Voice Analysis Tool (VAT[™])



818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878 Phone: (301) 670-4784 Fax: (301) 670-9187 Email: <u>info@gl.com</u> Website: <u>https://www.gl.com</u>

Voice Analysis Tool (VAT[™])





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





VAT™ Application

Voice Analysis Tool (VA						-		×
File Configuration	Неір	0.110				Results		
FileName	TimeStamp	Call ID	Last Updated	TestsRun	^	Thoolito		~
								\vee
				1				
Clear Results C	apture Results				Browse		Start Auto	D
Manual Test File				Browse	Send Manu	ual Results to CentralDB	Start Manu	Jal
Select Manual Test Ty	pe	00001						
Combo VQ1	O Delay O Others	СВООЛ						
CBO01: VQT03 AUD0	1 P5601 DRP01							
CentralDB Connect	ting	VQT Connecting		Speech To Text Cor	nnecting			





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IVATProfile.ini - Notepad	-		×
File Edit Format View Help			
CBO(Combination of Test)] [CBO(1 = VQT03]AUD03]P5601]DRP01 CB002 = RTD03]AUD03]P5603 CB003 = STT03]DRP02 CB004 = VQT10			
<pre>[RTD(Correlation)] RTD01 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation8k.pcm 8000 RTD02 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation16k.pcm 160 RTD03 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation48k.pcm 480</pre>	0.5)0 0.)0 0.	500 6. 5 500 5 500	4 3. 1
<pre>[OWD(Correlation)] OWD01 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation8k.pcm 8000 OWD02 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation16k.pcm 160 OWD03 = C:\Program Files (x86)\GL Communications Inc\VoiceAnalysisTool\CorrelationFiles\Correlation48k.pcm 480</pre>	0.5 30 0. 30 0.	500 3. 5 500 5 500	2 1. 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			
<pre>[STT(Speech To Text)] STT01 = PCM16 NB (8kHz) Clothes new deepened eye en-US 100 TextMatch STT02 = PCM16 NB (8kHz) Clothes new deepened eye 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 TextMatch STT05 = PCM16 SWB (48kHz) Clothes new deepened eye en-US 100 TextMatch STT06 = PCM16 SWB (48kHz) Clothes new deepened eye en-US 100 WordMatch</pre>			
[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			
<pre>[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\fem1POLQA.pcm 8000 Raw POLQA 8000 userid VQT05 = C:\VQT_Reference\VQuad_Auto\POLQANB\male1POLQASWB.pcm 48000 Raw POLQA 16000 userid VQT06 = C:\VQT_Reference\VQuad_Auto\POLQASWB\fem1POLQASWB.pcm 48000 Raw POLQA 16000 userid VQT07 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm 48000 Raw POLQA 16000 userid VQT08 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm 48000 Raw POLQA 48000 userid VQT09 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm 48000 Raw POLQA 48000 userid VQT09 = C:\VQT_Reference\VQuad_Auto\POLQASWB\male1POLQASWB.pcm 48000 Raw POLQA 48000 userid VQT09 = C:\VQT_Reference\VQuad_Auto\POLQA-aLaw\fem1POLQASUB.pcm 8000 alaw 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\fem1POLQAAla.pcm 8000 alaw PESQ 8000 userid</pre>			
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General Configuration

General Config		_		×
File Information Test File Folder Browse	-CentralDB IP			
Auto-Delete the degraded file after measurement	Port	8877		
Save degraded files to the inventory directory after measument Inventory Folder Browse	Speech To IP	Text		
	Port	45728		
Default Test Combination	IP Port	6666		
Enable result log (create new log daily)		Save	Car	ncel
Note: Note: Edit GeneralConfig.ini available under VAT Installation Directory, Reload INI from File Dropdown to update with changes.				



Test Configuration

TTETTONIC	File	SamplingRate	CorrelationFactor	PassFactor (msec)	Offset Factor (msec)	^		
RTD01	C:\Program Files (x86)\GL Communications In	8000	0.5	500	6.4			
RTD02	C:\Program Files (x86)\GL Communications In	16000	0.5	500	3.2			
RTD03	C:\Program Files (x86)\GL Communications In	n Files (x86)\GL Communications In 48000 0.5 500 1						
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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 reestablished the data is automatically sent from the VAT[™] to the GL WebViewer[™] database, so no data is lost.

FileName	TimeStamp	Call ID	Last Updated	TestsRun	^	Results
fem1Polqa	2024/06/05 12:55:56	I_BALANCEDPOLQATEST_M	2024-06-05.12:58:54	CB001:VQT01, AUD01, P5601, DRP14, OWD04		Test Combination:CBO03
male1Polqa	2024/06/05 12:56:12	I_BALANCEDPOLQATEST_M	2024-06-05.12:59:09	CB003:VQT02, AUD02, P5602, DRP15, OWD01		"Status" No Result;1641.4ms
fem1Polqa	2024/06/05 12:56:27	I_BALANCEDPOLQATEST_M	2024-06-05.12:59:25	CB001:VQT01, AUD01, P5601, DRP14, OWD04		"Power" -23.2dB(PowerPass)
male1Polqa	2024/06/05 12:56:43	I_BALANCEDPOLQATEST_M	2024-06-05.12:59:40	CB003:VQT02, AUD02, P5602, DRP15, OWD01		"Bandwidth" /015.0Hz(WB) P56
fem1Polqa	2024/06/05 12:57:09	I_BALANCEDPOLQATEST_M	2024-06-05.13:00:31	CB001:VQT01, AUD01, P5601, DRP14, OWD04		"SpeechFactor" 29.77
male1Polqa	2024/06/05 12:57:25	I_BALANCEDPOLQATEST_M	2024-06-05.13:00:34	CB003:VQT02, AUD02, P5602, DRP15, OWD01		"NoiseLevel" -63.90dB
fem1Polqa	2024/06/05 12:57:41	I_BALANCEDPOLQATEST_M	2024-06-05.13:00:41	CBO01:VQT01, AUD01, P5601, DRP14, OWD04		"DCOffset" -46. /2dB "TotalRMSPower" -28.41dB
male1Polqa	2024/06/05 12:57:56	I_BALANCEDPOLQATEST_M	2024-06-05.13:00:55	CB003:VQT02, AUD02, P5602, DRP15, OWD01		Dropout "PassFactor" 100%
fem1Polqa	2024/06/05 12:58:23	I_BALANCEDPOLQATEST_M	2024-06-05.13:01:20	CB001:VQT01, AUD01, P5601, DRP14, OWD04		VQT
male1Polqa	2024/06/05 12:58:38	I_BALANCEDPOLQATEST_M	2024-06-05.13:01:35	CB003:VQT02, AUD02, P5602, DRP15, OWD01		Status POLQA 3.17
fem1Polqa	2024/06/05 12:58:54	I_BALANCEDPOLQATEST_M	2024-06-05.13:01:50	CB001:VQT01, AUD01, P5601, DRP14, OWD04		
male1Polqa	2024/06/05 12:59:09	I_BALANCEDPOLQATEST_M	2024-06-05.13:02:05	CB003:VQT02, AUD02, P5602, DRP15, OWD01		
Clear Results	Capture Results			Browse	B	Stop Auto
Manual Test File				Browse Send	d Manua	al Results to CentralDB Start Manual
201 220 22						
Select Manual 1	fest Type					
● Combo ○	VQT O Delay O) Others CBO01	~			



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	N12º55'35" E077º36'05"						74.20																
08/18/2022 04:02:46	08/18/2022 04:01:13	GL Test	ITSD1	N12º55'35" E077º36'05"						68.40																
08/18/2022 04:02:14	08/18/2022 04:01:13	GL Test	ITSD1	N12º55'35" E077º36'05"	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	N12º55'35" E077º36'05"	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	N12º55'35" E077º36'04"	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	N12º55'34" E077º36'04"							15.30															
08/18/2022 04:01:29	08/18/2022 04:01:13	GL Test	ITSD2	N12º55'34" E077º36'04"											Peak	127										
08/18/2022 04:01:26	08/18/2022 04:01:13	GL Test	ITSD1	N12º55'34" E077º36'04"			3069																			



Thank you

