Quick Start Guide
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AT&T Natural Voices Products

The purpose of this guide is to provide information about the AT&T Natural Voices including descriptions of the various packages, installation instructions for each and application examples to allow the user to get the TTS software running on their computer as easily as possible. It does not replace the information which is available in the Developer’s Guide.

AT&T Natural Voices - Editions

The AT&T Natural Voices TTS product is currently available in two forms: the Server Edition and the Desktop Edition.

The Server Edition provides a scalable, client/server architecture that’s ideal for supporting many simultaneous client connections or channels on a single server or large server farm of TTS servers converting multiple text streams into audio concurrently using the powerful AT&T Natural Voices text-to-speech (TTS) server technology. The server edition includes both server and client components. The client and server components can be installed on the same computer or on different computers.

The Desktop Edition provides the same AT&T Natural Voices TTS technology on a desktop computer and limits the TTS engine to converting text into audio on a single channel at a time.

You may install either edition of AT&T Natural Voices into any directory. The default installation directory for both editions for Windows XP is the same: c:\Program Files\ATTNaturalVoices\TTS5.1. The installation directory is referred to as <INSTALL_DIR> in this manual.

The following screen shot shows what the installation directory should look like after installation is completed.
AT&T Natural Voices - Versions

Each edition of AT&T Natural Voices comes in 2 versions – Trial and Live. The Live version contains the production or distributable version of the TTS runtime engine. The main difference is that the trial version will expire after 180 days and it also requires an Internet connection to validate your copy of AT&T Natural Voices is within the trial period every time it is used. If you have a trial version, please make sure your anti-virus or firewall does not prevent AT&T Natural Voices from accessing the Internet.

AT&T Natural Voices versions:

<table>
<thead>
<tr>
<th>AT&amp;T NV Version</th>
<th>Expires After</th>
<th>Works w/o Internet</th>
<th>Contains Runtime</th>
<th>Contains SDK</th>
<th>SDK has Manual</th>
<th>Needs Voice Font</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial</td>
<td>180 days</td>
<td>No</td>
<td>Trial</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Live</td>
<td>Never</td>
<td>Yes</td>
<td>Production</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Please note that you can upgrade from one version to another at any time later on.
**AT&T Natural Voices – Voice Fonts**

Voice fonts for the AT&T Natural Voices are currently available for US English, UK English, Indian English, French, German, Spanish, Italian and Canadian-French. Each voice font is available sampled at 8 kHz and at 16 kHz. The 16 kHz version provides the best quality audio. The 8 kHz version should be used for telephony applications.

AT&T Natural Voices will not function until the runtime engine and one or more voice font(s) has been installed. Setup files for voice fonts come in the form of a single executable file, which will look like this: `att_naturalvoices_v5.1_mike8.exe`, `att_naturalvoices_v5.1_crystal16.exe`, etc. Voice fonts are the same for all editions and all versions of AT&T Natural Voices.

Table of Fonts:

<table>
<thead>
<tr>
<th>Language</th>
<th>Name</th>
<th>Gender</th>
<th>Installation Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>US English</td>
<td>Mike</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\mike*</code></td>
</tr>
<tr>
<td></td>
<td>Crystal</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\crystal*</code></td>
</tr>
<tr>
<td></td>
<td>Rich</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\rich*</code></td>
</tr>
<tr>
<td></td>
<td>Ray</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\ray*</code></td>
</tr>
<tr>
<td></td>
<td>Claire</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\claire*</code></td>
</tr>
<tr>
<td></td>
<td>Julia</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\julia*</code></td>
</tr>
<tr>
<td></td>
<td>Lauren</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\lauren*</code></td>
</tr>
<tr>
<td></td>
<td>Mel</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_us\mel*</code></td>
</tr>
<tr>
<td>Spanish</td>
<td>Alberto</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\es_us\alberto*</code></td>
</tr>
<tr>
<td></td>
<td>Rosa</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\es_us\rosa*</code></td>
</tr>
<tr>
<td>UK English</td>
<td>Charles</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_uk\charles*</code></td>
</tr>
<tr>
<td></td>
<td>Audrey</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_uk\audrey*</code></td>
</tr>
<tr>
<td>*** Indian Accent</td>
<td>Anjali</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\en_uk\anjali*</code></td>
</tr>
<tr>
<td>German</td>
<td>Reiner</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\de_de\reiner*</code></td>
</tr>
<tr>
<td></td>
<td>Klara</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\de_de\klara*</code></td>
</tr>
<tr>
<td>French</td>
<td>Alain</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\fr_fr\alain*</code></td>
</tr>
<tr>
<td></td>
<td>Juliette</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\fr_fr\juliette*</code></td>
</tr>
<tr>
<td>French Canadian</td>
<td>Arnaud</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\fr_ca\arnaud*</code></td>
</tr>
<tr>
<td>Italian</td>
<td>Giovanni</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\it_it\giovanni*</code></td>
</tr>
<tr>
<td></td>
<td>Francesca</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\it_it\francesca*</code></td>
</tr>
<tr>
<td>Brasilian Portuguese</td>
<td>Tiago</td>
<td>M</td>
<td><code>&lt;INSTALL_DIR&gt;\data\pt_br\tiago*</code></td>
</tr>
<tr>
<td></td>
<td>Marina</td>
<td>F</td>
<td><code>&lt;INSTALL_DIR&gt;\data\pt_br\marina*</code></td>
</tr>
</tbody>
</table>

Note: replace star (*) with either 8 or 16, depending on voice font type.
Installation Instructions

The following sections describe the installation procedures for each edition/version of AT&T Natural Voices and the voice fonts. Each one whether downloaded or on CD will be contained in the form of a zip archive file. If the software was downloaded it is recommended that a back-up copy of the zip file be saved on CD or a backup drive for archival purposes. Administrator’s privileges are required for installation.

If previous versions of AT&T Natural Voices were installed it is necessary to Uninstall them prior to installing version 5.1. If a Trial Version of AT&T Natural Voices v5.1 was installed previously it is not necessary to uninstall it. Installing the Live Version in the same installation directory will remove the trial verification requirement.

To begin installation, first copy the file into any folder on your computer and unzip it. Then proceed to the appropriate section below which describes the installation instructions for the specific product which you received. The edition and version can be identified by looking at the file name of the zip file. For example, the file name: att_naturalvoices_v5.1_desktop_trial.zip is the Desktop Edition, Trial Version.

AT&T Natural Voices editions and versions:

- Desktop Edition, Trial Version
- Desktop Edition, Live Version
- Server Edition, Trial Version

*Please note that the sequence of installation steps is very important. Please follow the installation instructions described below for the product being installed.*
Installation of Desktop Edition, Trial Version

There are 2 executables inside - runtime.exe and sdk.exe.

1) Install the AT&T Natural Voices runtime engine.

Run runtime.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

2) Install the AT&T Natural Voices SDK (sdk.exe).

Installation of this component is optional. You do not need to install the SDK if you are not a developer and do not need the Developers Guide.

3) Install AT&T Natural Voices voice font(s).

Please install voice font by double clicking the executable. The setup application will walk you through the standard set of installation screens before the voice font is installed on your computer. Install all voice fonts which you downloaded or have on CD.

4) Activate the trial version.

Locate the order number, which can be found on the invoice sent to you by Wizzard Software Corp. Create a file named order.txt and type the order number (10 digits) into that file. Save order.txt into the directory <INSTALL_DIR>\bin.

5) Run the Simple Test application to verify installation was successful. See instructions in the Sample Applications section.

There are two executables inside - runtime.exe and sdk.exe.

1) Install the AT&T Natural Voices runtime engine.

Run runtime.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

2) Install the AT&T Natural Voices SDK (sdk.exe).

Installation of this component is optional. You do not need to install the SDK if you are not a developer and do not need the Developers Guide.

3) Install AT&T Natural Voices voice font(s).

Please install voice font by double clicking the executable. The setup application will walk you through the standard set of installation screens before the voice font is installed on your computer. Install all voice fonts which you downloaded or have on CD.

4) Run the Simple Test application to verify installation was successful. See instructions in the Sample Applications section.
Installation of Server Edition, Trial Version

There are 3 executables inside the archive – server.exe, client.exe and sdk.exe.

1) Install the AT&T Natural Voices server runtime (on server).

Run server.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

2) Install AT&T Natural Voices voice font(s) (on server).

Please install voice font by double clicking the executable. The setup application will walk you through the standard set of installation screens before the voice font is installed on your computer. Install all voice fonts which you downloaded or have on CD.

3) Activate the trial version (on server).

Locate the order number, which can be found on the invoice sent to you by Wizzard Software Corp. Create a file named order.txt and type the order number (10 digits) into that file. Save order.txt into the directory <INSTALL_DIR>\bin.

4) Install the AT&T Natural Voices client (on client).

Run client.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

5) Install the AT&T Natural Voices SDK (on client).
Installation of this component is optional. You do not need to install the SDK if you are not a developer and do not need the Developers Guide.

6) Configure SAPI (on client)

Locate and run file `<INSTALL_DIR>\bin\WinVoiceEdit.exe`. Make sure that you select option “Run as administrator” under Windows Vista or Windows 7:

SAPI configuration utility is a single-screen application which looks like this:

Do the following for each voice font:

.pressure symbol] Click button **New**.
.pressure symbol] New voice token will appear - highlight line by clicking it.
.pressure symbol] Select voice font from the dropdown list **Name**. This dropdown contains all available fonts – you have to pick one installed.
.pressure symbol] Select **Gender**.
.pressure symbol] Set “Adult” within dropdown list **Age**.
.pressure symbol] Select language within dropdown list **Locale**.
.pressure symbol] Enter IP address of the computer with the TTS Server into field **Server**. Use **localhost** if client and server are on the same computer.
.pressure symbol] Enter port number (which TTS Server listens to) into field **Port**.
.pressure symbol] Click button **Save**.

7) Run the Simple Test application to verify installation was successful. See instructions in the Sample Applications section.
Installation of Server Edition, Live Version

There are three executables inside the archive – client.exe, runtime.exe and sdk.exe.

1) Install the AT&T Natural Voices server runtime (on server).

Run server.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

2) Install AT&T Natural Voices voice font(s) (on server).

Please install voice font by double clicking the executable. The setup application will walk you through the standard set of installation screens before the voice font is installed on your computer. Install all voice fonts which you downloaded or have on CD.

3) Install the AT&T Natural Voices client runtime (on client).

Run client.exe by double-clicking it. The setup application will walk you through the standard set of installation screens before AT&T Natural Voices will be installed on your computer.

4) Install the AT&T Natural Voices SDK (on client).

Installation of this component is optional. You do not need to install the SDK if you are not a developer and do not need the Developers Guide.

5) Configure SAPI (on client)
Locate and run file `<INSTALL_DIR>\bin\WinVoiceEdit.exe`. Make sure that you select option “Run as administrator” under Windows Vista or Windows 7:

SAPI configuration utility is a single-screen application which looks like this:

Do the following for each voice font:

- Click button **New**.
- New voice token will appear - highlight line by clicking it.
- Select voice font from the dropdown list **Name**. This dropdown contains all available fonts – you have to pick one installed.
- Select **Gender**.
- Set “Adult” within dropdown list **Age**.
- Select language within dropdown list **Locale**.
- Enter IP address of the computer with the TTS Server into field **Server**. Use **localhost** if client and server are on the same computer.
- Enter port number (which TTS Server listens to) into field **Port**.
- Click button **Save**.

6) Run the Simple Test application to verify installation was successful. See instructions in the Sample Applications section.
Sample Applications

Simple Test

An application is provided to verify installation of AT&T Natural Voices using command line binaries and to provide a simple user interface to generate audio files from text and play it over the computer’s speakers or save it in a file. This application, called “Simple Test”, is located in the directory \bin\SimpleTest.exe. In some versions this application can also be started from the Windows Start Programs menu under the AT&T Natural Voices 5.1 folder. Following is a screenshot of the Simple Test user interface:

The screen is divided into 4 sections. The settings section allows the desired voice to be selected. When selecting a voice from the Select Installed AT&T NV Voice Font panel it is important to select a voice font which has been installed. If 16 kHz voice fonts were installed be sure to change font to 16 KH.

To verify installation of AT&T Natural Voices:

- Select installed voice font by highlighting it
- Click radio button “Use Sample Text”
- Select sample text from pull down menu to match selected voice
- Click radio button “Send to Computer Speakers”
- Click “Convert” button
The program should convert the sample text to audio and play it over the PC speakers if the software was correctly installed. If it does not, please verify that you selected a voice and the correct sampling rate for a voice font which was installed.

**To generate an audio file from text in the text dialog box:**

- Select installed voice font by highlighting it
- Click radio button “Use This Text”
- Replace content of the text dialog box (right of the radio button) with the text you want converted either by typing it in or using the clipboard to paste the text into the text box
- Click radio button “Create This File”
- Replace the default filename with the desired directory\filename where the output audio file should be saved
- Click “Convert” button

The program will convert the text in the text box and generate an audio file (.wav format). The audio will be saved under the specified filename and could be opened by clicking button “Listen to Audio”.

**To generate an audio file from a text file:**

- Select installed voice font by highlighting it
- Click radio button “Get Text from File”
- Replace the default filename (right of the radio button) with the desired input file containing the text to be converted into audio by typing the directory\filename or using the Browse button to select the file
- Click radio button “Create This File” and replace the default filename with the desired directory\filename where the output audio file should be saved
- Or click radio button “Create Audio File in the Input Directory” (this will save the output audio file in the same directory as the input file using the same file name but with a .wav extension)
- Click “Convert” button

The program will convert the text contained in the specified input file and write it out to the specified output file. The audio file could be opened by clicking button “Listen to Audio”.

**Using SSML control tags in the text input:**

- Text entered in the text box or from a file must be plain text (ie. not rich format text); except that it may contain SSML control tags
- In the above sample wrapping the text with the tag `<VOICE NAME="mike16">…text…</VOICE>` would cause the text to be read using the Mike 16 kHz voice font regardless of what voice was selected in the settings. This allows you to change voices in mid-stream. For example, if the text contained a phrase in French you could use a French voice to read it as long as that voice font was previously installed.
- See Section 6 in the AT&T Natural Voices Developers Guide for a complete list of SSML control tags which are supported showing the format, description and examples for each tag.
Simple SAPI

Another application is provided to verify installation of 32-bits SAPI components of AT&T Natural Voices and to provide a simple user interface to generate audio files from text and play it over the computer’s speakers or save it in a file. This application, called “Simple SAPI”, is located in the directory `<INSTALL_DIR>\bin\SimpleSAPI.exe`. In some versions this application can also be started from the Windows Start Programs menu under the AT&T Natural Voices 5.1 folder. Following is a screenshot of the Simple SAPI user interface:

![Simple SAPI User Interface](image)

The screen is divided into 3 sections – settings, input source and output destination. The settings section allows the desired voice to be selected and to adjust the speaking rate and volume. When selecting a voice from the Select Installed AT&T NV Voice Font panel it is important to select a voice font which has been installed and which appears on the Available SAPI Voice Tokens panel. If 16 kHz voice fonts were installed be sure to scroll down to the 16 kHz voices (e.g. mike16).

To verify installation of AT&T Natural Voices with SAPI:

- Select installed voice font by highlighting it
- Click radio button “Use Sample Text”
Select sample text from pull down menu to match selected voice
Click radio button “Send to Computer Speakers”
Click “Generate” button

The program should convert the sample text to audio and play it over the PC speakers if the software was correctly installed. If it does not, please verify that you selected a voice and the correct sampling rate for a voice font which was installed.

To generate an audio file from text in the text dialog box:

- Select installed voice font by highlighting it
- Click radio button “Type Text / SSML Tags”
- Replace content of the text dialog box (right of the radio button) with the text you want converted either by typing it in or using the clipboard to paste the text into the text box
- Click radio button “Create Following Audio File”
- Replace the default filename with the desired directory\filename where the output audio file should be saved
- Click “Generate” button

The program will convert the text in the text box and generate an audio file (.wav format). The audio will be saved under the specified filename and open it in a Windows Sound Recorder window.

To generate an audio file from a text file:

- Select installed voice font by highlighting it
- Click radio button “Get Text from File”
- Replace the default filename (right of the radio button) with the desired input file containing the text to be converted into audio by typing the directory\filename or using the Browse button to select the file
- Click radio button “Create Following Audio File” and replace the default filename with the desired directory\filename where the output audio file should be saved
- Or click radio button “Create Audio File in the Input Directory” (this will save the output audio file in the same directory as the input file using the same file name but with a .wav extension)
- Click “Generate” button

The program will convert the text contained in the specified input file and write it out to the specified output file.

Using SSML control tags in the text input:

- Text entered in the text box or from a file must be plain text (ie. not rich format text); except that it may contain SSML control tags
- In the above sample wrapping the text with the tag `<VOICE NAME="mike16">…text…</VOICE>` would cause the text to be read using the Mike 16 kHz voice font regardless of what voice was selected in the settings. This allows you to change voices in mid-stream. For example, if the text contained a phrase in French you could use a French voice to read it as long as that voice font was previously installed.
- The sample also shows the use of the MARK tag to notify an application when the words “fox” and “dog” are read which could allow a browser application to perform some action on the screen. This could be used to have a bouncing ball follow the text as it is read or to synchronize an avatar’s mouth movements.
- See Section 6 in the AT&T Natural Voices Developers Guide for a complete list of SSML control tags which are supported showing the format, description and examples for each tag.
Dictionary Editor

An application is provided which allows you to define custom user dictionaries which change the AT&T Natural Voices TTS runtime engine’s pronunciation for user defined words. The AT&T Natural Voices includes a sample user dictionary for US English already populated with some words. This dictionary is located in `<INSTALL_DIR>\data\en_us\en_us.dict`.

The “Dictionary Editor” application is located in `<INSTALL_DIR>\bin\WinDictEdit.exe`. In some versions this application can also be started from the Windows Start Programs menu under the AT&T Natural Voices 5.1 folder. Following is a screenshot of the Dictionary Editor user interface:

To load the default EN_US user dictionary:

- Click “Dictionary” on the main menu, then select “Open”
- Locate file `<INSTALL_DIR>\data\en_us\en_us.dict` then click the “Open” button
- List of words will appear within the main window.

To change the pronunciation of a word:

- Select word by clicking the word in the list
- Alter the phonemes then click the “Say” button to hear it
- Click the “Update” button

To add a word:

- Type word in the Selected Word window then click the “Say” button to hear the default pronunciation
- To change how the word is read first click on the “Convert” button to see the default phonemes
- Alter the phonemes then click the “Say” button to hear it
- Click the “Insert” button
To save the updated dictionary

☞ Click “Dictionary” on the main menu, then select “Save”

For additional information on creating your own custom user dictionaries please check Section 7 of the AT&T Natural Voices Developers Guide (located in <INSTALL_DIR>\docs\dev_doc.pdf).

Please refer to Section 9 in the Developers Guide for a complete list of phonemes for each language.
Both editions of Natural Voices come with native 32-bit and 64-bit libraries and binaries. Use utility Switch (<INSTALL_DIR>\bin\switch.exe) if you have a 64-bit Windows but want to compile your code against 32-bit libraries – it is able to switch all libraries and binaries from 64-bit to 32-bit and back. You also need to use Switch if you are using SAPI for your developments and would like to switch between 32-bit SAPI and 64-bit SAPI.

If you have Server edition, you need to stop and uninstall Windows service ATT_TTSService51 before running Switch, then install and start the service – check utility “Service Manager” to learn how to do it.