

## **SIMULATED ENGLISH NATIVE SPEAKERS**

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Working at Luoyang University, Henan Province, P.R China, we can not invite more English native speakers to teach listening and pronunciation due to lack of finance. Our Chinese English teachers' pronunciation is of course not as standard as the native English speakers'. It is a big problem to record the listening questions for the final examinations or a random quiz as we have more than 70 classes and only one American teacher.

By chance I found Microsoft Text to Speech Engine when I surfed on the Internet and, more importantly, it is absolutely free! This is really great news to me because I had heard before about some other paid TTS Engines which charged a lot and their English voice sounds like a robot's, not like a real man's. On the other hand, this particular TTS will offer as many English native speakers as we need and will spell words or read the whole passage automatically with standard pronunciation at any time. Thus, it may be some solution to the problem of a sufficient number of native speaker teachers

To convert the automatic text to speech we should have these two files installed:

1) Microsoft Text-to-Speech Engine

It can be downloaded at: <http://www.aurora-systems.com/files/spchapi.exe> or <http://www.testsoft.net/spchapi.exe>

2) Microsoft Speech Synthesizers

It can be downloaded at: <http://www.aurora-systems.com/files/mstts.exe> or they can be downloaded according to different voices:

Mike's voice (a male voice) file can be downloaded at:

<http://www.4developers.com/characters/tts/mike/msttsm221.exe>

or [http://www.testsoft.net/mstts\\_m.exe](http://www.testsoft.net/mstts_m.exe)

Mary's voice (a female voice) file can be downloaded at:

<http://www.4developers.com/characters/tts/mary/msttsf221.exe> or

<http://www.testsoft.net/mstts.exe>

Or we can download these files and their help documentation at:

[http://www.pcworld.com/downloads/file\\_description/0,fid,6594,00.asp](http://www.pcworld.com/downloads/file_description/0,fid,6594,00.asp)

I downloaded these files to my computer and installed them. After examining important relevant class library files I was very happy to find so many useful methods in interfaces. As we know, the more and rich methods provided in a component, the more flexibilities and functions it has. It was possible for me to generate computer applications - simulated native English speakers by building Component Object Model and making it communicate with Automation Server which is able to convert any English texts/passages/word(s) into voice with required reading speed and intonation.

I imported the files to Delphi 5.0 which had already been in my computer for programs to teach and immediately added the relevant unit to the uses part. I placed several buttons on the form, whose functions were to trigger correspondingly Read, Read Previous Sentence, Read Next Sentence, Pause/Continue and Stop, similar to press buttons on a tape recorder, which serve separately as functions of Play, Rewind, Fastforward, Pause/Continue and Stop. As for the specific functions of the methods provided, please read VtxtAuto.tlb in \speech directory for detailed information after you have installed the files above successfully. This type library file describes the interfaces of the server. Alternatively you may visit <http://msdn.microsoft.com> to retrieve related information on text to speech.

I succeeded in making it speak as and especially more than a native English speaker can do. The key source codes with notes are below and the full codes can be downloaded at:

<http://www.envy.nu/guoshesen/download/textvoicecode.zip>

...

interfaces

uses

...

```
vtxtauto_tlb
```

```
...
```

```
implementation
```

```
...
```

```
procedure TForm1.readClick(Sender: TObject);
```

```
begin
```

```
tts.Speak(memo1.text,vtxtst_reading);//make it read. here the parameter I choose
```

is

vtxtst\_reading which means normal reading. For the uses of other parameters in reading, please check vtxtauto.tlb file

```
end;
```

```
procedure TForm1.stopClick(Sender: TObject);
```

```
begin
```

```
tts.StopSpeaking; //stop reading when clicking the button
```

```
end;
```

```
procedure TForm1.pauseClick(Sender: TObject);
```

```
begin
```

```
if tts.IsSpeaking then //if TTS is reading then pauses.
```

```
begin
```

```
tts.AudioPause;
```

```
end else begin //if TTS pauses then continues.
```

```
tts.AudioResume;
```

```
end;
```

```
end;
```

```
procedure TForm1.nextClick(Sender: TObject);
```

```
begin
```

```
tts.AudioFastForward;//read next sentence
```

```
end;
```

```
procedure TForm1.prevClick(Sender: TObject);
```

```
begin
tts.AudioRewind; //Similar to the method of AudioFastforward, TTS can stop to
read the previous sentence when it is reading.
end;
procedure TForm1.speedkChange(Sender: TObject);
begin
tts.Set_Speed(speedk.Position); //To control the reading speed
speedtext.Caption:='speed:'+inttostr(speedk.Position); // show the value of
reading speed.
end;
...
```

When I entered English words or digits and clicked the Read button, the standard and fluent English voiced with perfect intonation. I was shocked when it read words I invented randomly as closely and as intelligently as a real man did. Yes, there are no words it does not speak, or rather there are no characters it does not read. Even a real and live native English speaker could not know as rich vocabulary as it can. It is a great reader.

To control the reading speed I placed a trackbar on the form. This is really important for people who study English as a second language and for students who train for improvement of listening and speaking. I think this is revolutionary as the English teachers generally use tape recorders to practice listening, which can not regulate the reading speed, that is, the reading speed of a tape is fixed, we have to press the button of audiorewind again and again to catch some difficult words which are read fast in the sentence so that they can be understood. Now we may use this magic method to set the reading speed as fast or as slow as you like to make the students understand better. It is a great speed controller.

To my surprise this TTS can jump reading and it can stop to read next sentence correctly and immediately when it is reading. It will be difficult for a real man to do so and to a certain degree MS TTS is better than native live English speakers for it is never

tired of speaking and repeating and jumping. It is a great jumper.

When I clicked the Read Previous Sentence, it would jump back to the previous sentence and immediately read. Again a great jumper.

It never complains of pausing and continuing. It will locate exactly where it paused and continue reading until the end of the passage as my finger flips on the Pause/Continue button. A real native speaker could envy its patience and energy.

When clicking the Stop button it will stop reading and wait for your next command, never going back to offices or houses for drinking or sleeping.

I succeeded in running it in Delphi and compiled it into an executable file and copied it to other computers. They all became native English speakers who are never tired of speaking and repeating standard and fluent English at any time and place and need not to be paid.

But it is not everything. It has its own disadvantages. Sitting at the computer, we are still a bit dissatisfied with the super native English speaker with artificial intelligence.

If she had human feelings ...

Whenever we need an English speaker for listening comprehension or listening quiz or reading texts or word(s) in the classroom, the simulated speaker may be invited to perform for us. As we know, the screen of a computer is quite different from the blackboard. English words can be shown on it or removed from it at no time. And we can highlight or locate any word(s) or characters in a very long text. These unique features combined with the functions mentioned above enable both students and teachers to control and practise English speaking and listening freely, comfortably and efficiently in the classroom.

### **Example Activity: Reading and Listening Material**

#### **Hyde Park (London)**

"139-hectare (344-acre) park in London. The name is derived from the manor of Hyde, which once belonged to the abbot of Westminster. Prominent features of the park are Rotten Row, the famous bridle path; Serpentine Lake; and Speaker's Corner, the

meeting place of soapbox orators. Under Henry VIII, king of England, Hyde Park was a royal deer park. In the 18th and 19th centuries it was a fashionable park where royalty rode and drove, military reviews were held, and duels were fought. In 1851 the first world's fair was held in the park."

Steps to practise:

1. Minimize the screen form in which the material is so that the students can see no text material on the desktop and make the simulated speaker read the passage in a speed of 115. After reading the text ONCE the students should be asked the following questions:
  - 1) What do you know about Hyde Park?
  - 2) How much could you understand?
  - 3) Was reading speed fast or slow?
  - 4) Are there any new words in the material? How many approximately?
  - 5) Have you understood the first or the second part better?
  - 6) Have you heard numbers? What are they?or some other questions related to the material.
2. Reset the reading speed and let the speaker read for the second time. Ask the questions from Step 1 to compare. Mark the value of speed that the students like best. Compare the value with that of normal reading speed for reference.
3. Redo step 2 and set the speed to or nearest to the normal speed for their further understanding.
4. Let the speaker read sentence by sentence by clicking or highlighting the sentences in the passage until the students can understand all or almost all sentences.
5. Maximize the screen form to show the text. Highlight any new words or difficult sentences for students to practise and compare .
6. By highlighting or clicking Previous or Next the teacher selects the sentence for students to see and read so as to compare their pronunciations and let the students correct.

7. Highlight such words as 139, 344, VIII (numbers) or Westminster (proper names). Let the speaker repeat and the students read aloud.
8. Practise freely on the basis of the material by clicking Previous or Next or Pause or hiding the form to arouse students' interest.
9. Increase the value of the reading speed. Take note of the new speed value that they like best. Compare this value with that in Step 2 to specify the approximate value of reading speed for that class.
10. The approximate value in Step 9 should be reset from time to time according to difficulty degree of a passage or progress the students made.

These basic steps are on the basis of experience. We shall make more efforts to improve both methods and skills in the classroom and we shall also update the simulated speaker.

I have created a Text-to-Voice Generator into which some functions of editing have been integrated. It is hoped that it will be useful to English teachers whose offices are in need of native English speakers or are probing into reforms of English teaching. Those who are interested in this application can download it at <http://www.envy.nu/guoshesen/download/tevpack.zip> or may write me at [guoshesen@21cn.com](mailto:guoshesen@21cn.com) for further information.