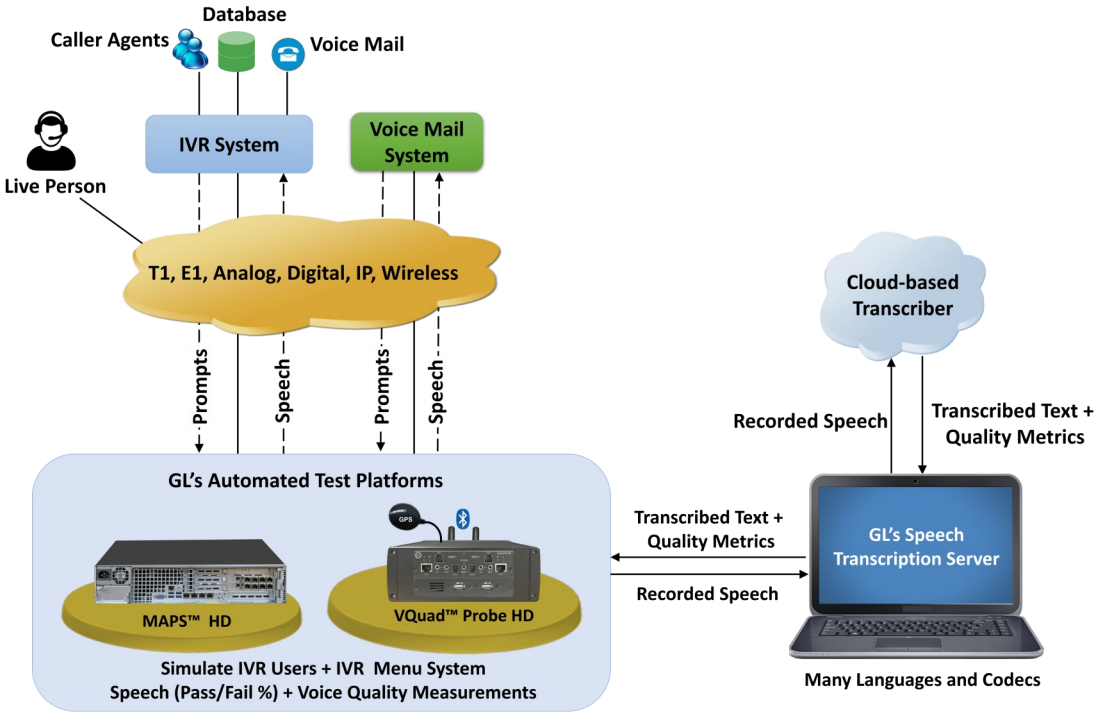
Speech Transcription Server



Overview

GL's **Speech Transcription Server** is a PC-based automated speech-to-text conversion application. Among numerous applications, the Speech Transcription Server can be used for confirming voice prompts (announcements) and aid in testing **Interactive Voice Response (IVR)** systems as well as voice transportation over any network.

Network providers use the application to record the voice prompts associated with the IVR, perform a speech to text conversion on the recording to confirm the prompt was proper (based on what the prompt should be), and thus confirming their IVR functioning. The application can be used to verify network quality as well as effect of different codecs on the speech quality.

The STS utility includes a Text-to-Speech feature that allows automated, on-the-fly generation of audio files from user-defined text. The speech synthesizer provides options to configure languages (over 50 supported) and save audio files in PCM/WAV format. Text can be manually entered to generate voice prompts in the selected audio file format. The converted audio files are automatically saved in the specified directory path.

The STS utility supports the Speech-to-Text feature, enabling seamless conversion of recorded audio into text. It supports formats such as PCM, WAV, and GLW, ensuring high transcription accuracy with confidence scores ranging from 0 to 1. This functionality also processes audio in real-time and stores results for future analysis or use.

This application integrates with GL's Audio File Conversion Utility, which supports various industry standard codecs. It also works with GL's Message Automation and Protocol Simulation (MAPS™) and VQuad™ applications, enabling voice transmission and recording to/ from audio files across numerous telecommunication network interfaces, including FXO, FXS, 4-Wire, ISDN, SS7, GSM, UMTS, VoLTE, and 5G.

MAPS™ emulates a wide range of telephony protocols including SIP and RTP for VoIP. Software-only versions can be provided for low call load. GL also offers High Density (HD) hardware-based appliances for emulating hundreds of thousands of simultaneous calls. The calls are fully customizable and independent. Each call can have different audio payloads and digits. By emulating a large call load, IVR systems can be tested under realistic operating conditions such as under emergency situations or denial of service. VQuad™ Probe HD is a versatile hardware solution with multiple interfaces, enabling seamless connections to wired or wireless networks for automated, end-to-end voice and data testing.

For more details, refer to Speech Transcription Server webpage.

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Main Features

- Ability to convert PCM, WAV, or GLW files into text format
- Transcribe up-to 20 seconds of speech files into text
- Transcribe recorded short speech files into text; there is a maximum limit of 20 seconds for any single utterance
- Single or Multiple folders containing audio files can be converted to text easily
- Cloud-based processing provides accurate translations
- Supports multi-languages such as U.S English, French, German, Italian, Japanese and more
- Easy to access transcribed text via file, API or database
- Base Software includes up to 420 hours of audio transcription per year, validity can be extended with annual support contract
- REST APIs for transcription request and transcript retrieval
- Ability to convert text to speech in PCM or WAV file format
- GL's VQuad™ application supports full automation of the Speech Transcription Server (as well as analysis of the transcribed text)

Working Principle

The **Speech Transcription Server** can convert recorded audio (*.PCM, *.WAV, or *GLW) files into text format. Single or multiple folders are monitored continuously for short audio files and once the files are detected, they are placed in the speech transcription queue for transcription. These files are sent to the cloud-based transcription service and are accurately converted to text.

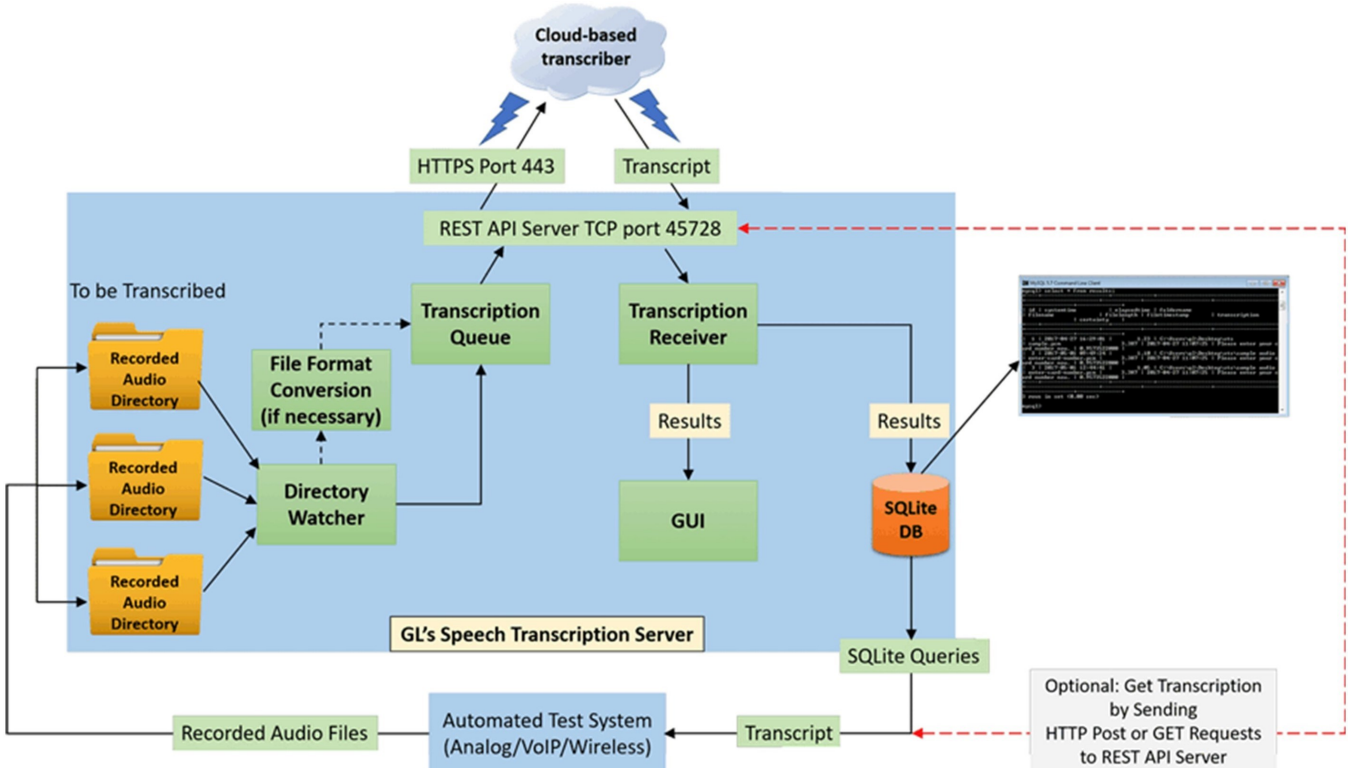

Figure: STS Working Principle

Transcription Results

Results are listed in the order they are transcribed and includes source file information (such as File Name, Directory path, Language, Length of the file, Modified Date and Time) along with the transcribed file information such as Transcribed Date and Time, Transcription output text, Certainty score, and the Time taken in seconds to transcribe the file. The certainty ranges from 0-1 where 0 indicating the lowest confidence score and 1 indicating the highest confidence score for the transcribed text.

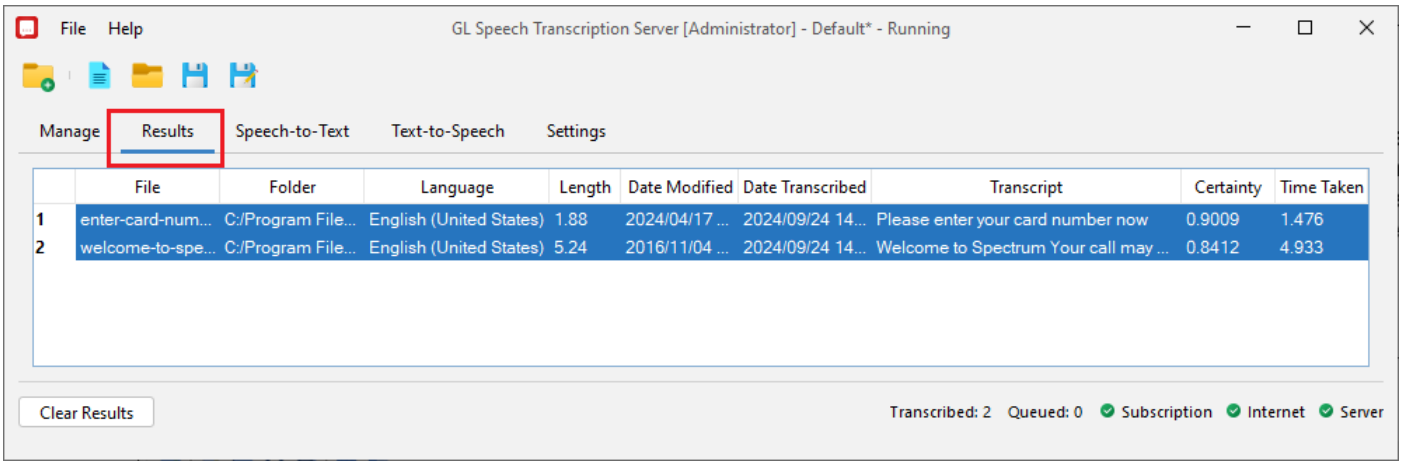

Figure: Transcription Results

Speech-to-Text Conversion

The **Speech Transcription Server** can transcribe speech to text for a single PCM, WAV, or GLW files using **Speech-to-Text** option. This option will help user to quickly transcribe required file manually.

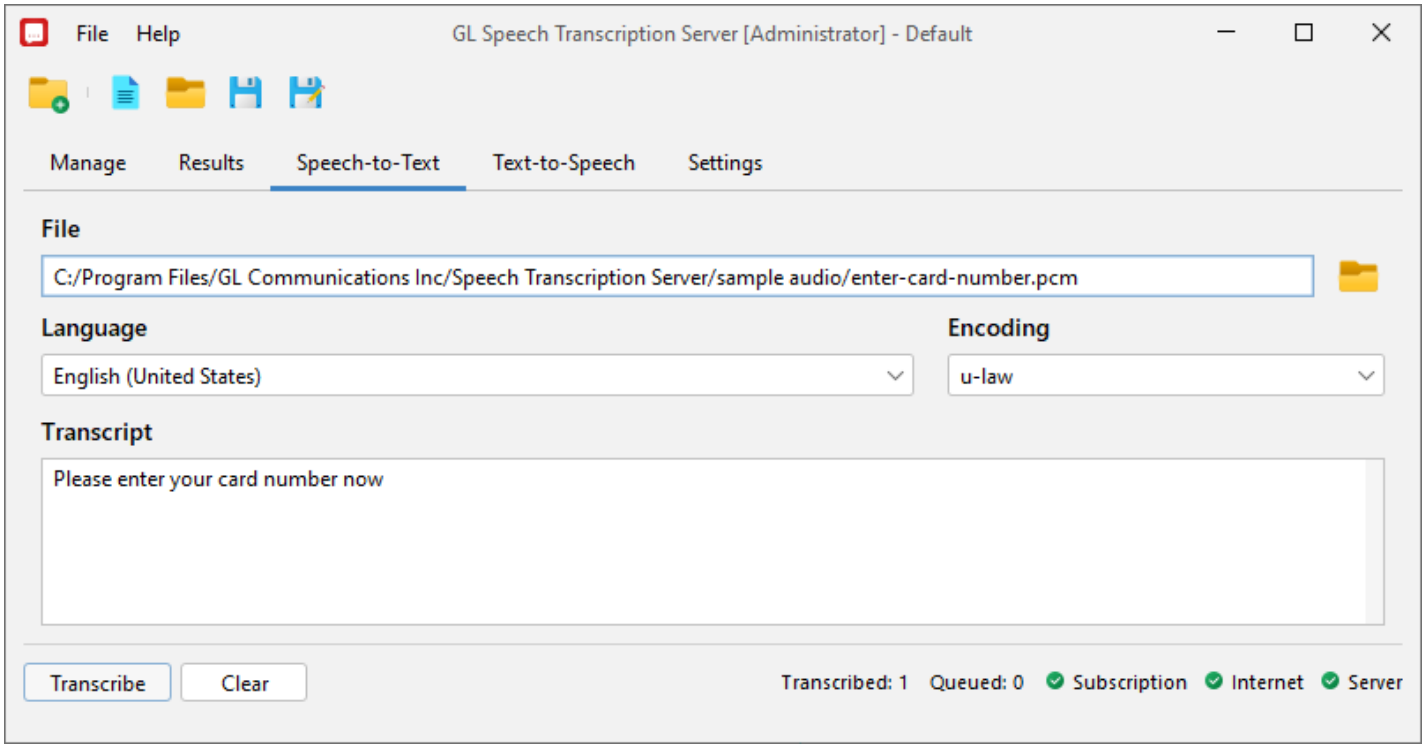

Figure: Speech to Text Conversion

REST Server

REST Server helps to transcribe and get the transcribed results on the remote PC using HTTP request on the configured REST API port number.

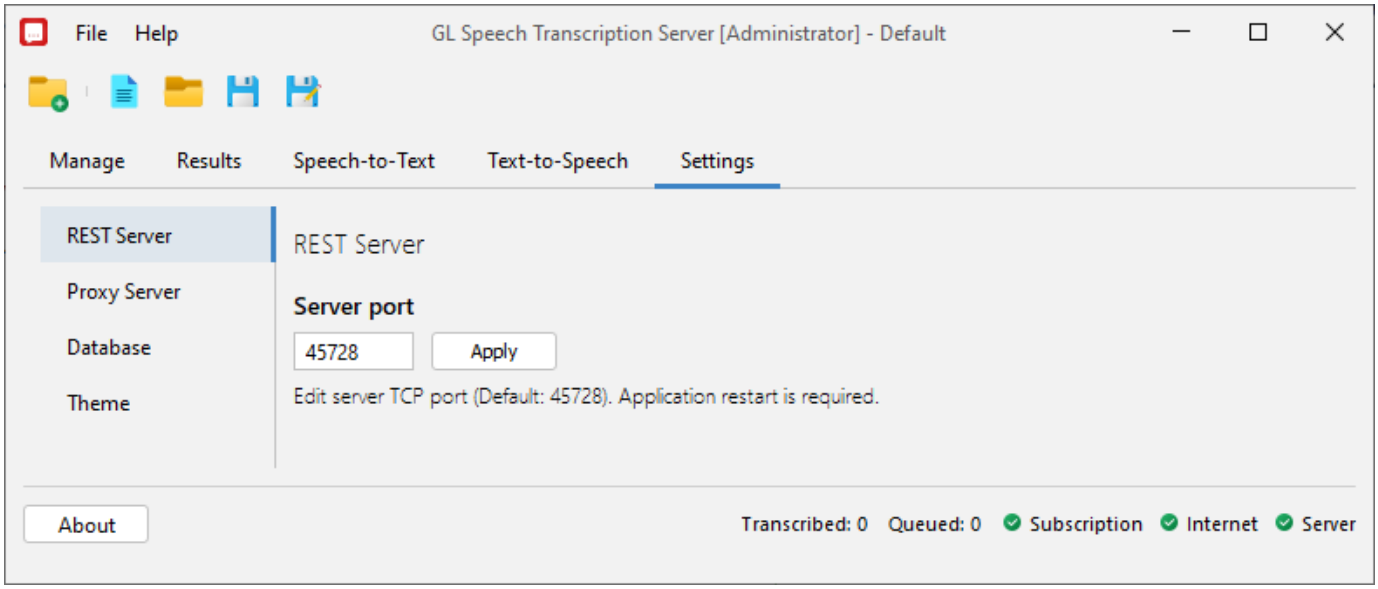

Figure: REST Server Settings

Text to Speech Conversion

The **Speech Transcription Server** application converts text into speech in PCM or WAV file format.

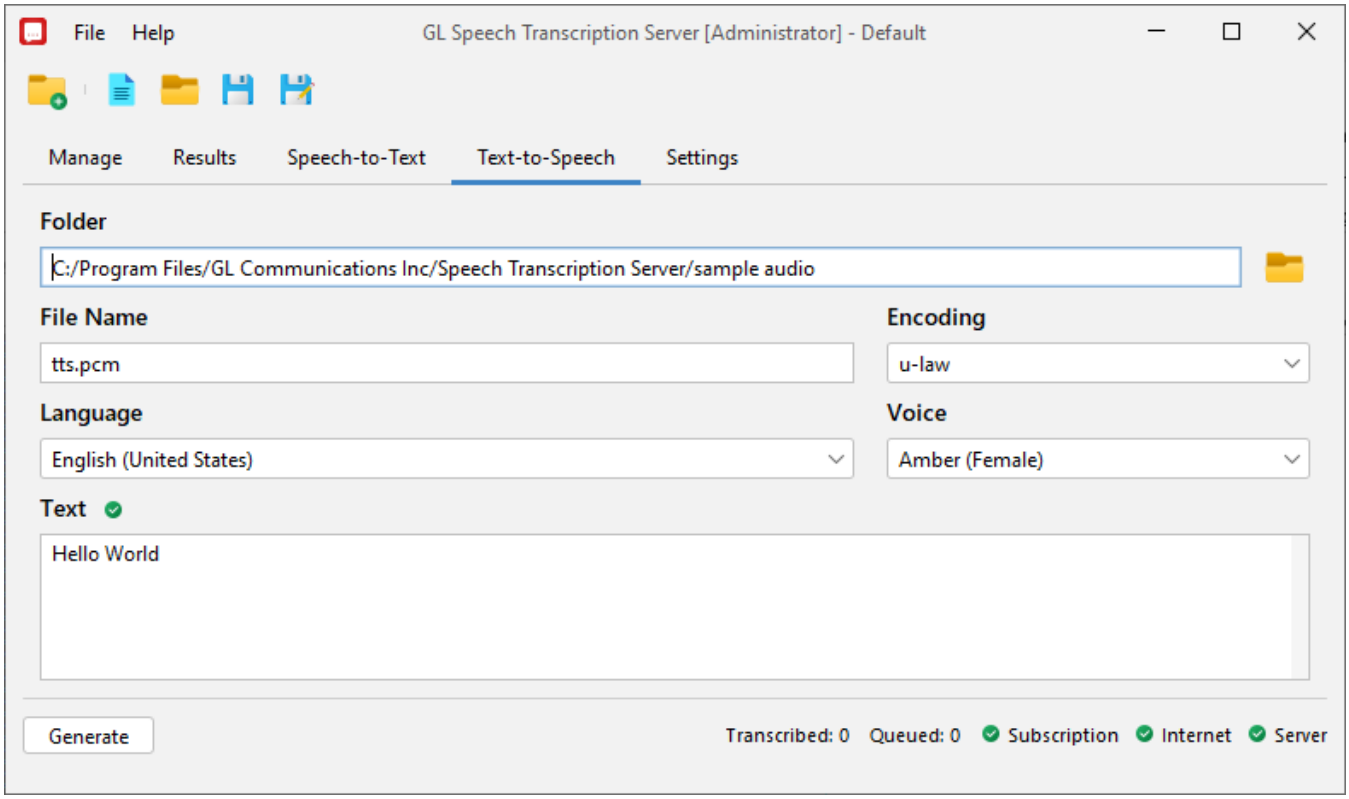

Figure: Text to Speech Conversion

Buyer's Guide

Item No	Product Description
VQT009	Speech-to-Text Conversion

Item No	Related Software
VQT002	Voice Quality Testing (PESQ only)
VQT006	VQT w/ POLQA server license
VQT010	VQuad™ Software (Stand Alone)
VQT013	VQuad™ with SIP (VoIP) Call Control
VQT251	Dual UTA HD Next generation Dual UTA with FXO Wideband support
VQT252	Dual UTA HD – Bluetooth Option
PKS102	RTP Soft Core for RTP Traffic Generation
PKS120	MAPS™ SIP
PKS108	RTP Voice Quality Measurements
PKS106	RTP Video Traffic Generation

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