDK together (This code snippet is from **EEG Algorithm SDK**’s sample project):

```
// Init TGStream Instance
TGStreamInstance=[TGStream sharedInstance];
TGStreamInstance.delegate=self;
[TGStreamInstance enableLog:true];

// Init connection session
[TGStreamInstance initConnectWithAccessorySession];

// Tear down session
[TGStreamInstance tearDownAccessorySession];

-(void) onDataReceived:(NSInteger)datatype data:(int)data obj:(NSObject *)obj
deviceType:(DEVICE_TYPE)deviceType{

    NSLog(@"data Type:%d data:%d deviceType:%d", (int)datatype, data, (int)deviceType);

    if (obj) {

        TGSEEGPower *TGSEEGPowerInstance=(TGSEEGPower *)obj;
        NSString *TGSEEGPowerString=[NSString stringWithFormat:@"%d\n EEGPower delta-- %d\n EEGPower theta-- %d\n EEGPower lowAlpha-- %d\n EEGPower highAlpha-- %d\n EEGPower lowBeta-- %d\n EEGPower highAlpha-- %d\n EEGPower lowGamma-- %d\n EEGPower lowGamma-- %d\n ",
            [self NowString],
            TGSEEGPowerInstance.delta,
            TGSEEGPowerInstance.theta,
            TGSEEGPowerInstance.lowAlpha,
            TGSEEGPowerInstance.highAlpha,
            TGSEEGPowerInstance.lowBeta,
            TGSEEGPowerInstance.highAlpha,
            TGSEEGPowerInstance.lowGamma,
            TGSEEGPowerInstance.lowGamma];
        NSLog(@"%@", TGSEEGPowerString);
```

```
}  
}
```

TGStreamInstance is used to get information returned by Stream SDK, and onDataReceived delegate function is used to receive data. You can pass the data to EEG SDK here.

References and Bug reports

You can get the latest developer information from here:

<http://developer.neurosky.com/>

Learn about NeuroSky's EEG Data Types here:

http://developer.neurosky.com/docs/doku.php?id=thinkgear_communications_protocol

You may find some additional useful information in the Knowledge Base:

<http://support.neurosky.com/kb>

If you find any bugs, please contact us at:

support@neurosky.com