TrueSpeech(tm) Player & Plug-in

Version 3.10b, March 1996
developed by DSP Group, Inc.

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Feel free to send us your comments or suggestions for improvement on future upgrades. Please e-mail:
tsplayer@dspg.com.

1 . Overview

The TrueSpeech Player is an application that lets you play in real time any TrueSpeech encoded sound files (.WAV files) as you download them from the World Wide Web. The sound is played within seconds from the moment you begin to download the audio files. The TrueSpeech Player allows you to hear the sound without having to wait for the entire sound file transfer to be completed.

TrueSpeech(tm) is a family of speech compression and decompression algorithms developed by DSP Group, Inc. of Santa Clara, California. The TrueSpeech Player utilizes the TrueSpeech 8.5 algorithm. This advanced speech compression technology features low computational complexity, low memory requirements, high compression ratios and excellent voice quality. One minute of speech can be stored digitally in 64KB of memory after compression by TrueSpeech 8.5 (8.5kbps.)

Since the TrueSpeech 8.5 encoder is included in Windows(tm) 95 and NT, anyone using these platforms may create content which is compatible with the TrueSpeech Player. For Windows 3.XX users, a convertor is available from our Web Site.   Section 5 of this file includes simple step-by-step instructions on how to create TrueSpeech Player compatible content.

2. Improvements in Revision 3.10b

*Fixed "This is not a .WAV file" error for TrueSpeech files stored on Windows NT Servers.
*Added the TrueSpeech Plug-in compatible with Netscape 2.0+ which provides in-line web page audio control functionality.

Compared to other Plug-ins, the TrueSpeech Plug-in has the following merits:
•   Except for the Player buttons, it is totally transparent. It even uses the web page's background image.
•   Supports both TrueSpeech .wav and PCM standard .wav formatted files.
•   Small and fast. The DLL works on the Client side, meaning the Plug-in are independent of the web server. Thus, the Plug-in controls load much faster than images from the web. (Compare this to other Plug-ins.)
•   Supports an *Autostart* option so that audio can begin playing almost as soon as the web page itself is retrieved.
•   Supports a *Loop* option so that audio can be repeated again and again.
•   Audio files <u>do not </u>need to reside on the same server as the web page which contains the Truespeech links. You may specify any URL as long as it points to a .wav file. (see Creating Content).

3. Playing TrueSpeech sound files in real-time

If you have the Netcape Navigator, the installation package will automatically configure your browser to use the TrueSpeech Player.

Otherwise, configure your WWW browser to "view" files with the extension TSP by associating them with the TrueSpeech Player (TSPlayer.exe or TSPlay32.exe). See the Help Topics files contained in your browser on how to configure external viewers, or visit http://www.dspg.com/tsfaqs.htm for frequently asked questions.

For the majority of browsers, you may accomplish configuration by pointing and clicking on a TSP link file within the WWW page. When the browser prompts you, configure the external viewer as your permanent TSP file viewer. This usually has to be done only once.

Your new Player will be installed which will contain the predefined bookmarks pointing to some sample TrueSpeech files on the DSP Group, Inc. WWW page "www.dspg.com/samples/85/".

4. Troubleshooting

In the advanced/options menu, it is usually not necessary to change the default Silence buffer size. If you do, please make it larger than 480 bytes. Try not to lower the Initial buffer size to less then 1024 bytes. If you experience a lot of pauses forced by the player during downloading, try to set up a bigger Initial buffer size.

Also, in the advanced/options menu, there are now options to select alternative sound card sampling rate and resolution options. In general, the default setting should be sufficient. However, for some cards, it may be necessary to select a specific sampling rate and resolution type.

For more information on troubleshooting, please **visit http://www.dspg.com/tsfaqs.htm.** If you still need additional help, please e-mail: tsplayer@dspg.com.

5. Creating TrueSpeech compatible content for the TrueSpeech Player

NOTE: If you decide to use TrueSpeech audio on your pages -- please provide us with your URL so that we may include you in our Official (Cool) Sites page. Email: **webster@dspg.com.**

World Wide Web developers may immediately add TrueSpeech audio content to their pages without fee or special server software by following the 5 steps below.

To download the TrueSpeech icon for use on your page, go to www.dspg.com/gif/tiny040.gif.

STEP 1: CREATE YOUR AUDIO FILES. Create PCM Encoded Audio .WAV Files At 8KHz Sampling Rate With 16-Bits Resolution. The TrueSpeech compression algorithm has been optimized for 8KHz sampling frequency with 16-bits of resolution. Recording amplitude should be held to a maximum of 14-bits so that clipping will not occur. For highest quality, it is essential that you record with these settings. Any multimedia board which is SoundBlaster™ 16-compatible will support this format. If your audio equipment does not support this format, conversion utilities exist for converting to the recommended format.

STEP 2: CONVERT YOUR FILES To TrueSpeech Encoded .WAV Files. To convert PCM encoded .WAV files to TrueSpeech encoded .WAV files, we recommend you use the Sound System of Windows 95 or NT since our product is located there. (In Windows 95, the Sound Recorder is located at START>PROGRAMS>ACCESSORIES>MULTIMEDIA>SOUND RECORDER.)

While within the Sound Recorder, simply open the PCM encoded .WAV file created in Step 1 above, select the TrueSpeech format, and then use the SAVE AS command to create a new file name .WAV extension, then CHANGE the file type to DSP Group TrueSpeech, and then SAVE. The new .WAV file has now been encoded in TrueSpeech audio format which is compressed by a factor of 15 from the original .WAV file. (For those who are using Windows 3.11, a PCM to TrueSpeech Conversion utility may be downloaded from here. This conversion utility will accept PCM .WAV files only if sampled at 8KHz/16-bit PCM format.)

STEP 3: CREATE A SIMPLE TEXT FILE (*.TSP) which is associated with the *.WAV File Created Above. (For use with the Plug-in, see Section 6.) Use a standard text editor such as Notepad and give this file the *.TSP extension (* is the chosen name of your file.) This is done so that the browser will know to launch the TrueSpeech Player when a TrueSpeech encoded .WAV file is about to be transmitted. The *.TSP file associated with a TrueSpeech encoded .WAV file should contain the (case sensitive) HTML line:

```
TSIP>>URL/*.wav
```

The URL above should NOT include the "HTTP://" characters. For example, www.dspg.com would be appropriate and HTTP://www.dspg.com would not be. For example, let's suppose you create a PCM encoded .WAV file and convert it to a TrueSpeech encoded .WAV file. Let's give this file the name

```
test_ts.wav.
```

Next, suppose that this file is located at your server in the directory www.home.com/audio/testfiles. It is now necessary to create a one line .tsp text file. This file should contain the following line:

```
TSIP>>www.home.com/audio/testfiles/test_ts.wav.
```

Now, let's name this file *sample.tsp*

STEP 4: LINK THE *.TSP FILE INTO YOUR PAGE. This .tsp text file should now be referenced on your page. Continuing the example from Step 3, let's assume the sample.tsp file was located in the directory www.home.com/audio/tspfiles, you would add one line of html code to your page to reference this line. This line would look like

```
<A HREF="www.home.com/audio/tspfiles/sample.tsp">SAMPLE.TSP</A>
```

Once a user selects the TrueSpeech audio pointed to in the line above, the sample.tsp file will be sent to the browser. The browser, after initial setup, associates the TrueSpeech Player with the .tsp extension. Upon spawning the player, the TrueSpeech Player reads the location of the TrueSpeech test_ts.wav file from the sample.tsp file. The Player then accesses and plays this test_ts.wav file as it is downloaded.

STEP 5: CONFIGURE YOUR SERVER to Accept the .TSP File Extension. Because the "tsp" file extension may not be recognized by HTTP servers running on UNIX or Windows, it should be mapped in configuration of the server to MIME type "application/dsptype." In order to do this on UNIX servers, only one line should be introduced in the HTTP server configuration file MIME.TYPE as follows:

```
application/dsptype              tsp
```

On the CERN HTTP Server, the configuration line should read:

```
AddType.tsp     application/dsptype     binary 1.0
```

For Windows based HTTP servers, registration is performed through configuration file or control panel.

If your homepage is located on a remote HTTP server, please contact your service provider and have them configure your server as described above.

6. Creating content for use with the TrueSpeech Player Plug-in

If you have already created a *.TSP file to embed your TrueSpeech files, the process similar--just name the text file extension *.TSI instead of *.TSP. There are 3 basic steps you need to do to setup up the Plug-in for your own homepage:

STEP 1. ADD THE PLUG-IN HYPERTEXT. Edit your *.html or *.htm file to add the Plug-in hypertext wherever you want the Plug-in to go on your page. (If you want the audio to begin playing upon loading of the web page,

then type `autostart=TRUE`, and if you want a continuous loop, add `loop=TRUE`.). The Plug-in hypertext tag is this:

```
<EMBED SRC="win95.tsi" HEIGHT=60 WIDTH=200 autostart=FALSE>
```

STEP 2: CREATE A SIMPLE TEXT (*.TSI) FILE which contains the URL for the TrueSpeech or PCM formatted *.wav file and save this file with the .tsi extension. Make sure that the URL does not include "http://" and does include the *.wav extension file. You may want to create a *test.tsi* file which contains this line in order to perform a test with your Plug-in first. Here is an example from our own TrueSpeech audio files:

```
TSIP>>www.dspg.com/samples/85/a5.wav
```

STEP 3. CONFIGURE YOUR SERVER. Edit your HTTP or Netscape Server's MIME.TYPE file to add the line:

```
audio/TSP-audio      tsi
```

You may need to contact your system administrator for them to add it for you. Once this is done, you must **restart your server** for the change to take effect.

You have now enabled your page to support the TrueSpeech Plug-in.

7. License Agreement

DSP Group, Inc.
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