



PPA Innovation Co., Ltd.

412/62 3th floor, Phaholyothin Place Plaza, Phayatai, Bangkok 10400

Tel.: +66-2271-0493 Fax: +66-2271-0493 <http://www.ppainnovation.com>

PPA Text-to-Speech

Server Edition & PC Edition



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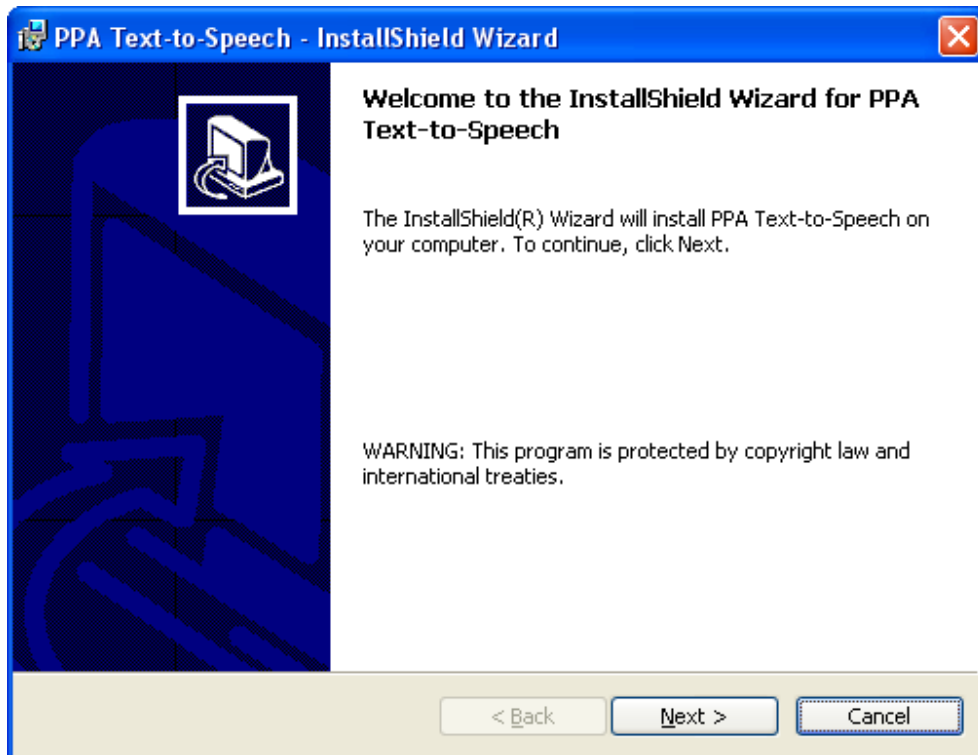
Getting Started

System Requirements

- Processor: Pentium III 1.0GHz
- RAM: 40MB (per port)
- Hard Disk: 1 GB
- OS: MS-Windows 2003 Server / 2000 / XP / 98 / ME
- Software: MS-SAPI 5

Installing Your Software

Setup PPA Text-to-Speech in your computer.





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About this Guide

The PPA Text-to-Speech Guide provides important information to help you start your work quickly with 2 main sections.

Getting Started – Provides basic information on the system requirements and how to install PPA Text-to-Speech.

User's Guide – Provides step-by-step instructions about using PPA Text-to-Speech.



User's Guide

Chapter 1 – Using PPA Text-to-Speech with the APIs

PPA Text-to-Speech has 2 APIs. You may choose only 1 API which you prefer.

1. HTTP API

a. Initial step

run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe". If you want to hide PPA Text-to-Speech, run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe hide".

b. Processing step

You can manually test this step by using your browser, for example, type the follow text in the address box.

<http://127.0.0.1:33333/?text=สวัสดิการรับทดสอบระบบภาษาไทย>

You may adjust speech voice and Thai accent by adding the input with these parameters.

Example: <http://127.0.0.1:33333/?text=สวัสดิการรับทดสอบระบบภาษาไทย &voice=Toom&thaiaccent>

For programmers:

- i. Open a socket to port 33333 with the HTTP protocol.
- ii. Send "GET" operation with the argument, "text", text value, and other parameters (optional) to the socket.
- iii. For PPA Text-to-Speech Server Edition, receive the output voice from the socket.
For PPA Text-to-Speech PC Edition, the output voice will be played from PC's speakers.
- iv. Close the socket.
- v. To guaranty the success process, in case that an error occurs, the socket will be close, with no data sent.



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c. Stop command

Stop processing by running "c:\program files\PPA Text-to-Speech\interface\stop.exe".

d. Final step

Exit PPA Text-to-Speech by running "c:\program files\PPA Text-to-Speech\interface\exit.exe".



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2. Executable File API

a) Initial step

run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe". If you want to hide PPA Text-to-Speech, run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe hide".

b) Registration step

(available on PC Edition)

Run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe" isregistered

to check if PPA TTS is registered or not.

If registered, result is 0. If not registered, result is 1.

Run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe" getusercode

ProductCodeXXX

to register and get user code.

ProductCodeXXX is a 12 digit number.

Output file is usercode.txt containing a 16 digit user-code.

If success, result is 0. If not success, result is 1.

Run "c:\program files\PPA Text-to-Speech\interface\Text2speech.exe" productcode

ProductCodeXXX unlockingcode UnlockingCodeXXX

to activate PPA TTS.

ProductCodeXXX is a 12 digit number.

UnlockingCodeXXX is an 8 digit number. You can get an unlocking code from

www.ppainnovation.com/register, using a user code.

If success, result is 0. If not success, result is 1.

c) Processing step

i. Save your input text in a text file. (ANSI or Unicode)

ii. **For PPA Text-to-Speech Server Edition**, run the follow command with 2 parameters: the input file name and the output file name.



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"c:\program files\PPA Text-to-Speech\interface\process.exe".

Example:

"c:\program files\PPA Text-to-Speech\interface\
process.exe input.txt output.wav"

Note: To guaranty the success process in case that an error occurs, the output file will not exist after the execution.

For PPA Text-to-Speech PC Edition, run the follow command with 1 parameter: the input file name.

"c:\program files\PPA Text-to-Speech\interface\process.exe".

Example:

"c:\program files\PPA Text-to-Speech\interface\
process.exe input.txt "

Note: The output voice will be played from PC's speakers.

- iii. You may adjust speech's voice and Thai accent by adding the input with these parameters.

Example: input.txt

สวัสดีครับ

บรรยาย

&voice=Toom

&thaiaccent

Note: You can manually test this API by using the "Command Prompt"

d) Stop command

Stop processing by running "c:\program files\PPA Text-to-Speech\interface\stop.exe".

e) Final step

Exit PPA Text-to-Speech by running "c:\program files\PPA Text-to-Speech\interface\exittext2speech.exe".

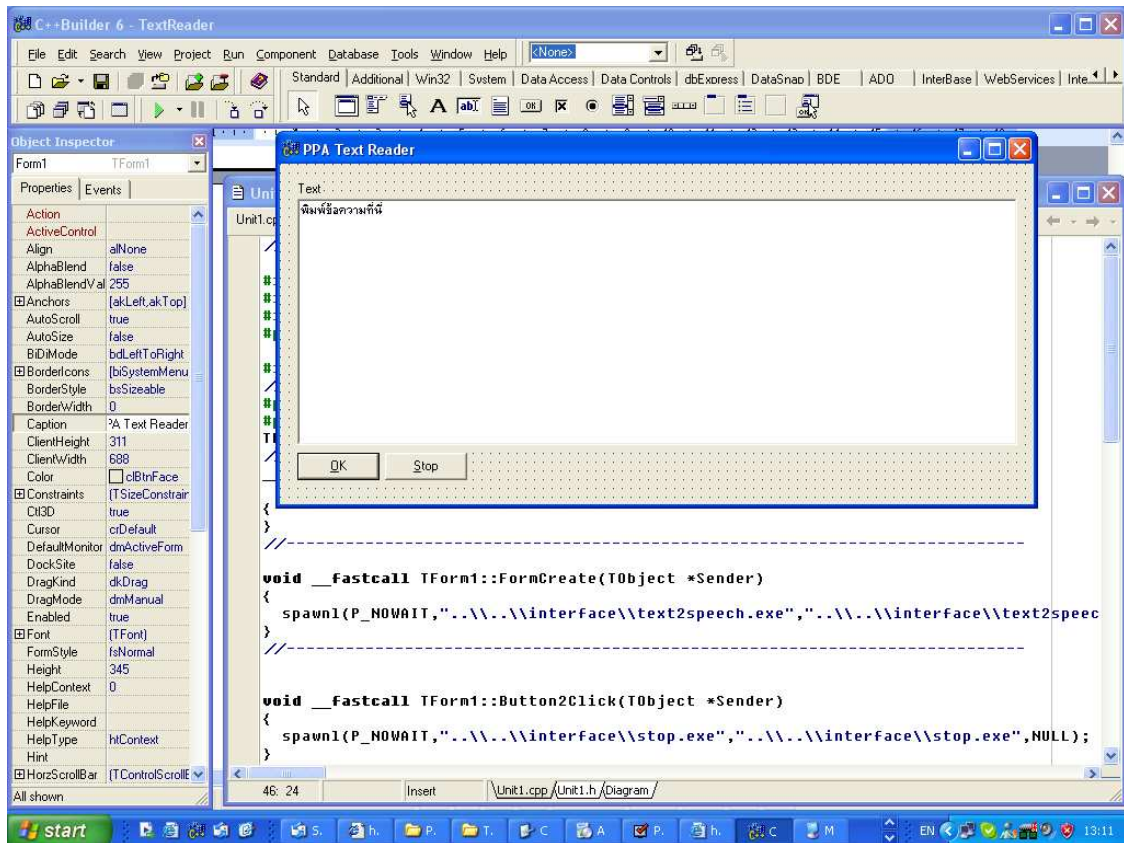


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3. Example with Source Code

You can easily develop the API module by modifying an example, which is located at “c:\Program Files\PPA Text-to-Speech\Examples”. It’s written in Borland C++ Builder 6 and uses the Execute File API.





Chapter 3 – Options



1. Select Voice

- Click **Menu** then choose **Options** menu.
- Click on **Voice** box to select your preferred voice.
- Click **OK** button.

2. Change Accent when Reading English Text

2.1. Change Accent to Thai Accent

- Click **Menu** then choose **Options** menu.
- Uncheck the “**English-Accent Voice**” check box.
- Click **OK** button.

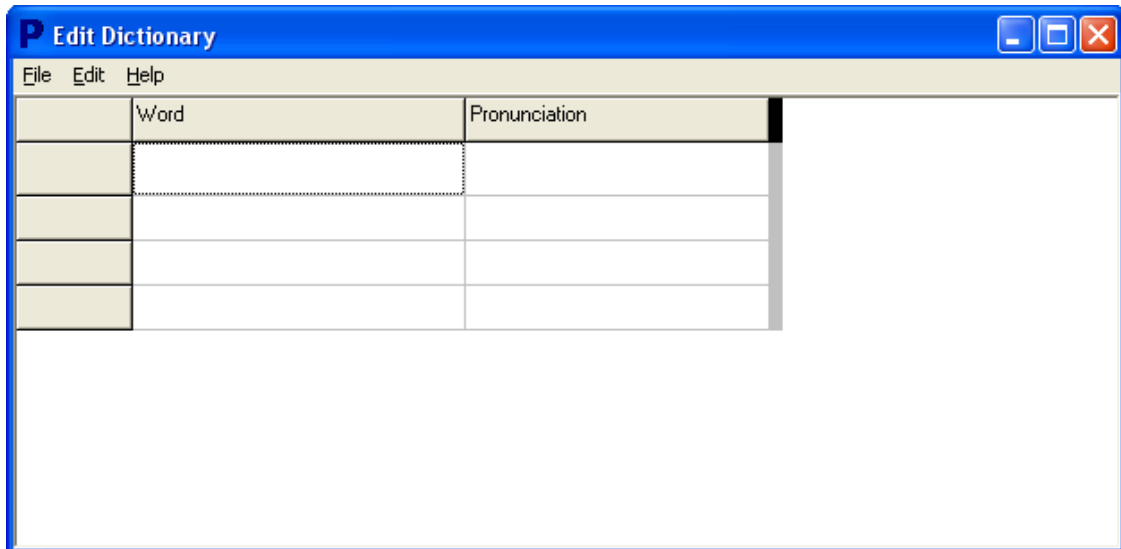
2.2. Change Accent to English Accent

- Click **Menu** then choose **Options** menu.
- Check the “**English-Accent Voice**” check box.
- Select English voice in the box under the **English-Accent Voice** check box.
- Click **OK** button.

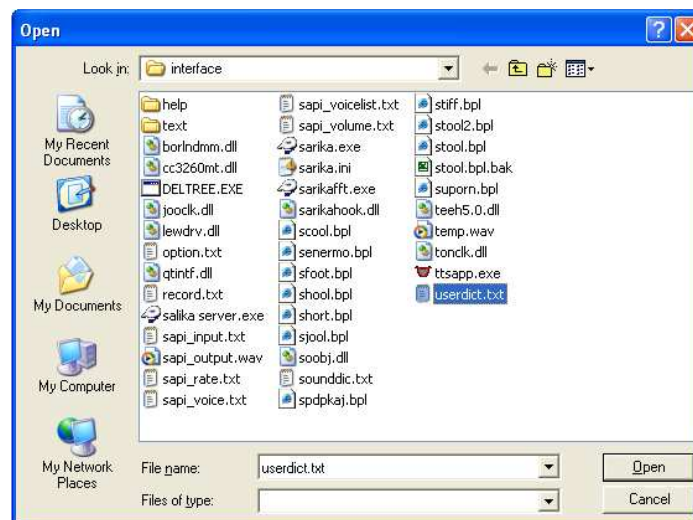


Chapter 3 - Edit Dictionary

- Click “**Menu**” then go to “**File/Edit Dictionary**”. The Edit Dictionary window will appear on your screen.



- Click the menu “**File->Open**”, it will show open dialog.

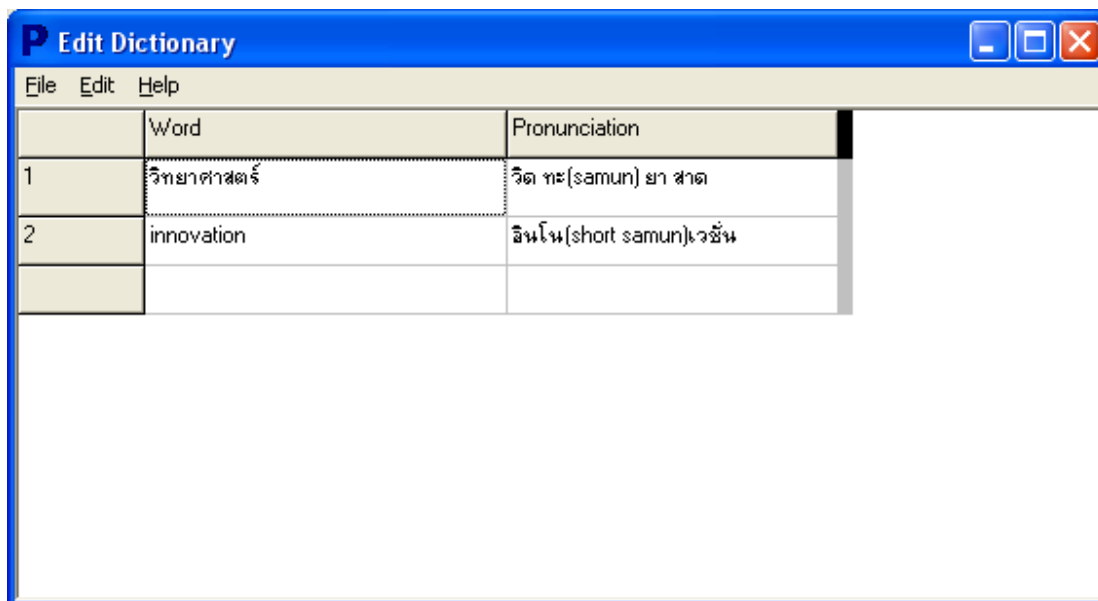


- Choose “**userdict.txt**”.
- Click at “**Open**” button.



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- Type your word in column **“Word”**
- Type the reading symbol of the word in column **“Pronunciation”**
- More information on how to type the reading symbol can be found in **“Help”**
- After you add the new word, click the menu **“File->Save As”** you will see the **“Save As”** Dialog.
- Choose **“userdict.txt”** then click **Save**.
- You must restart your program after you made change to the dictionary.



Chapter 4 – Technical Detail

1. Performance

PPA Text-to-Speech can support 48 users at the same time on Pentium IV 3.5GHz. The rate between the conversion time and the real speech duration is **0.011**, so PPA Text-to-Speech uses 0.011 sec. to generate 1-sec. speech.

2. Specification

1. Language Supported
 - Thai
 - English (both Thai and English accent up to users)
 - Thai mixes English
2. Accuracy
 - Thai dictionary words: 99.387%
 - Thai proper name: 96.881%
3. Dictionary Database
 - More than 60,000 words
4. User Dictionary
 - Yes, PPA Text-to-Speech has a user dictionary. In order to add a new word, it's very simple. You don't need to use phonetic alphabet at all. Just use another word that pronounces like the word you want, for example, "พุดฉิมพันธ์ พุด-ที-พันธ์"
5. Input Format
 - ANSI and Unicode
 - Unlimited Input Text Length
6. Output Format
 - Windows .WAV format 16 bits 44,100Hz Mono

3. Frequency Asked Question

- Can we host PPA Text-to-Speech on the same box as our solution?
 - Yes.