Unity plugin

- This project will help to integrate bHaptics' haptic devices into Unity environments.
- Current version is 1.4.0

1. Prerequisite

bHaptics Player needs to be installed (Windows 8.1, 10, Android)

- The apps can be found at
  bHaptics webpage: http://www.bhaptics.com
- Android Appstore : https://play.google.com/store/apps/details?id=com.bhaptics.player

2. How to install

(1) Download from the Unity Asset Store

- https://www.assetstore.unity3d.com/en/#!/content/76647

(2) Download the package file, then import it into a Unity Project

- https://github.com/bhaptics/tac-sharp/releases

(3) Clone from the github repository, then open it in Unity

```
git clone https://github.com/bhaptics/tac-sharp.git
```

3. Tutorial Videos

- Tutorials : https://www.youtube.com/playlist?list=PLfaa78_N6dlvd0Ha0s0Y_LT62-Oqp8N2A

4. How to use

(1) Default Test Scene

```
>Go to Assets > bHapticsManager > Examples > open 1. Simple Example with
TactSouce.scene
Select the [bHaptics Manager] Prefab in the scene.
Some example feedback effects are automatically loaded, ready for testing.
You can check each feedback effect by pushing the corresponding button while
playing in the editor.
```

(2) To apply to your own project, just add the [bHaptics Manager] Prefab to your scene.

(3) Then add TactSource to the GameObject in the inspector.

5. Options in [bHapticsManager]

(1) visualizeFeedbacks

• Enable/disable visualization of haptic feedback

(2) LaunchPlayerIfNotRunning (Windows only)

• Enable/disable launching bHaptics Player if it is installed and it is not running.

6. UWP Issues

• Please check uwp-issue.pdf

7. Android Issues

(1) Prerequisite

• Make sure that all the android setting with unity must be fininshed.
• https://unity3d.com/kr/learn/tutorials/topics/mobile-touch/building-your-unity-game-android-device-testing
• THe version of the Android device must be higher or equals to 4.3(API level 18) - https://developer.android.com/guide/topics/connectivity/bluetooth-le

(2) If there is not a paired device, then the SDK will do nothing.

(3) setting for AndroidManifest.xml

• Add BhapticsService and HapticPlayerWrapper as below.

```xml
    <service android:name="com.bhaptics.tact.ble.BhapticsService">
      <intent-filter>
          <action android:name="com.bhaptics.player.Service" />
          <action android:name="android.intent.action.MAIN" />
          <category android:name="android.intent.category.DEFAULT" />
      </intent-filter>
    </service>

    <activity android:name="com.bhaptics.tact.unity.HapticPlayerWrapper"
              android:label="@string/app_name"

 android:configChanges="fontScale|keyboard|keyboardHidden|locale|mnc|mcc|navigation|
 orientation|screenLayout|screenSize|smallestScreenSize|uiMode|touchscreen">
      </activity>
```

(4) Checkout how unity manage AndroidMenifest.xml

• https://docs.unity3d.com/2018.1/Documentation/Manual/android-manifest.html

(5)How to install the bhaptics Player at Daydream standalone devices.

• https://uploadvr.com/android-daydream-app-standalone-how-to/

8. Notes

(1) Migration to 1.3.1

• namespace changed from Bhaptics.Tac to Bhaptics.Tact

```
Bhaptics.Tac --> Bhaptics.Tact
Bhaptics.Tac.Unity --> Bhaptics.Tact.Unity
```

(2) Migration to 1.3.0

```
// from
BhapticsManager.HapticPlayer.SubmitRegistered("BowShoot");

// to
BhapticsManager.HapticPlayer.SubmitRegistered(BhapticsManager.GetFeedbackId("BowSho
ot"));
```

(3) Migration to 1.2.2

```
// from
SubmitRegistered(string key, TransformOption option)

// to
SubmitRegisteredVestRotation(string key, RotationOption)

// from
SubmitRegistered(string key, float intensityRatio, float durationRatio)

// to
SubmitRegistered(string key, ScaleOption option)
```

(4) Migration from 1.0.3 to 1.0.4

```
var hapticPlayer = FindObjectOfType<BhapticsManager>().HapticPlayer();

// To
var hapticPlayer = BhapticsManager.HapticPlayer;
```

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