Voice Analysis Tool (VAT™)

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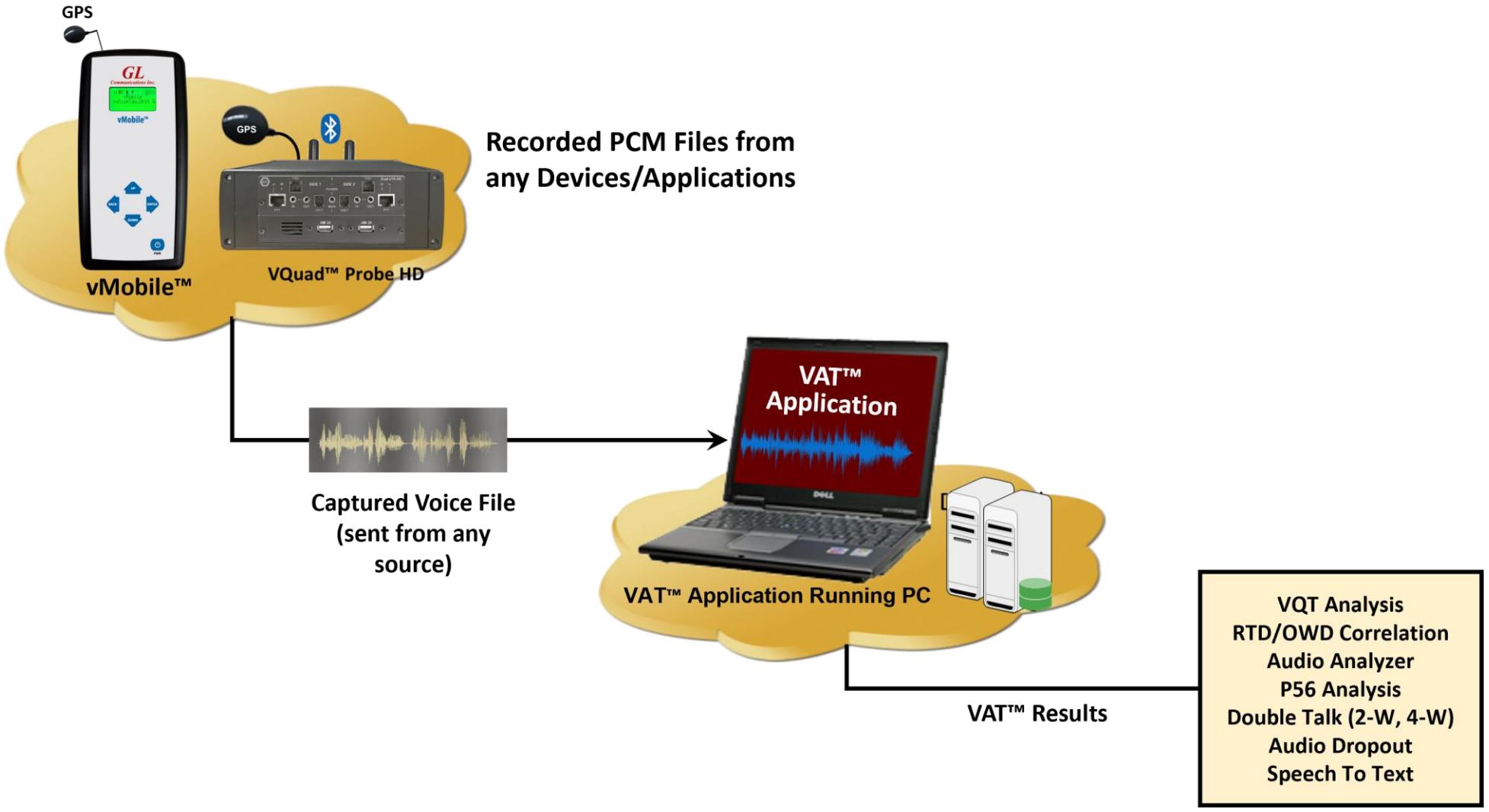
Voice Analysis Tool (VAT™)



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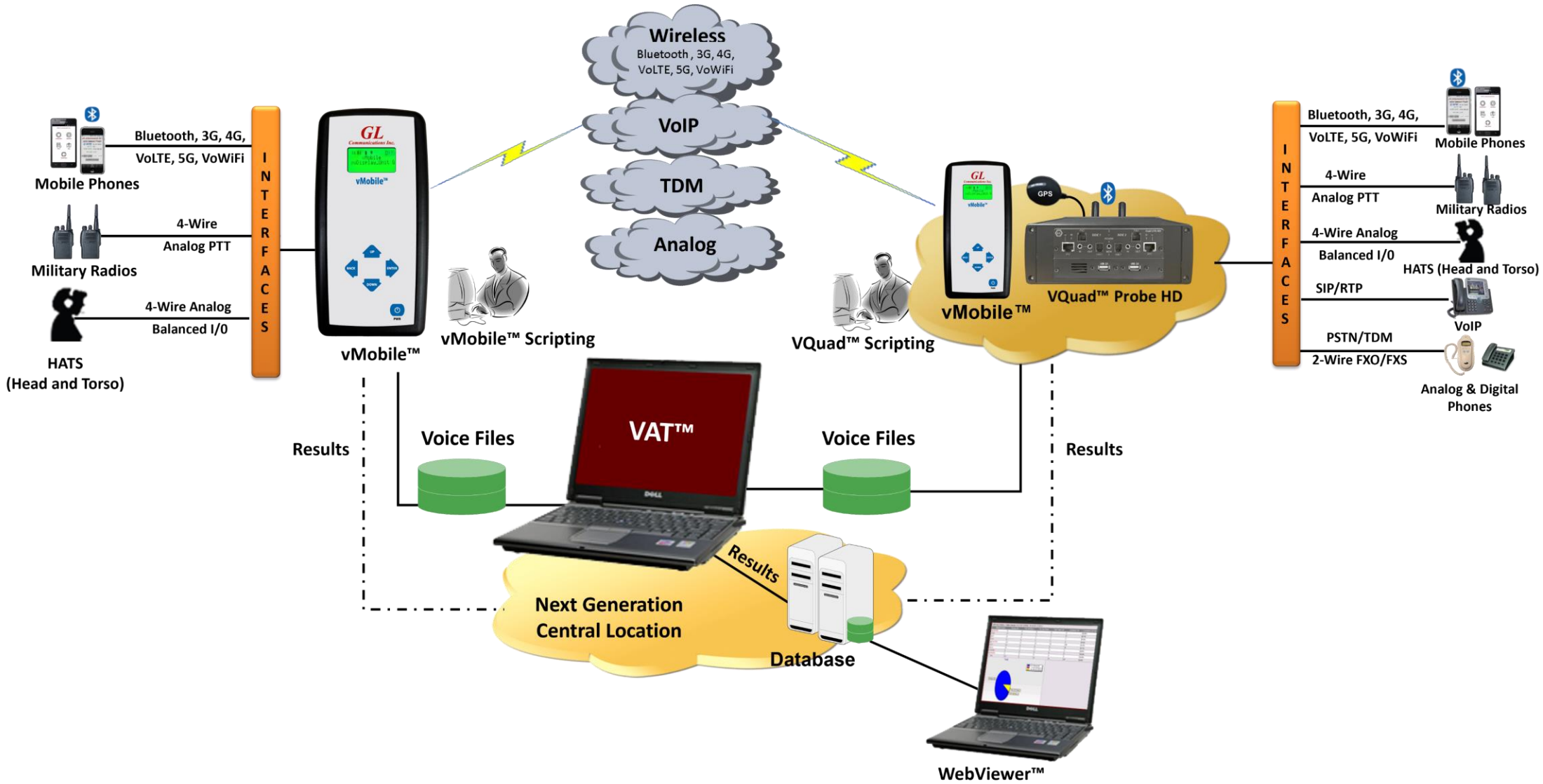
Features

- GL VAT™ supports analysis of any Raw PCM 16-bit voice file, including NB, WB, and SWB along with 8-bit PCM a-Law and µ-Law PCM voice files
- The system is fully automated, with results logged and stored in the GL Central Database. The results can be easily accessed using the GL WebViewer™
- Audio files can be generated from any application, including GL VQuad™ and vMobile™
- VAT™ Command Line Interface (CLI) supports remote operation
- Audio analysis includes, Round Trip and One Way Delay, Audio Dropout analysis, Speech and Noise level,, Power Level and Frequency Analysis, Speech Activity, DC Offset, and Double Talk analysis
- Supports Voice Quality Testing POLQA or PESQ algorithms when used with GL VQT™ software. Supports Speech to Text analysis when used with GL STT software
- Multiple analytical tests can be performed simultaneously on each individual voice file

VAT™ Operations



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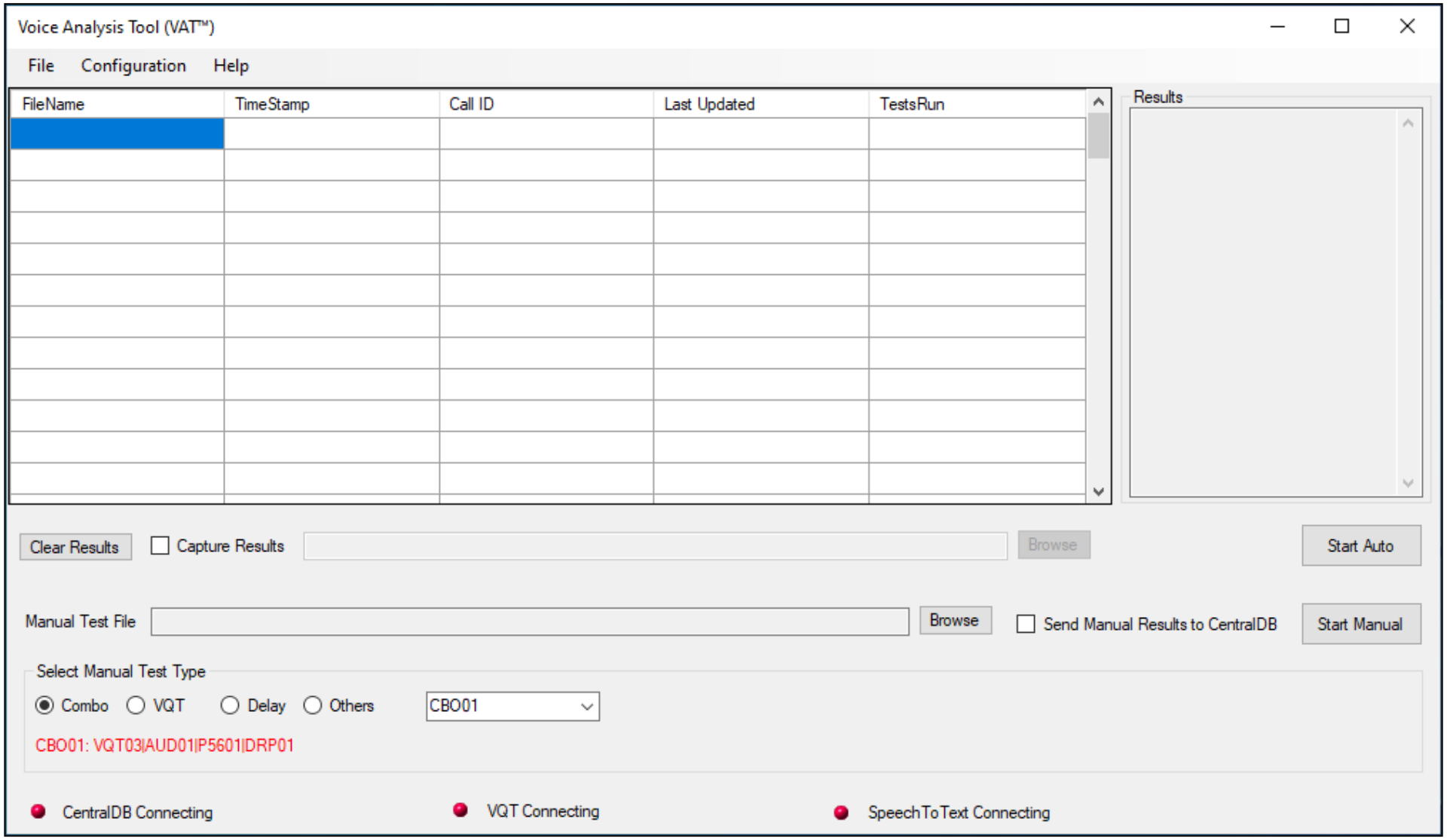
VAT™ Application



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VAT™ INI File

VATProfile.ini - Notepad

File Edit Format View Help

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Voice Analyzer Profile

[CBO(Combination of Test)]
CBO01 = VQT03|AUD01|P5601|DRP01
CBO02 = RTD03|AUD03|P5603
CBO03 = STT03|DRP02
CBO04 = VQT10

[RTD(Correlation)]
RTD01 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation8k.pcm|8000|0.5|500|6.4
RTD02 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation16k.pcm|16000|0.5|500|3.
RTD03 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation48k.pcm|48000|0.5|500|1

[OWD(Correlation)]
OWD01 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation8k.pcm|8000|0.5|500|3.2
OWD02 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation16k.pcm|16000|0.5|500|1.
OWD03 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation48k.pcm|48000|0.5|500|0.

[AUD(Audio Analyzer)]
AUD01 = 8000|4000|-25
AUD02 = 16000|4000|-25
AUD03 = 48000|4000|-25

[P56(P.56 Analyzer)]
P5601 = 8000
P5602 = 16000
P5603 = 48000

[DTF(Double Talk Test FXO)]
DTF01 = C:\VQT_Reference\VQuad_Auto\POLQANB\fem1POLQA.pcm|8000|3.6
DTF02 = C:\VQT_Reference\VQuad_Auto\POLQAWB\fem1PolqaWB.pcm|16000|3.6
DTF03 = C:\VQT_Reference\VQuad_Auto\POLQASWB\fem1POLQASWB.pcm|48000|3.6

[DTW(Double Talk Test 4-wire)]
DTW01 = 8000|0
DTW02 = 16000|0
DTW03 = 48000|0

[STT(Speech To Text)]
STT01 = PCM16 NB (8kHz)|Clothes new deepened eye|en-US|100|TextMatch
STT02 = PCM16 NB (8kHz)|Clothes new deepened ey|en-US|100|WordMatch
STT03 = PCM16 WB (16kHz)|Clothes new deepened eye|en-US|100|TextMatch
STT04 = PCM16 WB (16kHz)|Clothes new deepened eye|en-US|100|WordMatch
STT05 = PCM16 SWB (48kHz)|Clothes new deepened eye|en-US|100|TextMatch
STT06 = PCM16 SWB (48kHz)|Clothes new deepened eye|en-US|100|WordMatch

[DRP(Dropout Test)]
DRP01 = C:\VQT_Reference\VQuad_Auto\POLQANB\fem1POLQA.pcm|8000|100
DRP02 = C:\VQT_Reference\VQuad_Auto\POLQAWB\fem1PolqaWB.pcm|16000|100
DRP03 = C:\VQT_Reference\VQuad_Auto\POLQASWB\fem1POLQASWB.pcm|48000|100

[VQT(Voice Quality Test)]
VQT01 = C:\VQT_Reference\VQuad_Auto\POLQANB\fem1POLQA.pcm|8000|Raw|PESQ|8000|userid
VQT02 = C:\VQT_Reference\VQuad_Auto\POLQANB\fem1POLQA.pcm|8000|Raw|PESQ+POLQA|8000|userid
VQT03 = C:\VQT_Reference\VQuad_Auto\POLQANB\fem1POLQA.pcm|8000|Raw|POLQA|8000|userid
VQT04 = C:\VQT_Reference\VQuad_Auto\POLQANB\male1POLQA.pcm|8000|Raw|POLQA|8000|userid
VQT05 = C:\VQT_Reference\VQuad_Auto\POLQASWB\fem1POLQASWB.pcm|48000|Raw|POLQA|16000|userid
VQT06 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm|48000|Raw|POLQA|16000|userid
VQT07 = C:\VQT_Reference\VQuad_Auto\POLQASWB\fem1POLQASWB.pcm|48000|Raw|POLQA|48000|userid
VQT08 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm|48000|Raw|POLQA|48000|userid
VQT09 = C:\VQT_Reference\VQuad_Auto\Raw\fem1_1.pcm|8000|Raw|PESQ|8000|userid
VQT10 = C:\VQT_Reference\VQuad_Auto\POLQA-aLaw\fem1POLQAala.pcm|8000|alaw|PESQ|8000|userid
VQT11 = C:\VQT_Reference\VQuad_Auto\POLQA-uLaw\fem1POLQAula.pcm|8000|ulaw|PESQ|8000|userid
```

Ln 1, Col 1 100% Windows (CRLF) UTF-8

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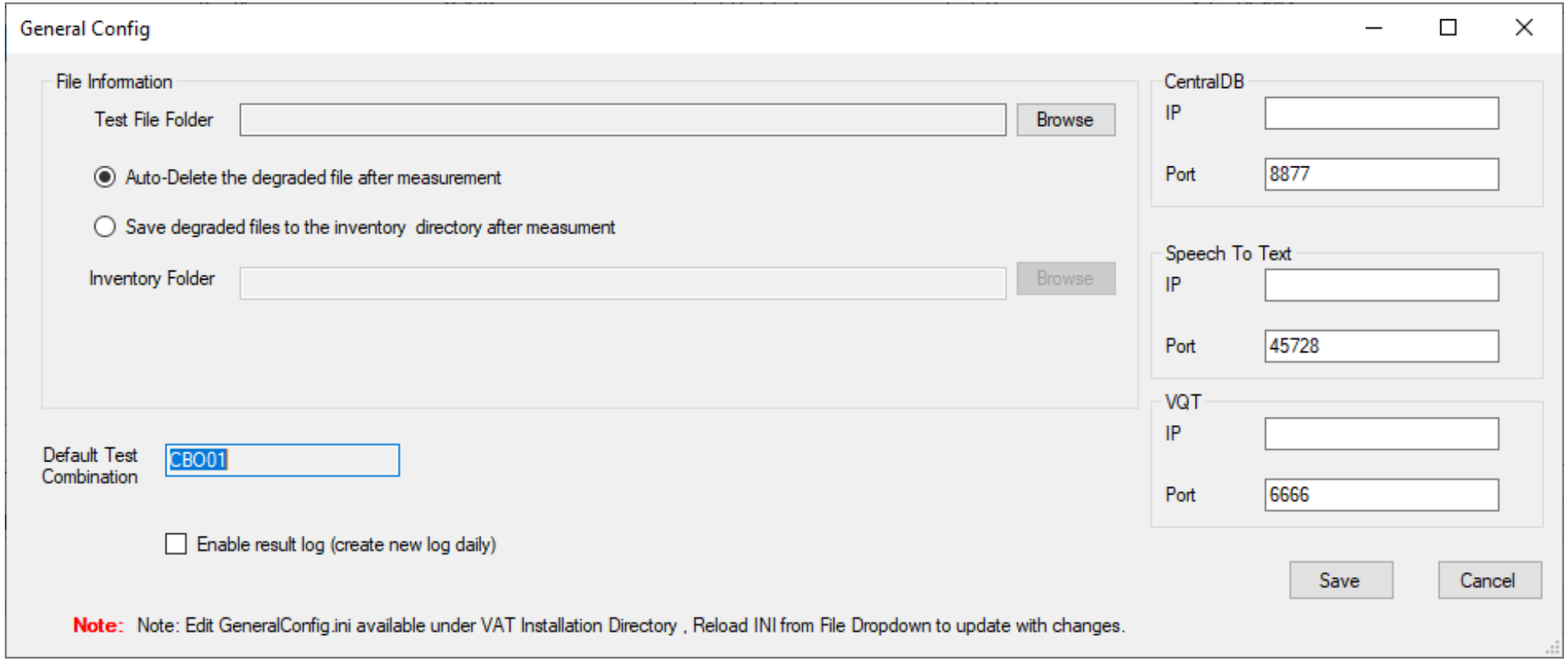
General Configuration



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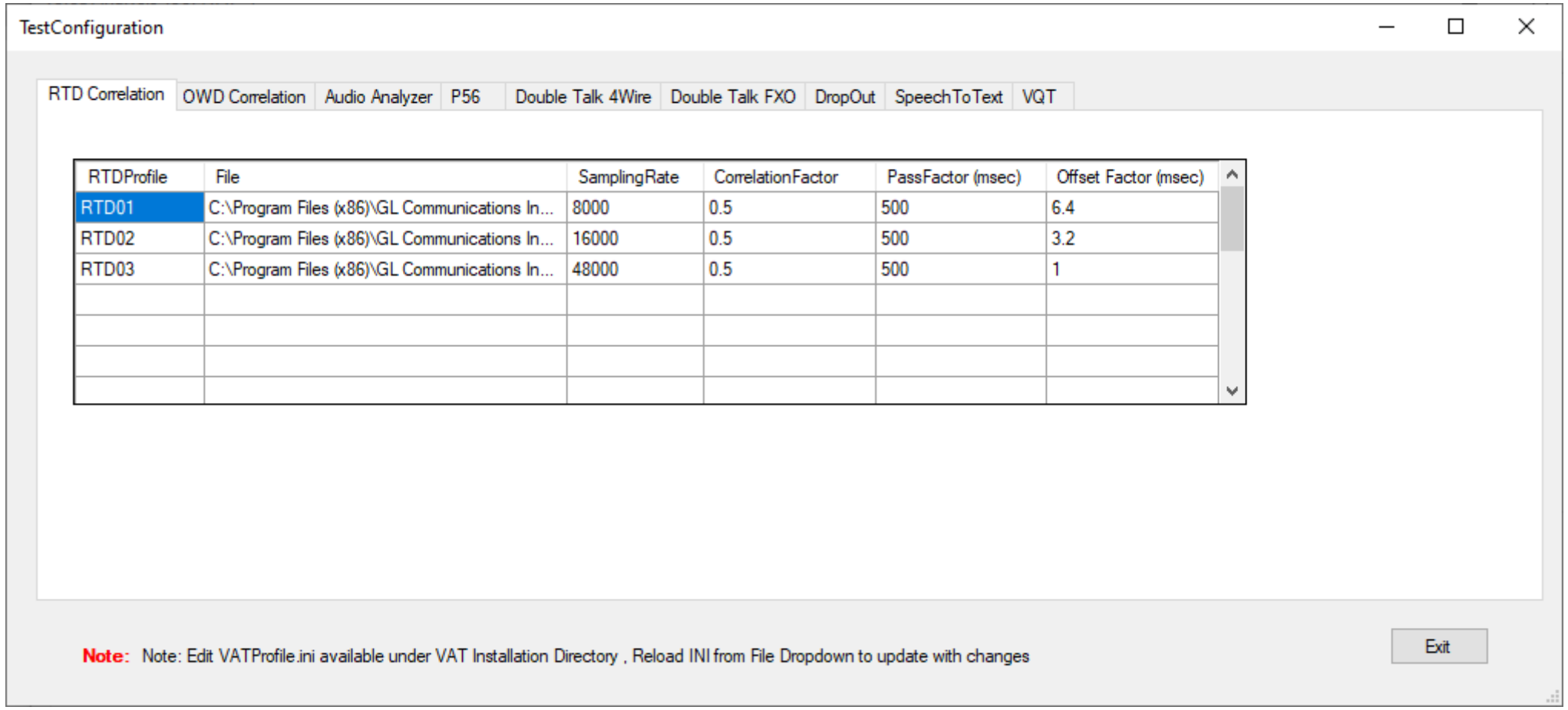
Test Configuration



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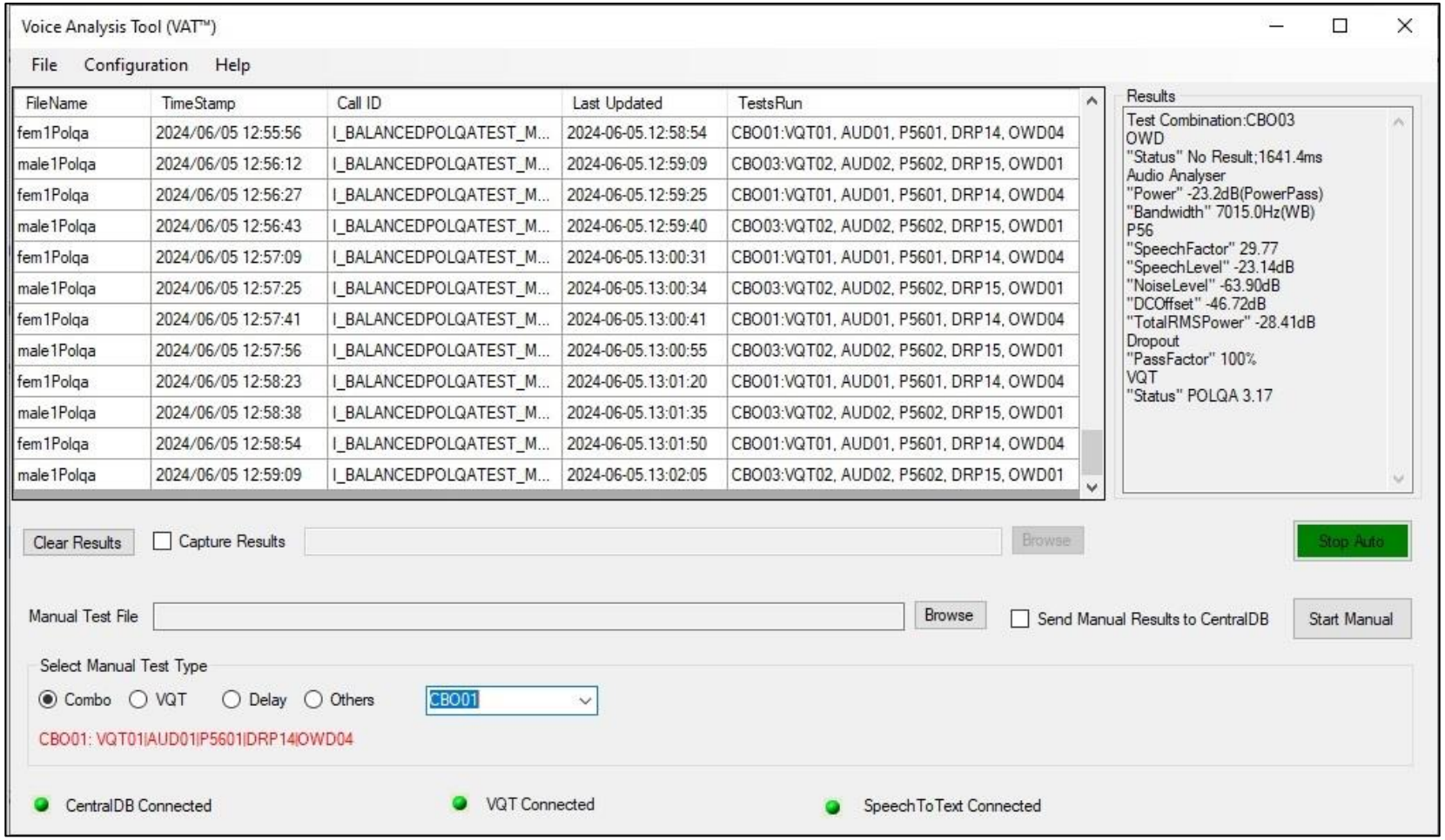
VAT™ Results

- All the VAT™ associated results are sent to the GL WebViewer™ central database and can be accessed using the WebViewer™ web browser.
- If the network connection is lost between VAT™ and the database, the data is saved internally. Once the network connection is re-established the data is automatically sent from the VAT™ to the GL WebViewer™ database, so no data is lost.



VAT™ Results on WebViewer™ Database

Audio and Delay Analysis (Display duration: 08-18-2022 03:52:25 - 08-18-2022 04:05:25)

VQuad Timestamp	Call Timestamp	VQuad Call ID	VQuad Device ID	VQuad GPS	RTD (ms)	Rating	PDD (ms)	SNR (dB)	OWD (ms)	CT (sec)	CCT (sec)	Signal Gain (dB)	Line Current (mA)	Line Voltage (V)	Ring Type	Ring Voltage (V)	Speech Active Factor (%)	Active Speech level (dB)	Noise Level (dB)	DC Offset (dB)	Total RMS Power (dB)	Double-Talk	Speech Analysis	Dropout	VMWI	SDT
08/18/2022 04:02:48	08/18/2022 04:01:13	GL Test	ITSD2	N12°55'35" E077°36'05"						74.20																
08/18/2022 04:02:46	08/18/2022 04:01:13	GL Test	ITSD1	N12°55'35" E077°36'05"						68.40																
08/18/2022 04:02:14	08/18/2022 04:01:13	GL Test	ITSD1	N12°55'35" E077°36'05"	1352.30	Fail			1355.60			-26.80					53.19	-26.79	-29.53	-36.13	-29.53	Pass		Fail (Proper Voice 79%)		
08/18/2022 04:02:03	08/18/2022 04:01:13	GL Test	ITSD2	N12°55'35" E077°36'05"	1350.20	Fail			1353.40			-26.70					52.51	-26.69	-29.48	-37.43	-29.48	Pass		Fail (Proper Voice 79%)		
08/18/2022 04:01:42	08/18/2022 04:01:13	GL Test	ITSD2	N12°55'35" E077°36'04"	1350.20	Fail			1353.40			-26.70					52.50	-26.68	-29.47	-37.52	-29.47	Pass		Fail (Proper Voice 79%)		
08/18/2022 04:01:38	08/18/2022 04:01:13	GL Test	ITSD1	N12°55'34" E077°36'04"							15.30															
08/18/2022 04:01:29	08/18/2022 04:01:13	GL Test	ITSD2	N12°55'34" E077°36'04"											Peak	127										
08/18/2022 04:01:26	08/18/2022 04:01:13	GL Test	ITSD1	N12°55'34" E077°36'04"			3069																			

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Thank you