AT&T Developer Program

AT&T API Platform SDKs for Windows
AT&T API Platform SDK for Windows Phone 8®

Installation, Setup, and Instruction Guide

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1. Introduction

The AT&T API Platform combines the power of the Microsoft .NET platform with AT&T services so that developers can quickly bring C# and Visual Basic applications to the market.

AT&T API Platform SDK for Windows Phone 8 ® (hereafter referred to as '**AT&T WP8 SDK**') goes even further, delivering pre-packaged controls (hereafter referred to as '**AT&T WP8 controls**'). These controls are designed with Windows Phone 8 ® native look and feel and run seamlessly in Windows Phone 8 ® environment.

Using these controls significantly reduces development effort to build Windows Phone 8 ® Apps that use AT&T API.

AT&T WP8 SDK is delivered as a Visual Studio ® Extension (hereafter referred to as '**AT&T WP8 Extension**'). This Extension is discoverable in Microsoft Visual Studio Gallery and can be installed into Visual Studio IDE without ever leaving the development environment.

Following controls are pre-packaged in the SDK:

- SpeechControl
- SpeechButton

2. Architectural Overview

AT&T WP8 SDK provides simplified access to the AT&T API Platform services for .NET developers. Typically, such an application is built with the following components:

- Windows Phone 8 Application – Developer code written in VB or C# that makes use of the controls in this package.
- Controls – AT&T WP8 controls made available when AT&T WP8 SDK is installed as Visual Studio Extension.
    - The controls in this package can be embedded in Visual Studio applications. These controls handle all messaging back to the SDK Wrapper Library.
- .NET Wrapper Library – AT&T Wrapper Library made available when AT&T WP8 SDK is installed as Visual Studio Extension.
    - The Visual Studio ® Extensions provide a special set of wrapper functions called the .NET Wrapper Library that are written in C# but are available to any .NET runtime language. This layer of objects that inherit from the AT&T API Platform provides APIs with a simplifying syntax that gives application developers a set of uniform and easy to use interfaces with which to address the AT&T REST APIs.
- Communiation Layer - This layer consists of APIs that communicate with AT&T services via REST.

You can find more information about the SDK Wrapper library and the AT&T API Platform in the Getting Started Guide on the AT&T website.

3. Installation Guidelines and Notes

To use AT&T WP8 SDK you need the following:

- A computer with Microsoft Windows 8 installed.
- Microsoft Visual Studio ® 2012 Professional (Or a version with comparable or greater capabilities).
- Windows Phone 8.0 SDK
- An Internet connection (required to download the necessary tools).

Consider the following when using the controls in this package:

- They are designed to be used in Microsoft Windows Phone 8 ® applications and will not work with prior versions of the operating system or compilers.
- They work only with AT&T API Platform. Other platforms or services are not supported.

In order to use the AT&T API Platform, you and your organization must abide by the AT&T API agreement. To use AT&T Speech API, a secret key and an API key are required. You can obtain these keys by joining the AT&T developer program.

There are two types of keys available to you:

- Sandbox keys are available for free, and allow programmers to demonstrate proof-of-concept and perform testing on applications using the AT&T APIs.
- Production keys provide the same capabilities, but are designed to handle a much larger amount of traffic.

You can learn more about how to obtain these keys by creating an account and signing in to http://developer.att.com.

4. Installing the Components

To install AT&T WP8 SDK, do the following:

1. In Microsoft Visual Studio ®, open the Tools menu and select "Extensions and Updates". The “Extensions and Updates” dialog will appear.

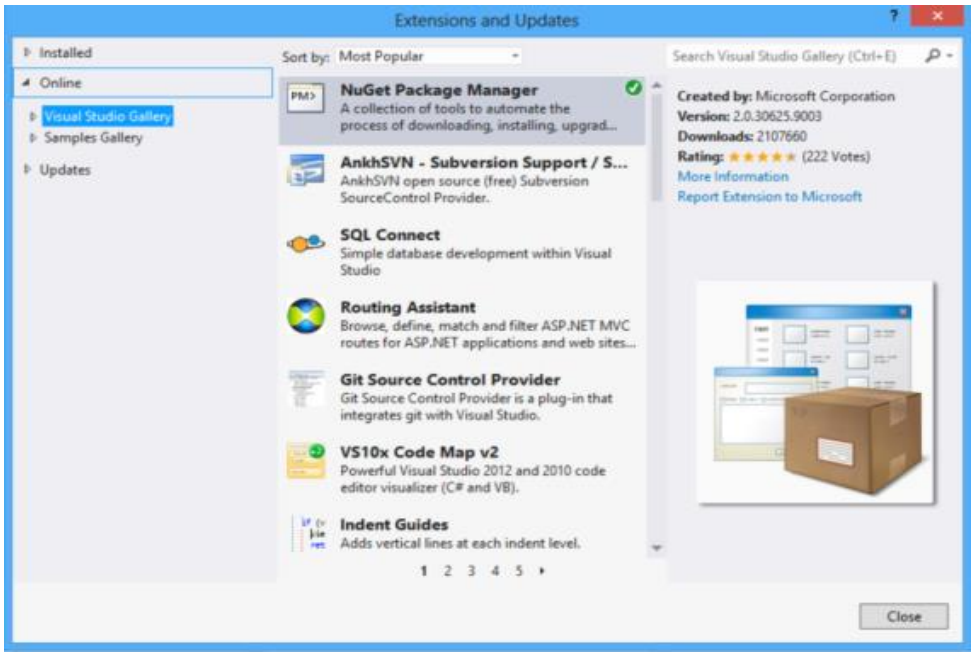

Figure 1: The Microsoft Visual Studio ® Extensions and Updates dialog.

2. In the “Extensions and Updates” dialog, open Online and click “Visual Studio Gallery” (as shown in figure 1). Wait a few seconds for the tool to retrieve the most popular extensions.
3. When the gallery has finished loading, type “**AT&T API Platform SDK for Windows Phone 8**” into the search box and hit <ENTER> or Return. The WP8 Extensions will appear in your list of search results.
4. Highlight the selection, and then click “Download” to download and install the components.

When this process has completed, the AT&T WP8 Extension installed and ready for use.

5. Using the Components

To use the AT&T WP8 controls in an application, do the following:

1. Create a “Windows Phone” project by opening the File menu, selecting “New project”, and under “Templates”, selecting “Windows Phone”.

   Note: Select as Target Windows Phone OS Version: “Windows Phone OS 8.0”. With other versions of OS controls do not work.

2. Select an application name and path, and click OK.
3. Click on “MainPage.xaml”. You will see an empty “Windows Phone” form, and on the left, before the File menu, a new, vertical toolbar will appear with the label:
   “Toolbox | Device | Document Outline | Data Source”.
4. Click to expand the “Toolbox”.
5. Right button mouse click on the toolbox and select in the context menu “Add Tab”. Set new tab name (for example, “AT&T Controls for Windows Phone 8”).
6. Right button mouse click on the new toolbox tab and select “Choose items…” in the context menu.
7. Select “Browse…” in file dialog.
8. Set the file path C:\ Program Files (x86) \Microsoft SDKs \Windows Phone \v8.0 \ExtensionSDKs \AT&T Controls \[Current Version Number] \References \CommonConfiguration \neutral\ ATT.WP8.Controls.dll and click “Open”.

   (Note: Adjust according to your Visual Studio install directory location)

9. AT&T controls now appear in the “Choose Toolbox Items” dialog.
10. Check *SpeechButton* and *SpeechControl* and click “OK” on the dialog window.

Figure 2: Toolbox with the AT&T Controls Category expanded showing the AT&T WP8 Controls.

11. Once you see the list of controls, simply drag your preferred control onto the main page and let go; your control will appear!

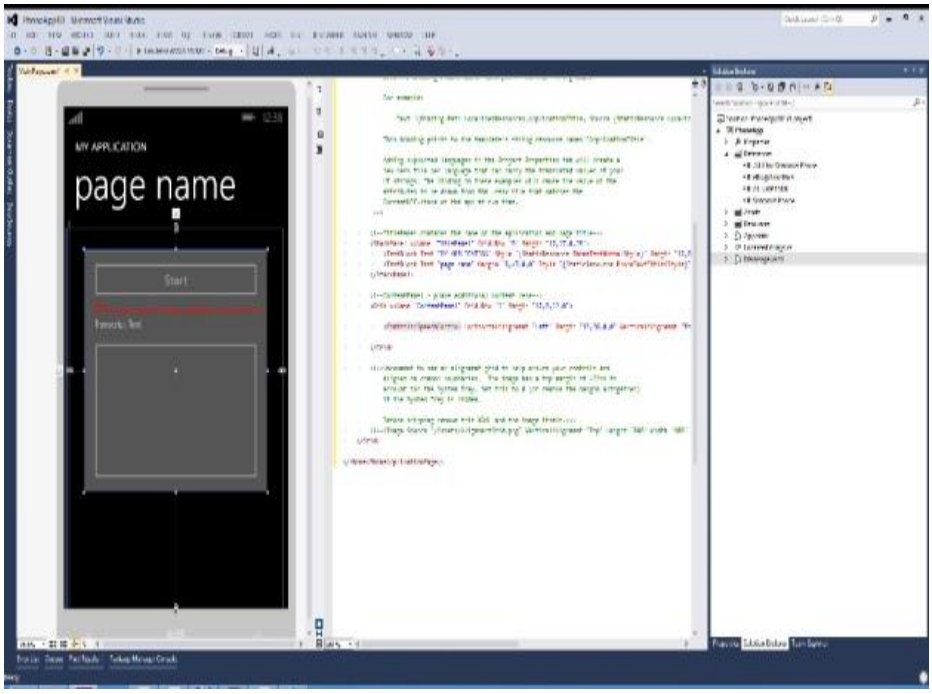

Figure 3: The Speech Control in Microsoft Visual Studio ® 2012 Professional.

At this point, the application can be compiled and it can send messages on the AT&T network using a rotating, encrypted set of API keys to send messages. These keys are sufficient for proof of concept work, but they are not intended to

be used for production deployments. Instead, developers should obtain their own organization Secret Key and API Key at developer.att.com and configure the application to use those keys.

To change to your production keys, do the following:

1. Click on the control itself, and look at the Properties pane on the right to find the properties of the control. (The Properties pane is shown in figure 3.)
2. Scroll down the Properties pane to “Miscellaneous” and expand the category. The fields listed under “Miscellaneous” include both the Secret Key and the API Key.
3. Obtain your keys and paste them in to these fields.

Your application can now send speech audio to AT&T Speech API and receive the transcribed text.

You can also set the Secret Key and the API Key values in the control’s xaml. Add the following properties for the Speech Button control or Speech control elements.

```
SecretKey = "real value of secret key";
ApiKey = "real value of API key";
```

To test your application, do the following:

1. Open the Build menu and select “Build Solution”.
2. Open the Debug menu and select “Start Debugging on the Windows Phone 8 Emulator”.

6. About the Controls

This release contains two controls:

- SpeechButton
- SpeechControl

Note: For all of these controls, you must enter the Secret Key and the API Key in the miscellaneous properties of the control, or in the global application ATTSetting variables. For a description of how to do this, see the previous section of this document “Using the Components”.

The following sections describe these controls in more detail.

6.1 SpeechControl

The SpeechControl interacts with AT&T servers via REST API. It takes an audio from your cell phone microphone, uploads that file to an AT&T server, and returns the text from the audio. When you press **Start** button, the control begins to record the microphone audio into a file. It also changes label to **Stop**. When you press **Stop**, audio capture will stop and recorded speech will be sent to AT&T API.

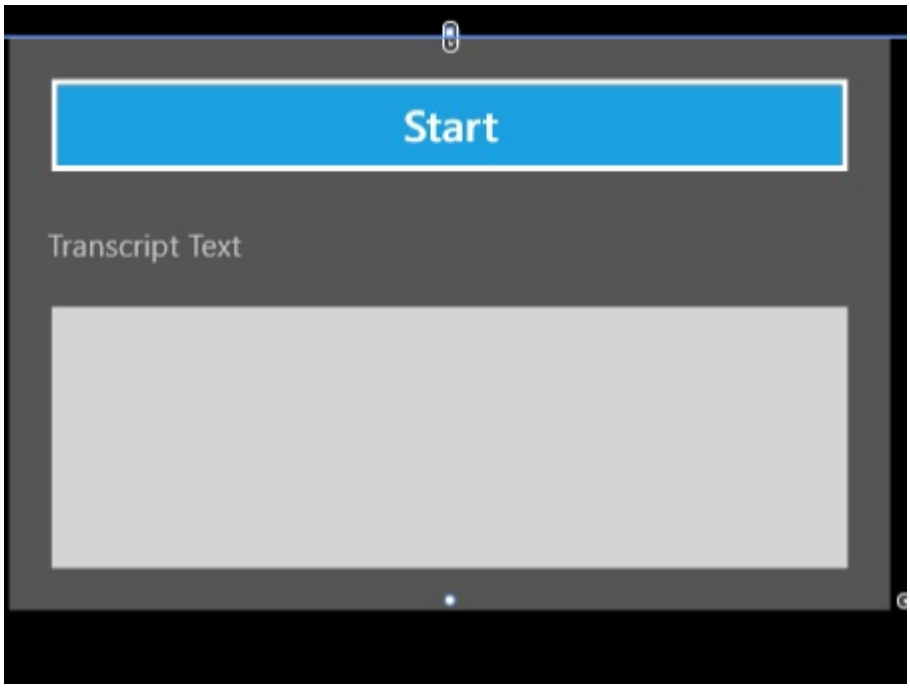

Figure 4: SpeechControl

6.2 SpeechButton

The SpeechButton control takes contents of an audio file (currently, the WAV and AMR file types are supported), uploads the contents to AT&T Speech API service, and maintains the transcribed text returned from Speech API.

Figure 5: Speech Button Control

7. Sample Application

AT&T Developer Program team created a sample application to demonstrate the functionality of each control.

To view and download the sample:

1. Go to the AT&T Extensions github site:

   https://github.com/attdevsupport/ATT_APIPlatform_MS_W8_SDK

2. Click on ATT.WP8.SampleApp directory
3. Click on the “ZIP” button to download the repository as a .zip file to your computer.
4. Extract the files from the .zip file to the desired directory.

To load the sample application in Microsoft ® Visual Studio:

1. Use Windows Explorer to browse to the location where you extracted the files.
2. Double-click on the Visual Studio Project File to open it.

When the sample application opens, you will see a home screen such as the one shown in figure 6. On this screen you may select each of the individual controls and explore their capabilities.

Note: AT&T Speech Service receives only .wav or .amr audio files. 8,000 Hz 8 bit format 64 Kbit/s Bitrate. No longer than 4 minutes.

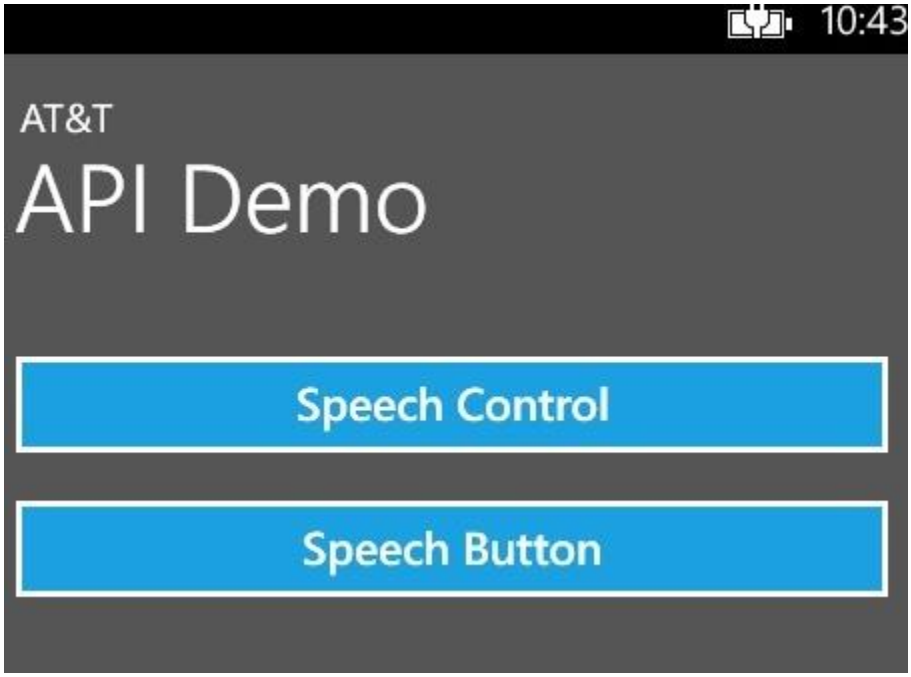

Figure 6: The home screen of the AT&T API Platform Demo for Windows Phone 8 sample application.