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Release Notes for VQuad™ version 11.4.4

		Description of Enhancement/Bug	Version
1.	VQuad Send Tone	The Send Tone function within the VQuad script and the Manual Tone screen now supports sending tones of 40ms OnTime or more. Previous version the minimum OnTime was 600ms.	**11.4.4**
2.	VQuad MDC	Update event from VQuad to DataImport when sending the MDC Keep Alive. This update event willinclude the VQuad name within the DeviceName event.	**11.4.4**
3.	VQuad bug	Fixing overflow problem within VQuad script when using the Pause timer.	**11.4.2**
4.	VQuad Tx/Rx Synch	Update the Stop TxRxSynch command to work under all VQuad conditions. This is a result of the command not working under certain conditions which leaves the file open.	**11.4**
5.	VQuad MDC	Added new functionality to MDC and VQuad in order to send the MDC Status update directly to VQuad. The VQuad in turn will send the MDC status to the WebViewer.	**11.4**
6.	VQuad Load Script	Resolved issues with Load Script for NetTest and SIRI functionality.	**11.3**
7.	VQuad Scheduler	Resolved several issues associated with the new VQuad Scheduler enhancements for SMS and SIRI implementation.	**11.2.3**
8.	VQuad Scheduler	Added enhanced features to the VQuad Scheduler, VQuad GUI Start Variables, and VQuad Load Script variables. These enhancements include support for NetTest Send SMS, NetTest Receive SMS, SIRI/Google Voice Send SMS, and STT. All results are sent to the Central Database and all new commands include proper parameters.	**11.2.1**
9.	VQuad multi-stage	Resolved issues related to M1R multi-stage calling to support Dial Tone energy detect and to support Answer Tone detect with proper Answer Tone event.	**11.2.1**
10.	VQuad Script	Resolved issues related to the new Pause function.	**11.2.1**
11.	VQuad Script	Update Pause and Wait timers to support real-time correction supporting inter-operation with vMobile. Also include in the General Configuration a switch to turn Off so timers match previous VQuad releases, *Subtract Script interval for Pause and Wait Event time.*	**11.2**
12.	VQuad multi-stage dialing	Add CPF filter to Dual UTA HD hardware. This was added for earlier versions of the hardware, we updated latest VQuad to include same filter with latest Dual UTA HD hardware.	**11.2**
13.	VQuad Scripting	Add function to properly exit the Do Loop (whether nested Do Loop or Main Do Loop). Once exit the Loop count of the Loop exited would be reset.	**11.1.1**
14.	VQuad timers	Modified Pause and Wait Event timers to support 10ms.	**11.1.1**

15.	VQuad multi-stage dialing	Add limitations for checking S1 tone during Stage 1, checking Voice Prompt during stage 2 and checking Answer Tone during stage 3. These changes were included for multi-stage SIP and FXO calls.	**11.1.1**
16.	VQuad Script	Added default comments to be used within Send Comment command (send comment to Central Database WebViewer) which includes Failed Call and Dropped Call (more to come). This allows these comments to be consistent and used specifically by GL WebViewer during search and Custom Reports.	**11.1**
17.	VQuad Remote	The VQuad API and CLI remote functions support latest Linux versions.	**11.1**
18.	VQuad Analysis	Support user-defined PCM files to be used for Double Talk analysis function.	**11.1**
19.	VQuad UI	Modified VQuad UI to remove several options which are no longer supported by the VQuad software.	**11.1**
20.	VQuad	Update overall VQuad to remove older generation library and revamp all screens to support newer look.	**11.0**
21.	VQuad Script	Include Reset device for resetting individual devices (same as right-click from Manual Call screen). This allows to reset device which may be in bad state directly from the VQuad script.	**11.0**
22.	VQuad SIP	Update VQuad SIP to resolve issues associated with multi-stage dialing.	**11.0**
23.	VQuad GUI	Remove several menus from VQuad which are no longer available.	**11.0**
24.	VQuad Fax	Support Fax testing for all 12 VQuad devices (previously only supported 4 devices). From the Fax screen the user can select to show events from All devices or a specific device only.	**10.8.1**
25.	VQuad Multi-Stage	Resolve issues with VQuad multi-stage dialing, SIP only testing.	**10.8**
26.	VQuad FXO	Include CAS Tone detect during inkling FXO call for providing CallerID (option if FSK is prior to first ring). Decode and display Caller ID after FSK decode.	**10.7.7**
27.	VQuad Script	Update script command, Set Volume, for Bluetooth BT TX Codec Level, to support full range of levels.	**10.7.4**
28.	File Monitor Utility	Fix crash issue when network cable is disconnected.	**10.7.4**
29.	VQuad	For Bluetooth connection, append the Caller ID Phone Name to the Caller ID in both Manual Call screen and the Event screen.	**10.7.4**
30.	VQuad SIP	Resolve discrepancies with Call ID event to make same for both VQuad SIP and Dual UTA HD interfaces.	**10.7**
31.	FXO Ring	Include new feature in FXO Preset Tones, General tab, Alternative Incoming Ring. This feature allows the user to specify the type of Incoming Ring to detect as an Incoming Call including frequency cadence and voltage. The configurations are user-specified and found in \VQuad\AlternativeRing.ini. Also included is a Reset button for automatically applying the new Alternative Ring setting.	**10.7**
32.	Bluetooth Display	Display on main screen status and in About if Bluetooth is available on Dual UTA HD and if Bluetooth is standard or Headset mode.	**10.7**
33.	Bluetooth Headset	Support Bluetooth Headset Mode (test Bluetooth headsets). Added to Bluetooth configuration ability to pair and connect to Bluetooth headsets when using the Modified Dual UTA HD Bluetooth board (requires this modified board).	**10.7**
34.	Bluetooth TX Level	Updated VQuad to support Bluetooth TX audio level codec adjustments.	**10.6.2**

35.	EMU Client	Updated VQuad to support SWB sampling rate for EMU Client (requires updated EMU Client, v1.0.18). EMU and EMU Client supports NB, WB, and SWB.	**10.6.1**
36.	VQuad VAC	Included a Local IP option for connecting to the VAC system (testing Video Conference). This allows a VQuad with multiple NICs to properly connect to the VAC.	**10.6**
37.	VQuad Audio Metrics	Resolvedf issues with Signal Level testing when running tests in manual mode.	**10.6**
38.	VQuad Analysis	Resolved issues with VQuad Analysis screens, Spectral and Oscilloscope. Display.	**10.6**
39.	VQuad SIP	Issue with SIP Connect state (showing Connected too soon). The VQuad SIP will only switch to Connected state when call is actually connected.	**10.6**
40.	VQuad GPS	Resolved issues when multiple Dual UTA HD units connectd to same VQuad system, GPS would only work if GPS receiver was connected to specific Dual UTA HD. With this fix the GPS receiver can connect to any Dual UTA HD associated with VQuad system.	**10.6**
41.	VQuad Script	Added new command for Clear Start (Preset) Variables. This command will clear all previously configured Preset Start Variables.	**10.6**
42.	VQuad P56 Analysis	Resolved issues with VQuad P56 specific with Noise Level calculation.	**10.6**
43.	VQuad ACU	Resolved issues associated with Audio Conversion Utility (ACU)	**10.6**
44.	VQuad FXO	Resolved issues associated with Alternate Caller ID. Also added parameters associated with this function to the General Configuration screen, FXO tab.	**10.5**
45.	VQuad Multi-Stage Dialing	Resolved issues associated with ACC calling.	**10.5**
46.	VQuad Multi-Stage Dialing	Resolved issues associated with Progress Tone Recording.	**10.5**
47.	VQuad ACC	Resolved issue associated with Call State when Disconnect while in ACC device mode. The Call State should not change while in this mode.	**10.4**
48.	VQuad Bluetooth	Support sending DTMF Digits directly from the phone (as Bluetooth commands) while in Bluetooth device mode. This is an optional setting (can send DTMF based on audio from VQuad or using the Bluetooth commands). This enhancement is also supported within the Multi-Stage Dialing function. Changes to this setting is found in General Configuration screen, General Settings tab, and in the VQuad Script under Mobile/Bluetooth Device – Set Send BT Digit.	**10.4**
49.	VQuad ITS	Additional enhancements to ITS include Pause and Pause with Countdown timer. This also includes updates to the VQT and ITS Viewer.	**10.4**
50.	Dual UTA TTL	Enhance VQuad to support additional BIT file for use when TTL is included as part of the Dual UTA HD hardware.	**10.4**
51.	VQuad GPS	Include GPS Bypass (General Configuration screen) to support GPS timing when using non-GPS hardware and does not return proper number of satellites. This allows using non-GPS Receiver hardware for providing GPS super-time and GPS pulse per second used with VQuad OWD functions.	**10.3.7**
52.	VQuad API	Include Status Response to API function LoadMasterConfigName.	**10.3.7**
53.	VQuad ITS	Enhancements to VQuad ITS and VQT in order to provide a smoother and more friendly interface when using ITS (Internal Tracking System) with VQuad software. Also included ITS Viewer for viewing ITS results.	**10.3.4**

54.	VQuad Multi-Stage	Resolved issues associated with VQuad multi-stage dialing when supporting Bluetooth and ACC calling.	**10.3.4**
55.	VQuad Installation	Resolved issues associated with VQuad 10.3 installation.	**10.3.4**
56.	VQuad Correlation RTD/OWD	Resolved a few issues with the RTD/OWD under the Correlation function. These updates will provide a higher accuracy RTD/OWD result for all devices.	**10.3**
57.	VQuad CLI/API	Include ALL VQuad audio analytical functions within he VQuad CLI and API functions.	**10.3**
58.	Speech to Text	Enhanced Speech to Text function to include File Length as additional returned metric.	**10.3**
59.	VQuad Volume Level Status	Include option from General Configuration screen in order to support either RX Volume level (default) or TX Volume Level in the Volume Status (lower left of the main VQuad screen).	**10.3**
60.	VQuad Installation	Remove erroneous modules/applications associated with the VQuad Installation to support care-free installation across all platforms.	**10.3**
61.	VQuad Calibration	Resign VQuad Dual UTA Calibration. The new Calibration function will require the user to adjust the Outbound Audio from Near side of the call while viewing the Level at the Far-end of the call. This method of calibration is better suited in that the Outbound volume is only adjusted.	**10.3**
62.	File Monitor	Included latest File Monitor which resolves issue associated with dblog.mdb database.	**10.3**
63.	VQT Results	Resolved issues when trying to connect to VQT application (using VQT Results screen) if both VQuad and VQT are running on same PC.	**10.3**
64.	Setup Devices	All connected Dual UTA HD devices will automatically sort by Dual UTA HD Serial Number for easier configuration of the devices. Of course, once changes are made to the Configuration screen these are saved to the database (including SN and Port Number).	**10.3**
65.	VQuad Bugs	Resolved several VQuad related bugs.	**10.3**
66.	GL NetTest	Include new GL NetTest function, Video Simulation, as part of GL NetTest manual and scripted operations. Requires latest GL NetTest app and GL NetTest MDC.	**10.2**
67.	VQuad Bluetooth	Resolved issues where Bluetooth connected phone remains connected (line connected) when Busy or Fast Busy failure is detected. Now when failure is detected VQuad automatically disconnects line associated with Bluetooth connected phone.	**10.2**
68.	VQuad Multi-Stage Dialing	Resolved issues associated with multi-stage dialing when sending PC Start Variable while including Reorg number. Start Variable can now support extra number to be used by Reorg command. Also included Digit Parameters within Register Multi-Stage Parameters (found in VQuad script) in order to configure Digits used for multi-stage dialing including power, ontime, offtime.	**10.2**
69.	VQuad Script	Resolved issues with VQuad Script, startrtd command. Also cleaned up all VQuad Script commands.	**10.2**
70.	VQuad TX Digits	Resolved issues with VQuad Transmit Digits from within VQuad Script and when sending the TX Digit command to a remote VQuad device. Note, when configured as SWB (48k sampling) and sending DTMF there is a limitation of 15 total DTMF digits.	**10.2**
71.	VQuad PTT	Include extremely accurate hardware-based PTT Connect Time (requires update to the Dual UTA HD hardware). Configuration of the PTT Connect time is found in the General Configuration screen, PTT Connect Time tab.	**10.2**

72.	VQuad Automation	When using command *Trigger Call Fail* from VQuad Script this command will now stop all traffic and Disconnect the call (previously only changed the VQuad Call Status).	**10.2**
73.	VQuad Help	Include latest VQuad and VQuad Scripting Help.	**10.2**
74.	FXO Caller ID	Support alternative method for detecting and decoding Caller ID for FXO interfaces. This method is more accurate for low level networks.	**10.1**
75.	VQuad Script	Place Call function, support grabbing the Place Call phone numbers from an INI file (allows many phones numbers to be used for single script). This was also added to the Send DTMF (support to grab DTMF digit strings from INI file).	**10.1**
76.	VQuad SIP	Include Reorigination (for multi-stage dialing) with the VQuad SIP function.	**10.1**
77.	VQuad Script	Support 100ms resolution for the Pause Timer function.	**10.1**
78.	VQuad PTT	PTT Enhancement for detecting accurate delay measurement upon PTT enable.	**10.1**
79.	Dual UTA Firmware	Dynamically change the Dual UTA Bit file (used for different conditions) directly from the VQuad UI, General Configuration screen.	**10.1**
80.	VQuad Detect DTMF	As part of the Detect DTMF from within the VQuad Script, the user can specify On/Off Time as well as Level threshold.	**10.1**
81.	VQuad SIP	Add switch in VQuad General Configuration screen to either initiate SIP drivers during VQuad start-up or not initiate drivers (note, SIP license must be active).	**10.1**
82.	VQuad Correlation	Include VQuad Correlation period (for One Way/Round Trip Delay) within VQuad Script.	**10.1**
83.	VQuad Custom Reports	From VQuad Script, support for generating Custom Reports from WebViewer now includes ability to generate PDF, Excel or TXT output files. This requires enhancement with Central Database (DataImport).	**10.1**
84.	VQuad Script	Support with VQuad Script Wait event, specifically for Wait User-Defined event, the ability to Wait for x-number of events before proceeding.	**10.1**
85.	VQuad Error Events	Provide events in VQuad_Error.log each time the VQuad loses connection to the Central Database or to the VQT application.	**10.1**
86.	Dual UTA	Support Auto Reset of Dual UTA HD if Dual UTA HD drops out of USB communication. Configure this setting from General Configuration screen.	**10.1**
87.	VQuad Bugs	Issues with Detect DTMF. Issues with VQT Result when testing with VQuad device other than Device 1.	**10.1**
88.	VQuad ACC mode	When selecting PlaceCall from ACC Mode support detect Call Progress tones in order to display proper Call State.	**10.0**
89.	VQuad Reference Files	Added following mixed (Fem/Male) POLQA Reference files for NB, WB, SWB (both PCM and WAV), Italian, Japanese, Korean, Russian, Czech, Dutch, English, French, German, Greek.	**10.0**
90.	VQuad Script	Add new feature for Digit Detection, support multiple length of detected digit sequences. This also allows the If/ElseIf to support multiple length digit sequences.	**10.0**
91.	VQuad Script	Support Goto command along with Goto Variable for use in the VQuad Script.	**10.0**
92.	VQuad Script	Support user-specified Script period (time between each script command). Defaults to 1000ms, user can specify 100ms to 8000ms.	**10.0**
93.	VQuad VMWI	Resolved issue with VQuad FXO device when detecting VMWI while onhook. If a small pulse was detected prior to the VMWI the VQuad would signal a Ring detect. The software has been modified to suppress this pulse so it is not detected as a Ring.	**10.0**

94.	VQuad Bug	Resolved VQuad Script issues with Set Call Failed Reason within VQuad Scripting (not supporting Busy properly), Bi-Direction connection (not working for Global Device 2), Wait command with VQT as parameter and VQT = 0 as result.	**10.0**
95.	VQuad Multi-Stage Dialing	Support multi-stage dialing (from VQuad Script) for Bluetooth and ACC modes. Also support Re-Origination calling for all multi-stage dialing modes.	**10.0**
96.	VQuad Scheduler	Enhanced the VQuad Scheduler to support additional commands such as Disconnect and Re-origination and Bluetooth devices.	**10.0**
97.	VQuad PlaceCall	Enhanced the VQuad PlaceCall multi-stage dialing functionality to support Bluetooth and ACC as well as support for Reorigination calling (secondary calling).	**10.0**
98.	VQuad PlaceCall	Support new option in VQuad Script, Place Call command, Load Numbers from INI file. This allows the user to load many Phone Numbers (100's) to the PlaceCall function directly from an INI file.	**10.0**
99.	VQuad Script	Add Detect Digit parameters (on/off time, level) when specifying Detect Digits within VQuad script.	**10.0**
100.	VQuad Script	Include new Search mechanism to search for script commands or search commands within Script.	**10.0**
101.	VQuad Script	Include on-screen instructions for methodology of using the User-Defined events, bi-directionally between two devices.	**10.0**
102.	VQuad API/CLI	Resolve a few issues, including SaveConfigurationByID and LoadConfigurationByID, as well as adding additional parameter to NameFormat for RecordVocieFile command, None indicates do not append anything to filename (no reformatting of filename).	**10.0**
103.	VQuad VQT Measurement	During IF POLQA Score command within VQuad script issues occur when running multi-devices. This has been resolved.	**10.0**
104.	VQuad Test	From VQuad General Configuration screen, new function Reset Audio Path. If the audio path has issues (bad state), click this button and all interfaces of all Dual UTA units connected to VQuad will be reset.	**9.9**
105.	VQuad VQT	Under TxRxSynch, the VQT Auto Measurement parameter supports up to 999 entries (this has also been updated in VQT v7.4).	**9.9**
106.	VQuad VQT Measurement	From within VQuad Script, when selecting VQT Measurement the user has option to Auto Delete Degraded file or Move Degraded file to Inventory directory. Also, when sending command to Connect to VQT Server, if connection already established do not do anything.	**9.9**
107.	VQuad CLI	VQuad CLI (Linux), fixed issue with filename having "\" as prefix. Also added Help for slog and glog commands for both Win and Linux versions of VQuad CLI.	**9.8**
108.	VQuad Logging	Resolved issues associated with creating and saving log files.	**9.8**
109.		Resolved several issues associated with the VQT Measurement command and Wait for Done command associated with VQuad scripting.	**9.8**
110.	VQuad Delay	Enhanced VQuad RTD with Correlation to support Bluetooth devices.	**9.7.4**
111.	VQuad CLI	Fixed issues associated with the glog command. Also updated VQuadCLI Help for better understanding of the commands.	**9.7.4**
112.	VQuad Script	Add variable associated with Send Comment to Event Screen within VQuad Script. Variables available include VQT score, Call ID, Detected Digit, and Detected Tone.	**9.7.4**
113.	VQuad Call ID	Support ID type 2 and ID type 3 coming from Network in order to display Number portion of Call ID and CW Call ID.	**9.7.4**

114.	VQuad CallID	Resolves some inconsistencies with reporting Call ID under special circumstances where line levels are low.	**9.7.4**
115.	VQuad Script	Include ElseIf with the VQT IF conditional command (after Wait VQT command).	**9.7.4**
116.	VQuad Stutter Dialtone	Support user-specified SDT duration bandwidth (configured in FXO Preset Tones screen, General Settings tab). Default is 20ms.	**9.7**
117.	VQuad	Resolves several operational bugs including Global Device ID associated with Load VQuad Script.	**9.7.4**
118.	VQuad Call ID	Support ID type 2 and ID type 3 coming from Network in order to display Number portion of Call ID and CW Call ID.	**9.7.1**
119.	VQuad Script	Include ElseIf with the VQT IF conditional command (after Wait VQT command).	**9.7.1**
120.	VQuad Stutter Dialtone	Support user-specified SDT duration bandwidth (configured in FXO Preset Tones screen, General Settings tab). Default is 20ms.	**9.7**
121.	VQuad Script	Support PlaceCall (Secondary Call option) with PC parameter for dial number. This works regardless if Secondary Call is in script along with PlaceCall or Secondary Call is in script alone.	**9.7**
122.	VQuad PTT	Support PTT Connect Time. The VQuad will generate a PTT CT event to both VQuad events and Central Database when tone is detected on line after PTT is enabled. Configuration of tone canbe found in General Configuration (On/Off, Qual Level, Duration)	**9.7**
123.	VQuad Script	Support IF SDT and support Wait for VQT Measurement (continues if proper VQT Result or Error). If VQT will provide result (Pass/Fail) or other which indicates Error (no result).	**9.7**
124.	VQuad Tone Detect	Support Tone Detect bandwidth (previously bandwidth was locked on 10Hz).	**9.7**
125.	VQuad logs	Update logs to fully support all reslts (including Call ID, VMWI, SDT, Fax).	**9.6**
126.	VQuad Script	Support Connect to Remote VQuad with bi-direction connection. With this bi-direction connection the far-end VQuad can send commands directly to near-side VQuad using Global parameter specified in Connect command (no need to specify Global parameter or Connect command in far-end VQuad).	**9.6**
127.	VQuad Analysis	Update VQT Measurement (from VQuad Script) to resolve issue when VQT score was 0 (no POLQA result) and to support all PESQ/POLQA variants including PESQ/POLQA NB, PESQ/POLQA a-law/mu-law, PESQ WB, POLQA WB, POLQA SWB	**9.6**
128.	VQuad CLI	Update the slog and glog commands to support filtering based on Device ID and Call ID.	**9.6**
129.	VQuad Log	Resolve issue that Log Events tab not appearing under General Configuration screen.	**9.6**
130.	VQuad crash	Resolve issues with VQuad Scheduler screen (in specific instances may crash) and specific functions with VQuad script Wait event (no longer required). Also resolve issue with If/End If command.	**9.6**
131.	VQuad SIP	Resolve issues with VQuad SIP multi-stage calling.	**9.6**
132.	VQuad Script	Updated VQuad Script Wait command to resolve issues with several Wait For parameters including Wait For VMWI Received.	**9.5.1**
133.	VQuad CLI	Resolved issue with glog function.	**9.5.1**
134.	VQuad STT	Include STT Pass/Fail within the VQuad script If/Elseif commands. Also send entire STT transcribed text to Central System (Call Events).	**9.5**
135.	VQuadCLI	Add to slog command (Set Log File) to Reset Log files. This is done using the second parameter (enable 1/disable 0/reset 2).	**9.5**
136.	VQuad VMWI	Include the VMWI result in the VQuad script Wait and If/Else commands.	**9.5**

137.	VQuad multi-stage dialing	Under VoIP SIP multi-stage dialing, support starting record of first stage sooner (immediately after Start Session).	**9.5**
138.	VQuad Correlation	Resolve GUI issues when running Correlation with Near-End Delay.	**9.5**
139.	VQuad TxRx	Resolved issues with sending/recording simultaneously under certain conditions.	**9.5**
140.	VQuad SIP	Resolve potential memory issues associated with VQuad SIP long-term operation (specifically with Sending voice).	**9.5**
141.	VQuad STT	Resolve issues associated with VQuad STT Analysis under certain conditions.	**9.5**
142.	VQuad SIP	Include Re-Invite as part of VQuad SIP. Also Enable RTP Source Port to be randomly selected from range 16000 to 32000.	**9.4**
143.	VQuad FXO	Support SDT (Stutter Dial Tone) detection. Provide event for SDT along with umber of SDTs detected when first going OffHook.	**9.4**
144.	VQuad FXO	Support VMWI (Visual Mail Wait Indicator). This function can selectively be turned on/off. When on, the VQuad can detect the FSK message (during OnHook) and generate an event with the VMWI decoded information (VMWI On and VMWI Off).	**9.4**
145.	VQuad PTT	Support PTT Setup time (time when PTT enabled until feedback from network). This requires on/off switch within VQuad script.	**9.4**
146.	VQuad OWD/RTD	Support maximum 20s OWD/RTD Correlation (this requires new OWD/RTD Correlation Reference files which are included with this release.	**9.4**
147.	VQuad Correlation	Support new Correlation (and Audio Dropout) method using Frequency domain which provides higher accuracy and much shorter analysis times.	**9.4**
148.	VQuad CLI	Update the VQuadCLI getes command to support Record File events for VQuad SIP and VQuad T1/E1.	**9.4**
149.	VQuad T1/E1	When using VQuad TxRx Synch script command with T1E1 devices, the resultant formatted filename was coming out all lower case. This is resolved such that the formatted filename is no longer modified in terms of upper/lower case.	**9.4**
150.	VQuad Export	Update VQuad Export to DataImport to support proper US Time Format which allows more consistency with sending results to the DataImport.	**9.4**
151.	VQuad VoiceGap (Dropout) Function	Add new test to VQuad, Voice Gap (or Dropout), for determining voice gaps (or muted voice) in the recorded file when compared to the Reference file. This will provide % of speech found in the recorded file when compared with the reference file and provide insight where the muted speech was found. This also provides a Pass/Fail (user-specified threshold) and can be used with VQuad Script If command.	**9.3**
152.	VQuadCLI	Add new command, SendUserDefinedEvent, within VQuadCLI. This command can be used as part of the VQuad WAIT for UserDefinedEvent and IF UserDefinedEvent. So, the VQuad can be Paused and Waiting for UserDefinedEvent command from the VQuadCLI, and the VQuad can confirm which UserDefinedEvent text was received. Also update VQuadCLI Linux version to match the VQuadCLI Win version.	**9.3**
153.	VQuad Path Confirmation	Support Pass/Fail (IF command) in VQuad Script for Path Confirmation.	**9.3**

154.	VQuad Speech to Text	Add new function in VQuad Manual screen (Correlation and Audio Analysis) and VQuad scripting (Analysis), Speech to Text. This requires a Speech to Text server (with license, VQT009) and can transcode any PCM file (NB or WB) into a text file. In addition to transcoding to text, this new feature also supports analysis of the transcoded text based on a reference text provided by the user, providing Pass/Fail results. All results are sent to the WebViewer. Two different Analysis methods are available, Word based (matching individual words between the Reference and the Transcoded text) and Text based (analyzing individual letters within each word of the Transcoded text against the Reference text). The Text based method should resolve issues associated with dropped packets or mangled text.	**9.3**
155.	VQuad Correlation	Add for the RTD Correlation the ability to specify Near End delay when configuring far-end RTD. This allows to specify proper delay between near-end and far-end if both ends are different interfaces. For instance, if near-end is FXO and far-end is Bluetooth, the far-end can be properly configured.	**9.3**
156.	VQuad Script	Increase timer limitation on Wait command from 6600s to virtually unlimited.	**9.3**
157.	VQuad Help	Update VQuad Help within VQuad application.	**9.3**
158.	VQuad Fax	Resolve few issues with VQuad Fax. Also support new feature, CNG Tone Off option. Include switch within Fax Tx/Rx commands to specify using older legacy Fax library specific for V34 testing (helps to resolve certain issues for some customers). The default setting is to use latest Fax library.	**9.3**
159.	VQuadCLI	Fix issues with ghealthstatus (Get Health Status) so the result will fail if the Dual UTA HD drops USB connection (Firmware is dropped).	**9.3**
160.	VQuad Sampling Rate	Fixed issues with RTD/OWD Correlation when using individual Sampling rates (per Dual UTA HD).	**9.3**
161.	VQuad GPS	Add ability to pass GPS of Near-Side VQuad Node to the Far-End VQuad Node, thus allowing all results to include Near-End GPS coordinates for plotting in WebViewer.	**9.2**
162.	VQuadCLI	Add new CLI commands, Start OWD, Start RTD, Set RTD Loopback. This allows OWD/RTD Correlation to be remote operated from VQuad CLI with results passed back to the VQuadCLI.	**9.2**
163.	VQuad Mobile	Added ability to include RSSI measurement as part of VQT result when configured for Bluetooth or Mobile.	**9.2**
164.	VQuad QoS Test	Add new Double-Talk test for both 4W and 2W Analog. This test performs a Send/Record at near-side to determine if Double-Talk is within the network and provides a Pass/Fail.	**9.2**
165.	VQuad Tx/Rx	Support new VQT file format (no longer requires specific file directories for each VQT configuration.	**9.2**
166.	Tone Detection	Resolve issue when Detect Tones during FXO call. Previously during Tone Detect, both the specified tone as well as the FXO Call Progress tones generated Tone Detect events. Current revision will only detect specified tone and generate events.	**9.2**
167.	VQuad NetTest	Resolve issue associated with NetTest.INI when connecting to GL Data Server (specifying proper IP and PW).	**9.2**
168.	VQuad Script	Modified Synchronize Clock command to support GPS or NIST (user-selectable).	**9.2**
169.	OWD Correlation	Resolved issue when configuring OWD Correlation for far-end when using GPS timing. Required Device 1 of far-end to be selected. This has been resolved.	**9.2**
170.	VQuad Fax	Resolved issues associated with sending multi-page faxes.	**9.2**

171.	VQuad Script	Revised VQuad script with better ease of operation.	**9.2**
172.	VQuad ITS	Resolve issues associated with GPS (ITS) values within Recorded VQT file.	**9.2**
173.	WebViewer Custom Reports	Support new script command to request a Custom Report be generated from WebViewer based on user-specified parameters such as time period, filtering, and Customer Report configuration. This feature requires latest WebViewer with Custom Report and Scheduling functions.	**9.1**
174.	VQuad Smartphone ACC	Include new Dual UTA HD device mode, MobileACC, which supports the Smartphone ACC cable. This mode is essentially 4-wire balance with added new functionalities on the VQuad Manual Call screen including, Invoke Siri/GoogleVoice, AnswerCall/DisconenctCall, RejectCall.	**9.1**
175.	VQuad Smartphone ACC	Optional Smartphone ACC (Automated Call Control) cable is available from GL, item VQT461. This new cable supports full audio send/record to/from mobile phone, and also support full Call Control including Answer Call, Reject Call, and Disconnect Call. Also supported is initiating Siri or Google Voice and sending command from VQuad to the phone (i.e. Place Call, Send SMS, and Run Application). The new Smartphone Cable function, within VQuad Script, utilizes VQuad Test-to-Speech for control of Siri and Google Voice.	**9.1**
176.	VQuad Text-to-Speech	Added new function in both Manual Call and VQuad Script, Text-to-Speech, for converting any Text file or simple Text to a Speech (Raw PCM) file. This is useful for sending Siri or Google Voice commands directly from VQuad to the Mobile phone (via Bluetooth or Smartphone ACC cable). This function is available in Bluetooth mode and MobileACC mode.	**9.1**
177.	VQuad Scripted Remote	Added new utility to run VQuad commands in a very high rate of speed using Remote functionality. The VQuadScriptedRemote can be run Stand-Alone or from within VQuad. This new utility includes ability to add any VQuad Remote command, specify delays between commands, and specify Loop of operations.	**9.1**
178.	VQuad ACU	Include new utility, ACU, for converting audio files from different formats to PCM, or resampling. The GL ACU is included as a stand-along application and as a function within both VQuad and VQT.	**9.1**
179.	VQuad SIP	Resolved crash issue during stop SIPCore, stop UA Operation, and SIP Registration timer expiry.	**9.1**
180.	VQuad Fax	Resolve several issues associated with Send/Record fax including multi-page fax and V34. Also updated Fax events for better understanding of Fax messages.	**9.1**
181.	VQuad CLI	Support PTT and Send Raw Commands as well as Central Database current status. Also support faster generation of CLI commands.	**9.1**
182.	VQuad FXO	Support new stand-alone utility for analyzing FSK (Call ID). External FSK Analysis utility can display Call ID along with Byte or Bit dump of data.	**9.1**
183.	VQuad FXO	Support Ring Voltage display in either Peak or RMS.	**9.1**
184.	VQuad Path Confirmation	Add new function to simply determine Path Confirmation once the call is established. This function utilizes Correlation RTD functionality and supports IF command for Path Pass or Fail.	**9.1**
185.	VQuad Correlation	Support all interfaces, including Bluetooth, for both RTD (requires Dual UTA HD) and OWD using the Correlation function. Also support Correlation when the two sides are Geographically separated (OWD required GPS on both sides).	**9.1**

186.	VQuad Correlation	Resolve few issues with Correlation which allow less stringent requirements for results. Also support ability to add Delay during RTD Correlation for all 4-wire interfaces.	**9.1**
187.	VQuad Analysis	Add P.56 measurement to VQuad Manual and Script. All P56 results, including Speech Activity, Active Speech Level, Noise Level, DC Offset, and RMS Power	**9.1**
188.	VQuad Digits/Tones	Resolve issues with Tone/Digits detect times when WB or SWB modes are selected.	**9.1**
189.	VQuad Client Events	Added to the VQuad Client Events screen ability to Get Client IPs (get all currently connected client IP addresses).	**9.1**
190.	VQuad Multi-Stage Dialing	Added CPF (Call Process Filter) to FXO multi-stage dialing function to suppress small POPs during Call Process. These pops could interfere with normal Call Control operation.	**9.1**
191.	VQuad Bluetooth	Include Bluetooth TX Codec Level settings in both Device Settings and VQuad Script. This is new settings for Dual UTA HD only which allows modifying the level of the Bluetooth codec.	**9.1**
192.	VQuad Bluetooth	Support Send/Record Audio regardless if Bluetooth Call is Connected or not Connected. This supports Record of Call Progress Tones and ability to initiate Siri or Google Voice when phone is in disconnected state.	**9.1**
193.	VQuad Bugs	Resolve several bugs including issues with the VQuad Statistics tab (main screen).	**9.1**
194.	VQuad Tone Detector	Enhance VQuad Tone Detector during normal tone detections as well as during Call Control for FXO calls.	**9.0**
195.	VQuad CLI/API	Support Send/Receive Fax directly form the VQuad CLI and API. The VQuad CLI and API documentation has also been thoroughly updated.	**9.0**
196.	VQuad Correlator	VQuad Correlator Delay function supports both OWD and RTD for both 4-wire and 2-wire interfaces. The Correlation can be supported on same system or two different VQuad systems.	**9.0**
197.	VQuad Scripting	Scripting conditional Wait and IF commands support Wait for Ring and Wait for Call Waiting.	**9.0**
198.	VQuad Scripting	Support ability to auto-increment the Call ID value per test iteration of the script. So, each test will have a unique Call ID. From the VQuad script you can configure Call ID to auto-increment or append the Timestamp.	**9.0**
199.	VQuad Scripting	Support new feature, when VQuad script ends allow switch to either disconnect call or allow call to remain connected. This allows multiple sub-scripts to be setup during the same calls.	**9.0**
200.	VQuad FXO	Support Ring Voltage event during incoming FXO call.	**9.0**
201.	VQuad Impairments	Supports adding impairments to traffic per device (previously supported as a global setting). This new function is supported in GUI as well as VQuad script.	**9.0**
202.	VQuad Fax	Resolve several issues with multi-page fax and configuring the Tx and Rx Modem Types. When specifying the Modem Type, the speed does not need to be specified. Alternatively the user can specify the speed only (Modem Type is left UnSpecified).	**9.0**
203.	VQuad Dual UTA	Update drivers for Dual UTA and Dual UTA HD to support more reliable and faster initialization. The new drivers also support both USB2.0 and USB3.0 connections.	**9.0**
204.	VQuad Scripting	New Script command, Dual UTA HD Loopback Functions. Provide support for Outward and Port-to-Port Loopback functions, both 2W and 4W, with or without delays for use with Dual UTA HD only. This command also supports internal Test loopback as well as a variety of miscellaneous commands.	**9.0**
205.	VQuad Scripting	Support option to append Timestamp to Call ID. Also, support option to generate Custom Report using Time Filter.	**9.0**

206.	VQuad SIP	Update VQuad SIP option to resolve issues with Call Negotiation using G.722 codec.	**9.0**
207.	VQuad Tones/Digits	Resolve several issues associated with sending/detecting Tones and Digits when configured for higher Sampling rates (16k and 48k). Support send/detect tones, NB (8k) from 100 to 3999Hz, WB (16k) from 100 to 7999Hz, SWB (48k) from 100 to 23999 Hz.	**9.0**
208.	FXO Device	Support new feature for Dual UTA HD when configured for FXO, detect and display Line Current and Line Voltage. The user can manually display the current Line Current and Line Voltage manually from the VQuad Correlation screen, FXO Analyzer tab, or automated via the VQuad script. This result is sent to the WebViewer.	**8.5**
209.	VQuad Fax	Include new parameter for TX FAX, CNG Tone Off. With this option checked, the VQuad Fax will proceed without generating the CNG tone during Fax Transmit.	**8.5**
210.	VQuad SIP	Support Send Audio to Speaker during a SIP call. This new feature is configured within the SIP Setup screen.	**8.5**
211.	VQuad GPS	Include new events indicating when VQuad GPS is Connected, Disconnected, and if GPS synchs the VQuad PC time.	**8.5**
212.	Dual UTA Monitor	Include a volume selection, for Left/Right Channels, on the Dual UTA Monitor screen.	**8.5**
213.	FXO Calibration	Support Record Progress Tones to file. The progress tones, during the call test, will be recorded to directory, \VQuad\ProgressTone.	**8.5**
214.	VQuad Bug – Tx/Rx Synch	Resolve issue with Tx/Rx Synch when configuring TX and RX on same side of Dual UTA (for Echo Testing). This worked in manually mode but was not working within VQuad Script.	**8.5**
215.	VQuad Bug – Call Progress	Resolve issue during FXO Call Control when the Ringback Call Progress Tone is configured for Detect Energy. The VQuad will now wait until Energy is suppressed before going to Connect state.	**8.5**
216.	VQuad Call Time Parameters	Added two new Call Parameters to VQuad events (and to WebViewer), Call Time (CT) and Call Connect Time (CCT). CT is the length of the call (from Connect to Disconnect). CCT is the period from Place Call until Ringback is detected.	**8.4**
217.	VQuad Script Status	Include new screen, VQuad Script Status, with large buttons to be used from VQuad Probe touchscreen monitor for easily starting/stopping VQuad scripts. This new screen is displayed using a new icon. The icon can be turned on/off from the VQuad drop-down, Setup – General Configuration, General Settings tab.	**8.4**
218.	VQuad Statistics	Resolved a few issues associated with generating Call Statistics under VQuad Statistics tab (main screen VQuad).	**8.4**
219.	Connect to Central Database	Modified VQuad Connect to Central Database (WebViewer) such that there is no longer VQuad freezing when the Connection is not available.	**8.4**
220.	VQuad Fax	Support No CNG tone during fax initialize (not supported for V34).	**8.4**
221.	VQuad PlaceCall	Add new feature to Place Call command within VQuad Script, Record Progress Tone (supports FXO calls only). This feature will record all progress tones, from offhook Dial Tone through Connected (or Disconnected – Failed) condition (the record has a 30s timeout period). All recorded files include the Timestamp in the filename and are saved to \VQuad\ProgressTone.	**8.4**
222.	VQuad Startup	Improve startup process when loading firmware on Dual UTA and Dual UTA HD. The process is more reliable and faster.	**8.4**
223.	Mobile Headset Mode	Issues with configuring Dual UTA HD to Mobile Mode (3 wire or 4 wire). The proper relays were not set within the Dual UTA HD.	**8.4**

224.	Mobile Phone Testing	Resolve issues within VQuad Script when, during a Bluetooth call, setting the mobile phone to mobile headset mode (for sending/recording audio), then back to Bluetooth mode (for audio and Call Control). Issues with WB (16k) were resolved.	**8.4**
225.	WebViewer	During Tone Detect display Tone frequency along with power and duration.	**8.4**
226.	T1/E1 Call Control	Resolve issues with Detect Tone (need to show Power and Frequency) and support for Send Digits to use Digit parameters.	**8.4**
227.	T1/E1 Call Control	Fix issue with TxRx Synch command not supporting single side only.	**8.4**
228.	Signal Level Testing	Support accurate Level Testing, using Send/Detect Tone, within an established call. Results will be sent to the VQuad Measurement Results as well as the WebViewer (Central Database).	**8.3**
229.	Accurate RTD Measurement	Support accurate Round Trip Delay (RTD) measurement, for both 2W and 4W interfaces, using the VQuad Correlator functionality. This new feature requires the Dual UTA HD hardware. Both manual and scripted testing available. Results will be sent to the VQuad Measurement Results as well as the WebViewer (Central Database).	**8.3**
230.	Dual UTA drop	If the Dual UTA or Dual UTA HD drops (loses connection to the VQuad PC) the VQuad will generate an error (to Error Event, to VQuad_Error log, to WebViewer Events screen) and will auto stop ALL running VQuad scripts. The user must either restart VQuad or run Reset DualUTA Firmware from the VQuad General Configuration screen. Note, the VQuad has an option, from the General Configuration screen, to turn OFF stopping all scripts in case of Dual UTA Drop.	**8.3**
231.	Dual UTA HD Loopback Testing	Enhancements to the control of the Dual UTA HD supporting Outward and Inward Loopback of the 4W and 2W interfaces. Loopbacks can support No Delay or up to 2000ms user-specified delays.	**8.3**
232.	VQuad Script	Resolve bugs associated with VQuad Script editor when creating and editing a VQuad script.	**8.3**
233.	VQuad Detect Digit Bug	Resolved issues associated with Detect Digit/Tone during extended periods.	**8.3**
234.	Dual UTA HD Enhancements	Support multiple RAW Commands to be sent in a single command to the Dual UTA HD. These commands support Loopback, Loopback Delay, Record Delay, and 4W self-testing. Also include many default Send RAW Command configurations for performing these different operations.	**8.3**
235.	VQuad Energy Detection	Support Energy and Silence detection within VQuad script.	**8.2**
236.	VQuad CLI	Support ability to Send Comment to Central Database directly from VQuad CLI.	**8.2**
237.	VQuad Loop Current	Resolve few issues with regard to Detect Loop Current (Dual UTA HD only).	**8.2**
238.	VQuad RTD	Support VQuad RTD and OWD delay times up to 8s (Dual UTA HD only). Access to the Delay time configuration can be found, Dual UTA Configuration, General Settings, RTD Wait Time.	**8.2**
239.	VQuad Start Variables	Add DTMF Digits to the Start Variables associated with the VQuad script. The Start Variables include Place Call, Call ID, Call Type, Transmit Digits, Sampling Rate, and Variable INI file.	**8.2**
240.	VQuad PlaceCall	Support *Secondary Call* from VQuad PlaceCall (script). This allows the Start Variables to be used within the VQuad script if a secondary call is made within the script. The Secondary Call will only send DTMF.	**8.2**

241.	VQuad Sample Rate	Support changing Sample Rate per Dual UTA (previously was set per system wide). This allows each Dual UTA (or Dual UTA HD) to have a unique Sampling Rate within the VQuad system. Change manually (Dual UTA Configuration screen), within Script, or from VQuad CLI. Also modify the IF Sampling Rate (script) to support individual devices rather than the Global setting.	**8.2**
242.	VQuad FXO	Support Flash hook with number of iterations (manual and script). This allows the VQuad with Dual UTA HD to support Pulse Dialing.	**8.2**
243.	VQuad Fax	Resolve issues with send fax.	**8.2**
244.	VQuad Central Database	Resolve a few issues regarding communication and connection to the Central Database (DataImport) as well as VQuad status from the WebViewer.	**8.2**
245.	VQuad FXO	Support for Country configuration when using Dual UTA HD, FXO Preset Tones – General tab.	**8.2**
246.	VQuad CLI and API	Full support for VQuad CLI (both Windows and Linux) and VQuad API (both Windows and Linux). VQuad CLI also supports both IPv6 and IPv4.	**8.2**
247.	VQuad SIP	Update SIP Core to resolve several issues.	**8.2**
248.	VQuad Fax	Resolve issues with Phase Reversal of the CED during Fax initialization. Add option to select Modem Type when configuring fax.	**8.1**
249.	IPv6	Fully support IPv6 and IPv4 for all VQuad operations.	**8.1**
250.	VQuad Statistics	Resolve several issues found with VQuad Statistics when changing VQuad Device type.	**8.1**
251.	VQuad Dual UTA	Support both Dual UTA v.2 and Dual UTA v.1 connected to same VQuad system.	**8.0**
252.	VQuad FXO	Support Call ID Call Waiting within Dual UTA v.2 FXO interfaces.	**8.0**
253.	Dual UTA HD	Support Dual UTA HD (v.2). This next generation Dual UTA includes support for FXO WB along with hardware loopback controlled through the VQuad software (including self-test mechanisms).	**8.0**
254.	VQuad Audio Analyzer	Support new function, Analyze Voice File, added to the VQuad Manual Correlation screen and to the VQuad script. This function requires one file and will return the maximum overall Frequency Bandwidth and Power associated with that file. This will allow the software to determine if the analyzed file includes WB attributes (frequency above 4000Hz) or if the file is empty (0 dB power).	**8.0**
255.	VQuad Configuration	Support 12 devices including 6 Dual UTAs and/or 12 SIP UAs. VQuad Script also supports 12 devices with all commands. Note Auto Config will only support 8 devices moving forward.	**8.0**
256.	VQuad OWD	Include new method for performing OWD using a Correlator and Send/Record Simultaneously from the Dual UTA interfaces. This function is available both Manual and within the VQuad Script. Results are posted to the standard RTD/OWD Measurement screens.	**8.0**
257.	VQuad Call ID	Include new parameter, Call Type, which identifies type of Network. Support including near and far-end Call Types per Call ID (each event will include Call Type for both sides of the call). Call Type can manually configure or automatically configured using Central Database or Load Script. Requires updates to DataImport, Central Database, and WebViewer.	**8.0**

258.	VQuad Master Configuration	Support Change Dual UTA type per Dual UTA device without having to load MC (not interrupting tests of other devices). This allows changing the device type on the fly while other tests continue to run. This is available in the Device Settings screen, VQuad Script and VQuad CLI.	8.0
259.	VQuad NetTest	Retrieve current NetTest mobile devices to the VQuad NetTest Manual screen and NetTest Script.	8.0
260.	VQuad FXO	Support user-specified Loop Current drop parameters for determining far-end disconnect. Requires Dual UTA v.2.	8.0
261.	VQT Measurement	Support PESQ/POLQA direct measurements from within the VQuad Script. Both NB and WB measurements supported using the newly added VQT Measurement screen and VQuad Script. This requires updated VQT.	8.0
262.	VQuad Script	Include new conditional parameter to VQuad Script IF command, IF Sampling Rate = 8000 (or 16000) Then.	8.0
263.	VQuad Tone Generation	Support sending/detecting frequency tones for 8k (up to 3999Hz), 16k (up to 7999Hz) and 48k (up to 23999Hz). This is supported with all available interfaces and via manual and automated control.	8.0
264.	VQuad General Configuration	Added several new parameters to the General Configuration screen including Network Mode, Restart UTA during startup option, Continue to Run VQuad Script when error occurred, Audio Analyzer parameters.	8.0
265.	Dual UTA Initialize	Support Dual UTA firmware reload during VQuad startup as well as directly from VQuad software (General Configuration screen).	8.0
266.	VQuad Connection	Most all communication within VQuad solution supports IPV6.	8.0
267.	VQuad Script	Add option to General Setting, if VQuad Script fails allow the script to continue. All VQuad Script failures will generate error in Error Events as well as VQuad Error Log. Failure event has been enhanced to include additional information.	8.0
268.	VQuad CLI	Added several new CLI commands as well as fixed an issue with the Stop traffic command.	8.0
269.	Network Info	Revised info being sent to DataImport during keep-alive. This required updates to DataImport, Central Database, and WebViewer.	8.0
270.	VQuad FAX	Support higher resolution and multi-page fax TIF files.	8.0
271.	VQuad Script	Resolved several issues within VQuad Script associated with Create Call ID and Send Call ID.	8.0
272.	VQuad OWD	Resolved issues with OWD measurements when delay is greater than 1s (now support up to 3s).	8.0
273.	VQuad GPS	Resolved several issues with GPS based on whether GPS receiver or CDMA receiver is connected to Dual UTA.	8.0
274.	VQuad Call Progress	Add Dial Tone detect and Ring Present (inkling Call) to the Call Event screen (also sent to the WebViewer).	7.3
275.	VQuad Script	Add to Wait Event (User Event) the ability to specify Number of Events to wait for before proceeding. In other words, if specify two, the Wait Event will not proceed until TWO Usert Events are detected before the time period expires.	7.3
276.	VQuad Script	Add to VQuad Script Editor, ability to Comment and UnComment any command within the script. From any command, right-click in order to specify Comment or UnComment.	7.3

277.	VQuad CLI	Add flashhook and ghealthstatus to the VQuad CLI. The flashhook function will perform a flashhook operation (FXO only) with a user-defined off-hook period. The ghealthstatus will return a value based on health of the VQuad, 0=All Good, 2=Dual UTA not connected, 3=Dual UTA firmware not running, 4=Issue with Dual UTA Codec, 5=Issue with Dual UTA PTT.	**7.3**
278.	VQuad Script	Add VQT Measurement to the VQuad script. The VQuad can auto run a VQT Measurement, when connected to the VQT application, and post a Pass/Fail result to the Central Database (as well as the VQuad Call Events). Configure the VQT threshold and the connection to the VQT system in the new VQT Measurement screen, View – VQT Measurement. Options include Auto Delete file after measurement, and use last recorded file from VQuad script.	**7.3**
279.	VQuad FXO	Add manual Flash-hook function to the Manual Call screen. User can specify the off-hook time.	**7.3**
280.	VQuad NetTest	When receive the TestFailed event from MDNetTest, the script will wait for the fail result from MDC (previously did not wait).	**7.3**
281.	VQuad Script	Add command Send MDNetTest Fail which will send a Fail Result to the WebViewer NetTest screen with user-specified parameters. This can be used within the VQuad script when a NetTest failure occurs due to Timeout (cannot reach the mobile device).	**7.3**
282.	VQuad About	Enhanced VQuad About to include additional applications associated with VQuad.	**7.3**
283.	Dual UTA Firmware	VQuad supports resetting the Dual UTA firmware whenever exiting VQuad (only supported if one Dual UTA connected). Also added Reset Firmware button to the VQuad General Configuration screen (resets any number of Dual UTA units).	**7.3**
284.	VQuad SIP	Enhanced VQuad SIP with support for Outband DTMF/MF digits and support for RFC4733 and RFC2833.	**7.3**
285.	VQuad VAC	Resolve several issues associated with VAC.	**7.2**
286.	VQT POLQA	Included additional POLQA voice files (NB, WB, SWB) with language German, Dutch, and Russian.	**7.2**
287.	WebViewer Network Status	Support VQuad identification using PCName, PC MAC Address, and/or VQuad Name. The user can specify, from DataImport, which ID combination will be used.	**7.2**
288.	VQuad VAC	Support for VAC (Video Application Controller) with both automated and manual VAC tests.	**7.1**
289.	VQT POLQA	Support new VQT POLQA WB and SWB voice files to be used with updated VQT (POLQA) software v.5.7.	**7.1**
290.	VQuad NetTest	Support TCP Multi-Session option with both PC based NetTest and MDC NetTest (Android and IOS apps).	**7.1**
291.	VQuad Tx/Rx	Enhance the VQuad Tx/Rx Script function to support enable/disable duration (can send or record with or without specified duration). Also added new function, Stop Tx/Rx (stops the sending or recording when duration is not specified).	**7.1**
292.	VQuad CLI	Added additional functions with the VQuad CLI including the ability to configure both the Input and Output Dual UTA Volume levels.	**7.1**
293.	Bug Fixes	Several bug fixes including issue with GrabMAC when sending VQuad Node info to Central System (Netwrok Status) and issue with Record Voice under certain circumstances.	**7.1**
294.	VQuad VAC	Support new VAC (Video Application Controller) within VQuad for both Manual and Automated (scripted) tests. This requires the VAC components currently in Beta.	**7.0**

295.	VQuad SIP	Resolved a few bugs associated with the SIP operation and connection.	**7.0**
296.	VQuad Analysis	Resolve issues associated with VQuad Oscilloscope and Spectral Display.	**7.0**
297.	VQuad Remote	Add additional functionality to the VQuad Remote (both within VQuad script and VQuad CLI). New remote commands include: Place Call, Set RTD/OWD Pulse length, Set RTD/OWD Threshold Level, Start/Stop Tone/Digit/Energy Detect.	**7.0**
298.	VQuad Network Status	Add support for sending current Call Status to the WebViewer (Central System).	**7.0**
299.	VQuad Auto Config	Resolve issue with Auto Config, Master/Slave setting. After a period of time the 2-minute sequence will be out of synch, this was resolved by re-synching during every 2-minute period.	**7.0**
300.	VQuad Initialize	Support new function to reinitialize VQuad after Dual UTAs drop out (lose USB connection).	**7.0**
301.	VQuad Bluetooth	Resolve bugs associated with running Bluetooth on four Dual UTAs.	**7.0**
302.	VQuad RTD/OWD Bluetooth	Support automatic time deduction during OWD/RTD when one or both sides are Bluetooth. This is based on inherent Bluetooth chip delay of 6ms per side.	**7.0**
303.	VQuad Dual UTA	When a Dual UTA is removed from the system (disconnect USB), the VQuad no longer crashes. However, the device which was removed will no longer be available within VQuad until a restart of the VQuad application. Note, next version of VQuad will also support manual reconnection of the Dual UTA without having to restart VQuad.	**6.23**
304.	VQuad Dual UTA	Support four Dual UTAs on single VQuad system. Note, there is a power limitation with the older generation Dual UTAs (ver.0) when configuring multiple Bluetooth devices. It is recommended, when configuring more than two Dual UTAs on same system with Bluetooth to use the next generation Dual UTAs (ver.1).	**6.23**
305.	VQuad Software	Resolve several bugs including issue with Send Tone/Digit/Voice having remnants of previous tone/digit/Voice.	**6.23**
306.	Connect to Central DB	Add additional parameters to WebViewer for control of VQuad. These include edit the VQuad IP type and address, Grab MAC address (allows the VQuad to attempt to grab a new MAC address during each VQuad startup), and UseBTName (replace the device name with the Bluetooth name for all results/events).	**6.23**
307.	VQuad SIP	Resolved issues associated with Place Call under certain circumstances.	**6.23**
308.	VQuad Script	Resolved issues with loading and saving scripts after making changes in the Setup VQuad Devices.	**6.23**
309.	VQuad Bugs	Resolve licensing with ITS and issues associated with GPS (both GPS Receiver and CDMA GPS). Also added Cancel button to Device Manager.	**6.23**
310.	VQuad Multi-mode	Resolve several bugs associated with VQuad multi-mode calling operation.	**6.22**
311.	VQuad Synch Test	Resolve several issues with OWD and Tx/Rx Synch using GPS as well as the CDMA timing unit. Also support user-specified GPS coordinates when using CDMA timing unit.	**6.21**
312.	VQuad Probe	Support within the VQuad Probe, optional watchdog service for auto reboot of the VQuad Probe if either Windows has issues or VQuad Software has issues. This function only runs on the VQuad Probe.	**6.20**
313.	VQuad Device Names	Support dynamic control of the VQuad Device Name when configured for Bluetooth (will use the actual Bluetooth phone name). Also support user-defined SIP UA (rather than UA1-UA8).	**6.20**

314.	VQuad NetTest	Update MDNetTest to support TCP Multi-Session operation within VQuad Script and Manual Operation.	**6.20**
315.	VQuad NetTest	Support sending Start GPS, Start TimeStamp, Test Completed/Failed with all PCNetTest and MDNetTest results.	**6.20**
316.	VQuad Load Script	Enhance the function variables available for Load VQuad Script to include PC (Place Call), Create Call ID (CI), Set Global Device ID (GD1,GD2), Set Global Phone ID (GP1,GP2), Connect to Remote Site (CVIP), Load Variable File (VF), Mobile Device NetTest Connect (CSIP), Set Sampling Rate (SR).	**6.20**
317.	VQuad Scheduler	Enhance the VQuad Scheduler to include support for Load/Start/Stop VQuad script, Modify FXO and VoIP SIP parameters, load Master. The VQuad Schedule can be loaded and started from VQuad GUI or from the WebViewer.	**6.20**
318.	VQuad Bluetooth	Resolve several issues associated with Bluetooth disconnect and using the Bluetooth commands within the VQuad script.	**6.20**
319.	VQuad Call Method	Support a variety of calling methods for both FXO and VoIP SIP with the ability to capture the signaling to PCM file, capture multiple stage PDD, specify PIN, and generate events based on call progress tones.	**6.20**
320.	VQuad Auto Config	Support user-defined Reference and Degraded filenames when configuring Master/Slave option. This requires AutoVQTFiles.ini to be configured and placed in the VQuad – Profiles directory.	**6.20**
321.	VQuad Script	Modified operation of IF Call Connected command, allow script to move to next line if Call Connected State is TRUE. Also, during Wait for Call Connected, if Call FAIL the script will immediately move to next line.	**6.20**
322.	VQuad Script	Combine the Detect Energy (SIP based) and Detect Volume (Dual UTA based) into single command for more versatility with scripts.	**6.19**
323.	VQuad NetTest	Resolve several issues with PC NetTest (sending results to WebViewer).	**6.19**
324.	VQuad Auto Config	Support PTT devices using 2 minute cycle with VQuad Auto Config. In other words, bidirectional, six voice files, 12 total files per 120s cycle.	**6.19**
325.	VQuad Device Name	Support using the Bluetooth phone name (Bluetooth configuration screen) as the Device name sent to the WebViewer. This allows for dynamic Device name when testing Bluetooth phones. This setting is located on Connect to Central DB screen.	**6.18.2**
326.	Device Configuration	When exit screen, do not check the script name (this may cause issues if the script is not located in the default Profiles directory).	**6.18.2**
327.	WebViewer Remote	Support sending script names (from VQuad Profiles and sub-folders) to the WebViewer for easily selecting script to remotely load. This requires additional enhancements to the WebViewer.	**6.18.2**
328.	VQuad Setup Devices	Resolve issue when trying to exit VQuad Device Configuration and script not found (script could be loaded from sub-directory). When leaving Device Configuration screen no longer check script name.	**6.18.1**
329.	Bluetooth	Resolve issue with Bluetooth Disconnect (certain Bluetooth Call Disconnected events were suppressed). Also added support for sending LIST command to Bluetooth radio for resetting Bluetooth device (show disconnect if call is down).	**6.18.1**
330.	VQuad Device Name	Support using Bluetooth name as Device name (dynamic based on Bluetooth device connected). Switch to turn this on/off is located in Setup VQuad Devices.	**6.18.1**
331.	Dual UTA Enhancement	Support reload of Dual UTA firmware each time VQuad application starts (automatically resolves certain issues which previously required disconnect of the Bluetooth hardware).	**6.18.1**

332.	Central DB Connection	Support turning off the Central DB PING if the VQuad node is not connected to the network. In other words, if VQuad is on field test (with no Central DB Connection), yet you wish to save the results/events to Central DB, turning off the PING will allow all results/events to save local with ability to export or stream to central DB at later time.	**6.18.1**
333.	File Monitor	VQuad reports the File Monitor status to the WebViewer Network Status.	**6.18**
334.	VQuad Connect to Database	Support Primary and Secondary Central Database IP entries (for backup and redundancy). Also support edit of Central Database IP from WebViewer Network Status screen. The VQuad will auto switch to the secondary IP if the Primary IP is no longer operational (DataImport is not running).	**6.18**
335.	WB Dual UTA	Support enhanced Dual UTA with WB Bluetooth as well as older generation Dual UTA. Auto detect which Dual UTA is connected and load appropriate firmware as well as configure appropriate Bluetooth board.	**6.18**
336.	VQuad GPS	Support GPS info in ALL results using user-defined GPS coordinates if GPS receiver is not connected.	**6.18**
337.	VQuad Automation	Add function for automated scheduling of VQuad script operations based on defined schedule file.	**6.17.3**
338.	VQuad MDNetTest	Add remote function for MDNetTest to start/stop Auto Test (within NetTest manual screen and script).	**6.17.3**
339.	VQuad Bugs	Fixed MDNetTest Phone Idle issues. Fixed issues with Wait/If events under certain conditions.	**6.17.2**
340.	VQuad Script	Resolved issues related to VQuad Remote Connect using Bi-Directional connection. These issues are related to Send User-Defined command using Global1 and Global2 parameters.	**6.17**
341.	VQuad Bluetooth	Resolved bugs when auto restarting Bluetooth devices after loading MC.	**6.17**
342.	VQuad NetTest	Resolve issues related to retrieving NetTest Audit Log.	**6.17**
343.	VQuad Bluetooth	Resolve issues with sending multiple commands simultaneously to two Bluetooth devices on same Dual UTA unit.	**6.17**
344.	VQuad SIP	Support Detect Energy from VQuad Script. The SIP option uses Detect Energy whereas the Dual UTA devices use Detect Volume. Both commands return events supported with conditional statements Wait for Volume and If Volume.	**6.17**
345.	VQuad DataImport	Support only sending events to the DataImport (central database) when a connect indication is received from the DataImport. This avoids sending events if the DataImport fails for some reason.	**6.17**
346.	VQuad DataImport	Support the WebViewer to modify the Network Parameters (Connect to DB) associated with each VQuad. This is done through the WebViewer Network Status screen.	**6.17**
347.	VQuad MDC	Resolved issue with reconnecting to MDC.	**6.17**
348.	VQuad Load Script	When passing parameters to the Load Script, PC (Place Call), support using P for short Pause within dial number. Note the normal Pause indicator (comma) is actually the Parameter delimiter. Resolved several issues with passing parameters through Load Script, Load Device and Load MC.	**6.17**
349.	VQuad CLI	Resolved issues with Start Script and Load Script (passing parameters). Also resolved issues with support for Linux CLI.	**6.17**
350.	VQuad Script	Resolved issues with conditional Wait and Event Watch commands.	**6.17**
351.	VQuad Connect to DBase	Resolved issues with saving the configuration and sending new configuration to DataImport.	**6.17**
352.	VQuad	Resolved several bugs related to stability. Also resolved issues related to RTD measurements when switching between devices.	**6.16**

353.	VQuad SIP	Added capability for multiple SIP cores as well as resolving several issues related to SIP calling.	**6.16**
354.	VQuad Software	Support for Win7 (32/64 bit) and Win8 (32/64 bit).	**6.16**
355.	VQuad Install	Includes new VQuad Test Script directory with several new test scripts supporting a variety of situations and devices.	**6.16**
356.	VQuad POLQA	Includes the POLQA NB, WB, and SWB fem/male voice files as part of the installation. Also include 48k sampling rate send/record option for POLQA SWB testing.	**6.16**
357.	VQuad NetTest	Resolved issues with NetTest Email send/receive configuration.	**6.16**
358.	VQuad MDC	Resolved several issues associated with MDC reconnect.	**6.16**
359.	VQuad NetTest	Auto-retrieve latest Default.def file info from the MDC and incorporate with NetTest parameters. This makes it is simpler for creating the NetTest configurations.	**6.16**
360.	VQuad WebViewer	Ability to send all VQuad system info to WebViewer for display within WebViewer under Network Status. The info can be configured within VQuad under Device Configuration. The info is auto sent to WebViewer upon starting VQuad, making changes to Device Configuration, or clicking on Send Info to Central DB button within Connect to Central Database screen. Info specified includes: 1. Computer Name 2. VQuad Name 3. GPS (can retrieve auto if GPS receiver is found or entered manually to display in WebViewer Google Maps) 4. FXO Phone Numbers 5. Bluetooth Phone Numbers and Phone Names 6. VQuad IP (can be auto generated or manually specified) 7. Fixed/Mobile designation 8. The VQuad also sends local Timestamp and VQuad version and Dual UTA firmware/serial number.	**6.16**
361.	VQuad Security	Support for starting VQuad from Remote Desktop when VQuad is licensed to dongle (requires latest dongle and dongle installation).	**6.16**
362.	VQuad CLI	Fixed several VQuad CLI bugs with regard to place call and transferring info.	**6.16**
363.	VQuad Auto Start	Issues with VQuad Auto Start, specifically not working with last specified VQuad device.	**6.16**
364.	VQuad MC	Support loading/saving Master Configuration when scripts are not in the profiles directory (scripts can be in any directory with this update).	**6.16**
365.	VQuad T1/E1	Fixed several bugs associated with VQuad T1/E1 functionality. Also supports latest T1E1 release.	**6.16**
366.	VQuad Auto Config	Support for POLQA analysis and NetTest (both PC and mobile based).	**6.16**
367.		Include new VQuad Help files. Resolve several bugs associated with the VQuad operations.	**6.15**
368.	VQuad Execution	Add new Command feature to Load MasterConfiguration and Start VQuad Script upon execution of VQuad. Example: VQuad.exe mc=FullTest ss=1,3,5 (note this starts scripts on devices 1, 3, and 5).	**6.15**
369.	VQuad CLI	Update VQuad CLI to support new Auto Config function and omit AFT functionality.	**6.15**
370.	VQuad SIP	Update VQuad SIP operation and fix several bugs.	**6.14.7**
371.	VQuad RTD	Resolve issues with stopping the RTD/OWD measurements within the VQuad script.	**6.14.4**
372.	VQuad Auto Config	Replaced the VQuad AFT with VQuad Auto Config. This new function supports simple, easy to use configuration of the VQuad operations without reverting to the VQuad Script.	**6.14.4**

373.	VQuad Script	Fixed issues with Send/Record Voice. Also added new function, Run VQuadCLI.	**6.14.2**
374.	VQuad Impairment	Ad a randomize option to the Impairment Noise Power function.	**6.14.1**
375.	VQuad Bug	Resolved issue with Dual UTA SNR calculation.	**6.14.1**
376.	VQuad SIP	Update SIP function to support authentification and proper registration of SIP client when connected to various phone systems.	**6.14**
377.	VQuad	Resolve licensing issues and Network connection issues if network fails for brief period.	**6.14**
378.	VQuad Script	Add POLQA license check to the IF conditional command.	**6.14**
379.	VQuad Impairment	Resolve issues related to configuring and generating impairments during VQuad send traffic. This is available with Dual UTA interfaces only.	**6.14**
380.	VQuad FXO	Resolve issues related to FXO detect and send voice during call progress and within call established. This issue was also seen in VQuad Balanced mode (resolved as well).	**6.14**
381.	VQuad Analysis	Support for POLQA within the VQuad script (Tx/Rx command) and the manual Tx/Rx command. The POLQA will be performed once the recorded file is complete. The POLQA option within the script can also auto delete the recorded file. Also added support for sending the POLQA results to WebViewer and displaying POLQA results on new POLQA screen within VQuad. Also add to VQuad script the ability to set POLQA threshold for Pas/Fail. Include POLQA specific Reference files in the VQT_Reference directory.	**6.14**
382.	VQuad Script	Resolve issues related to User Defined statements and Watch event. Also resolve issues related to sending AT commands within Bluetooth (reset equation information).	**6.14**
383.	VQuad T1/E1	Support latest T1E1 drivers.	**6.14**
384.	VQuad Bug	Resolved a bug related to Digit Detection conditional statements.	**6.14**
385.	VQuad	Various bug fixes including issue with FXO mode losing audio stream after period of time and lack of timestamp for events occurring exactly at Midnight.	**6.12**
386.	VQuad	Added support for German Windows.	**6.12**
387.	VQuad Script	Add command SendRawCommand which allows the user to send any RAW command to the Dual UTA for added flexibility. See GL for assistance with this command.	
388.	VQuad NetTest	Add function Send Results to Central Database to NetTest Manual operation. This allows all results from the manual tests to be sent to the Central Database and accessed via WebViewer.	**6.12**
389.	VQuad Analysis	Resolved issue with VQuad Spectral Analyzer having a -3dB power difference.	**6.12**
390.	VQuad NetTest	Modified Android/IOS app Suspend mode to allow for one Suspend mode option only (previously had multiple suspend mode options).	**6.12**
391.	VQuad NetTest	Add to VQuad and MDC the ability to set mobile device in Email Auto Receive or SMS Auto Receive. The Auto Receive function will not allow any other tests to operate as the mobile device waits for incoming Emails and incoming SMS messages (based on user-defined parameters). These Auto functions can be configured under RUN mode or Suspend mode.	**6.12**
392.	VQuad NetTest and MDC	Added new function to place Android app into Airplane mode for pre-defined period. This will turn off ALL radios within Android mobile device for this specified period.	**6.12**

393.	VQuad NetTest	Enhanced Email Send/Receive and SMS Send/Receive functionality in both the NetTest scripting and NetTest Manual operation.	**6.12**
394.	VQuad FXO	Add support to detect Energy as part of FXO Call Progress detection. In other words, the user can specify the Dialtone and Ringback detection as either specific frequencies or simply as energy detection with qualification time. This will allow easier detection of FXO call progress tones on certain networks.	**6.12**
395.	VQuad	Full support for Win7 64 bit OS	**6.12**
396.	VQuad Script	Ability to provide IF statement after Incoming Call to check Call ID.	**6.11**
397.	VQuad Script	Ability to Wait for any User Defined event (not specific value) and use If/ElseIf statements to determine which User Defined event was received.	**6.11**
398.	VQuad NetTest	Add to VQuad script and VQuad NetTest screen enhanced commands used with the VQuad Mobile NetTest (requires latest iPhone or Android app along with latest MDC). These commands include Phone Info, Phone SIM info, and Phone UE info. Also added is the ability test Email send and receive and place the Android device in Airplane mode (all radios off) for a user-specified time period.	**6.11**
399.	VQuad MF Digits	Resolve bug with sending MF Digits.	**6.11**
400.	VQuad Script	Add to the VQuad script functionality the ability to Wait for general User-Defined event (non-specific). Provide IF/Then conditional statement to individual User-Defined events.	**6.10**
401.	VQuad CLI	Support saving all recorded filenames to the StartES function under option H (Recorded Filenames).	**6.9.10**
402.	MDNetTest	Add to the MDNetTest ability to retrieve additional information from the mobile device during an MDNetTest. The additional information includes battery level, network, and app version. This additional information will be sent to the Central Database for inclusion in the WebViewer results.	**6.9.10**
403.	MDNetTest	Add to the MDNetTest the ability to send Manual Test results (generated from mobile device) directly to the WebViewer.	**6.9.10**
404.	VQuad Script	Add to the VQuad script function the ability to Wait for AT command and provide IF/Then conditional statements to the AT command response. This is user-defined via INI file.	**6.9.10**
405.	VQuad CLI	Add Format parameter to the rvf command (same as srvf).	**6.9.6**
406.	VQuad CLI	Support new command, send Call ID. This allows the user to designate a Call ID on any device without running the VQuad script. This new command allows srvf and rvf commands to produce results with Call ID identified.	**6.9.6**
407.	VQuad Statistics	Modify the Good and Missed columns to show Passed results and Failed results. Passed result is defined as Place Call (or Incoming Call) goes to connected state. Failed result is defined as Place Call (or Incoming Call) goes to Idle state without going to Connected state. Also add additional support to Dropped call (within VQuad script) to increment the Dropped Call column.	**6.9.6**
408.	VQuad Operation	Resolved a few bugs related to long term operation when controlled via Command Center. This also requires upgrade of Command Center.	**6.9.5**
409.	VQuad Communications	Resolved several issues regarding connections between VQuad devices. The VQuad will now disconnect all connections when loading MC and will not try to reconnect once the connection is requested to disconnect.	**6.9.5**

410.	VQuad Communications	Add ability to auto disconnect the bi-directional connection from he near-side device. This is a change in the Disconnect script control and defaults to disconnect the bi-directional connection.	**6.9.5**
411.	VQuad Bug	Resolve issues associated with VQuad Script command, Stop Script. This eventually caused issues when communicating with Command Center.	**6.9.2**
412.	VQuad Network Status	Add feature to VQuad Connect to Central DB, specify VQuad is located behind router. With this setting, VQuad will send Network Status periodically to the WebViewer rather than the WebViewer requesting information.	**6.9.2**
413.	VQuad CLI	Enhance VQuad CLI to support filtering responses based on CLI requesting feedback. In other words the results of the CLI request (getes or gstatus) will be sent solely to the requested CLI.	**6.9.2**
414.	VQuad Installation	Support for Win7 64bit (includes updated Dual UTA drivers).	**6.9**
415.	VQuad Load Master Config	Resolved issues with Load Master Configuration when performed many times (i.e. automatically through Command Center). After several hours/days of loading new MCs the VQuad would eventually crash.	**6.9**
416.	VQuad Connect	Add auto response on local VQuad event screen of far-end connection when bi-directional connection is performed. In other words, local VQuad will receive two events, connect from near VQuad to far VQuad, and connect from far VQuad to near VQuad.	**6.9**
417.	VQuad CLI	Add ability to retrieve VQuad Client Event screen from CLI commands (slog & glog). Also add ability to retrieve any event screen to user-defined filename.	**6.9**
418.	VQuad CLI	Add Detailed Call Progress events to ES CLI commands (includes startes, stopes, getes). This option retrieves all Call Progress and Idle events.	**6.9**
419.	VQuad Network Status	Enhanced both VQuad and DataImport to support WebViewer Network Status if VQuad is located behind a router. This enhancement will soon provide limited Remote Operation of same VQuad from WebViewer.	**6.9**
420.	VQuad Scripting	Increased number of possible VQuad script lines from 500 to 2500. This was updated in VQuad and VQuad Script Editor.	**6.9**
421.	VQuad Bugs	Resolved issue with VQuad Script, Set Call Failed Reason. Also resolved memory issues with Send Tone.	**6.9**
422.	VQuad CLI	Enhanced VQuad CLI to include the following: FXO Onhook/Offhook, Get Device Status (gstatus), Get User Events Returned to CLI (getes, startes, stopes), Detect Progress Tones for Handset devices (dprog, sdprog), Send/Record Voice Simultaneously (srvf), and Stop Detection of DTMF and Tones (sddit, sdton). Also modified in the CLI is the ability to send DTMF digits (sdit) when the FXO call is not connected. Updated the slog/glog commands for configuring and retrieving logs from the VQuad node to the CLI system.	**6.8**
423.	VQuad CLI	Resolved issues related to sending tones (ston) with shorter than acceptable duration (min duration = 600ms).	**6.8**
424.	VQuad NetTest	Resolved issues related to VQuad Manual MDNetTest functionality and returned events.	**6.8**
425.	VQuad Remote Connect	Resolved an issue with the VQuad bi-directional Remote Connect. If the bi-directional connection was setup for return device 1, and then changed to return device 2, the connection was not available without first performing a Disconnect at the far-end. With this update a Disconnect will always be performed at the far-end prior to a new Connect.	**6.8**

426.	VQuad Issues	Resolved stability issues with VQuad when connected to DataImport (Central Database).	**6.8**
427.	VQuad Issues	Resolved issues related to VQuad Timezone function.	**6.8**
428.	VQuad Devices	Enhance the Dual UTA devices Mobile and Bluetooth. The user can specify in the Device Settings to Always Connect for these devices. In other words, when selected the Mobile or Bluetooth device will appear Connected in the VQuad status.	**6.7**
429.	VQuad NetTest	Added new device field called NetTest. This device is specifically used for running both NetTest and MDNetTest (no other voice operations are available).	**6.7**
430.	VQuad HELP	Updated Help specifically with the VQuad Script. Added several context sensitive links when within the VQuad Script editor.	**6.7**
431.	VQuad NetTest	Enhancements and bug fixes associated with VQuad NetTest and MDNetTest.	**6.7**
432.	VQuad Database	Enhanced VQuad database to include automatic and manual compacting of database. This assures the database will not get too large and unmanageable.	**6.7**
433.	VQuad EMU	Added ability for automated EMU testing when used in conjunction with GL EMU and WebViewer.	**6.7**
434.	VQuad Fax	Ability to generate and receive T.30 faxes (selectable up to V.34) from any interface associated with the Dual UTA. Coming soon will be the ability to send/receive T.38 faxes from the VQuad VoIP SIP interface.	**6.6**
435.	MDNetTest	Added to VQuad NetTest Events screen a Manual MDNetTest tab. From this tab the user can manually get status of selected mobile device, change status (Suspend mode), and run a test. All results are captured in the VQuad results screen.	**6.6**
436.	MDNetTest	Add ability to change the Mobile Device Suspend mode for proper battery conservation. This allows the Mobile Device to be in a Run mode or suspended mode (conserve battery).	**6.6**
437.	VQuad Script	Add remote capability to VQuad functions Answer Call and Disconnect. These functions can run on Local VQuad or Remote VQuad from within the local script. Also added to the VQuad Wait Event and If statement, Ringback (ie. Wait For Ringback).	**6.6**
438.	VQuad with Dual UTA installation	Resolved issues with installing the Dual UTA on Win7 systems (required to add drivers via Device Manager). This process is now performed automatically via the installation.	**6.6**
439.	VQuad T1/E1	Resolved issue with saving currently selected T1/E1 timeslot.	**6.6**
440.	EMU Enhancement	Enhanced the EMU (Echo Measurement Utility) remote functionality to support latest EMU Block functionality.	**6.6**
441.	Android/Apple Mobile Device Apps	Enhanced the Apple/Android Mobile Device apps to include the following: 1. Supports both phone and tablet. 2. Supports SMS testing (send and receive). 3. Supports Manual operation (along with automated operation).	**6.6**
442.	Server Connection	Added the ability to send to the Central Server during Connection and changing of Device Phone IDs, the local Timezone information. This is used in conjunction with the Central Database and WebViewer for storing all results based on Central Database timezone.	**6.6**
443.	MDNetTest	Added to the NetTest Event screen the ability to manually retrieve the Audit Log for any MDNetTest result.	**6.6**
444.	MDNetTest	Add Global Phone ID variable within script. Allows the user to create the MDNetTest script using a variable for the Phone ID.	**6.6**

445.	MDNetTest	Added support for SMS (Send/Receive) from Apple and Android phones. This allows testing SMS functionality of the Phone directly and automatically from the VQuad. Results are sent to the WebViewer.	**6.6**
446.	MDNetTest	Added support for both Android and iPhone mobile devices using the GL supplied phone apps along with updated MDC server. Tests include TCP, UDP, HTTP, VoIP, DNS, FTP. GPS coordinated come directly from phone and are displayed with MDNetTest results.	**6.5**
447.	NetTest Config	MDNetTest and PCNetTest are configured through the VQuad script for specifying phone (or PC), specifying test, and specifying test parameters. Tests include fail/safe mechanisms which return failure in the event test cannot complete. VQuad includes NetTest Event screen with real time display of all MDNetTest and PC based NetTest progress, results and status.	**6.5**
448.	NetTest Results	All MDNetTest and PC based NetTest results are sent to the WebViewer, NetTest screen. All progress and failures are sent to the WebViewer Events screen.	**6.5**
449.	Automated VQuad install	New application for VQuad automated installed from Central system. This allows installation of all VQuad systems within network from a single location.	**6.5**
450.	Script Event Watch	Resolved issue with VQuad script Event Watch, specifically waiting for User Defined events. Previously when receiving a User Defined event the VQuad script would disconnect an FXO based call. This was resolved so that the call is no longer released.	**6.5**
451.	VQuad FXO	Several potential issues with FXO calling after a period of time as a result of multiple VQuad timers. After a period of time the FXO function was not available and required a shut down VQuad. This issue was fixed.	**6.5**
452.	VQuad FXO Preset Tones	Increased the user-defined timer limit for VQuad FXO timer, Wait for Ringback from 60,000 ms to 90,000 ms.	**6.5**
453.	VQuad AFT	Resolved several issues associated with loading and saving AFT configurations.	**6.5**
454.	VQuad Central DB	Added to control for connecting VQuad to Central Database, the ability to clear the local database. This is useful if issues arise during connection to the central system or if the local database becomes too large.	**6.5**
455.	VQuad PDD	Resolved issues associated with Pulse Dial Delay (PDD) when generating an FXO call. The PDD s now very accurate based on end of last DTMF digit to beginning of call progress tone.	**6.5**
456.	File Monitor	Resolved several issues associated with File Monitor and sending results from VQuad to Central database. These issues were associated with low or disrupted network speeds.	**6.5**
457.	VQuad NetTest	Add to VQuad the optional NetTest support for generating a series of Ethernet based data testing between VQuad PC and supported dedicated GL Data Server devices. The testing is supported on the VQuad PC via Ethernet connection, WiFi, or Broadband device. All results are returned to VQuad and can be sent to the WebViewer. Tests include TCP, UDP, VoIP, Route, HTTP, FTP, and DNS. Note that the VQuad NetTest requires a properly formatted INI file for operation.	**6.4**

458.	VQuad Mobile Device Data NetTest	Enhanced the Mobile Device Data Test and the Mobile Device Controller (MDC) to support more consistent connections and resolve several bugs. Include all tests as shown above between Mobile Device and GL Data Server devices, controlled via VQuad scripting. Tests include TCP, UDP, VoIP, HTTP, FTP, and DNS. Also include enhancements to the VQuad scripting to allow conditional statements regarding Mobile Device testing. Note that the VQuad MDNetTest requires the MDC and a properly formatted local INI file for operation.	**6.4.1**
459.	VQuad Chain Pulse	Support for VQuad Chain Pulse testing with regard to OWD and Tx/Rx. Enhancements to the VQuad for auto configuring the Clock type (Internal, GPS, Chain) from within the script or within the Tx/Rx screen was also added.	**6.4**
460.	VQuad scripting	Add to the VQuad script Connect command, the ability to perform Bi-Directional connection which provides the remote side to send User-Defined events. Also support LocalHost connection to allow local device connection to send User-Defined events. The Bi-directional command provides ability to provide the local IP automatically, via an INI ore within the script itself.	**6.4**
461.	VQuad scripting	Add to VQuad remote connection the ability to connect to different VQuad systems per VQuad device. In other words, each VQuad device (up to 8) can connect to a different VQuad system. This requires additional PORTS to be opened.	**6.4**
462.	VQuad OS	VQuad supports Win7 OS along with WinXP.	**6.4**
463.	VQuad scripting	Provide remote operation via VQuad script for the following functions: Send AT Command, MDNetTest, Set Clock Mode, Generate Tone, Transmit Digits, Send Call ID.	**6.4**
464.	File Monitor Utility	Resolved several File Monitor issues when zero length recorded files are detected.	**6.4**
465.	VQuad VOIP SIP	Added support to the VQuad VoIP SIP for several codecs including: G.711 (a-law/mu-law), G.726 (multiple flavors), G.729, G.722, GSM, AMR, AMR-WB, EVRC (A & B), SMV, ILBC, iSAC, SPEEX, SPEEX-WB.	**6.4**
466.	VQuad DataImport	Add ability to Export Results to DataImport. This allows the VQuad to run remotely without connection to the central system. One can Export all results saved to VQuad internal database and Import same to DataImport as a manual process.	**6.4**
467.	VQuad Remote Access	Added ability for VQuad to be executed via Windows Remote Desktop. This requires GL latest HL type dongle and latest Dongle installation.	**6.4**
468.	VQuad AFT	Resolve several bugs associated with loading and saving AFT configurations.	**6.4**
469.	VQuad Analysis screens	Resolve several bugs associated with displaying the analysis screens (Oscilloscope and Spectral Display).	**6.4**
470.	VQuad Clocking	Resolve several issues associated with GPS and Chain Pulse clocking when configuring VQuad for synchronous file Tx/Rx or OWD between remote VQuad systems. Add new Synchronous switch to TxRx Synch. When unchecked the VQuad will use the normal TxRx file function, when checked VQuad will synchronize the TxRx. Also added the ability to change Clock mode (Internal, GPS, Chain Pulse) from within the VQuad script.	**6.4**
471.	VQuad C-Message	Resolved issued associated displaying C-Message results (especially if call was not established).	**6.4**
472.	VQuad GPS	Resolved issues with GPS for connecting and displaying the connected state.	**6.4**

473.	VQuad Bugs	Resolve issues associated with Dual UTA FXO and Bluetooth interfaces (placing calls, sending RTD pulses). Also provide proper disconnect display when disconnect a Bluetooth call. Resolve issue of not being able to start the Dual UTA hardware (XiLinx error). Fix connection issues with the File Monitor application. Resolve issues associated with Send/Receive Simultaneously for use with the Echo Measurement Utility (EMU).	**6.3**
474.	VQuad RTD/OWD	Add interface to specify maximum RTD/OWD delay. Previously hard-coded as 3 seconds. Now the user can specify 2,3,4 or 5 sec.	**6.3**
475.	VQuad iPhone	Add to VQuad the ability to communicate with the GL iPhone Data App. Initiating tests as well as getting responses from the server are included with this new feature. All results are sent to the Call Events screen which can be sent to the WebViewer Central Database via DataImport. Configuration settings are embedded within the iPhoneData.ini file.	**6.3**
476.	VQuad Connect	Add to the VQuad script IF statement, the ability to check if the far-end VQuad is running and available (If Remote VQuad Connected). This test can be placed at the top of the script for verification the far-end VQuad is ready for the test.	**6.3**
477.	VQuad Script	Add to the AT Command function the ability to parse the result (either numeric or alphanumeric) and send to Call Events and the WebViewer database. Commands such as RSSI, Battery Level, and Network can be added to the ATCommand.ini file with parsing instructions embedded. A Help file is included in the AT Command script function.	**6.3**
478.	VQuad Configuration	Add the ability to specify a Maximum Threshold level. This parameter will override the automated Threshold level setting thus forcing a maximum level regardless with what was returned.	**6.3**
479.	VQuad Call ID	Add to the VQuad Script, Create Call ID, the ability to add multiple ID's in a Round-Robin fashion..	**6.3**
480.	VQuad Lite	Create VQuad Lite application which has same script functionality of VQuad but in a much simpler package (single button Start/Stop script). This is a separate application requiring a separate license.	**6.3**
481.	VQuad PTT	Under PTT device allow to configure data connection with ability to send AT commands.	**6.2.45**
482.	VQuad PTT	Auto turn PTT off if Auto Traffic stops or if Script stops.	**6.2.45**
483.	VQuad MC	Resolved crashing bug when Loading Master Configuration if VQuad script is running.	**6.2.45**
484.	VQuad Script	Add new Global parameter to VQuad scripting for network control between near and far-end systems. This allows more flexibility within VQuad script as you can create script and set the Global parameter at the top of the script.	**6.2.45**
485.	VQuad AFT	Add BypassCountdown to VQuad Automated File function when configured for time sync.	**6.2.45**
486.	VQuad Results	Add to VQuad database the means to Export all VQuad/VQT events if user is in remote location (in other words save VQuad/VQT events to temp database).	**6.2.45**
487.	VQuad Power Level	Resolved issues surrounding power levels for transmitting and receiving data using Dual UTA	**6.2.45**
488.	VQuad Measurement	Added to VQuad the ability to calculate RMS Power as well as C-Message based on recorded idle channel noise. The results are sent to the WebViewer database.	**6.2.45**
489.	VQuad RTD/OWD	Provide ability to generate different pulses for RTD/OWD measurements based on network conditions. This includes the Default pulse (5ms) along with Medium (10ms), Long (15ms) and X-Long (30ms).	**6.2.45**

490.	VQuad RTD/OWD	Add pulse block to Dual UTA firmware required for RTD/OWD reply mode for FXO only. This will prevent false pulse triggering under FXO based on sidetones.	**6.2.45**
491.	VQuad Bluetooth	Allow response from Bluetooth AT command to be used as event sent to WebViewer database. This allows commands such as RSSI and Battery Level to be entered into the Central Database and the WebViewer to display properly.	**6.2.45**
492.	VQuad Bluetooth	Add to VQuad script the ability to Pair/Unpair Bluetooth devices. This allows the use of multiple Bluetooth devices on a single Dual UTA platform.	**6.2.45**
493.	VQuad Master Configuration	Add ability to Load VQuad Master Config from Command Center Super/Site scripts as well as from VQuad scripts (local/remote). This allows automatic change of VQuad devices.	**6.2.45**
494.	VQuad Bluetooth	Updated Dual UTA Bluetooth Firmware to version 4.0. This resolves security issues for certain SmartPhones.	**6.2.45**
495.	VQuad Mobile	Add to VQuad script the ability to switch between Bluetooth and Mobile (3 or 4 wire) during call. This allows the script to generate a call using Bluetooth and then send/record audio using headset cable.	**6.2.18**
496.	VQuad Script	Add ability to detect power level (noise on line) and use this in Wait and If commands. This allows ability to Wait for Noise then proceed with script.	**6.2.18**
497.	VQuad Mobile	Allow ability to set Output volume level to +6dB (previous version allowed maximum 0dB).	**6.2.18**
498.	VQuad Events	Add to both VQuad and VQT the ability to export the events to file. This is available only if the VQuad/VQT are set to connect to Central DB but the connection is not available (Connecting). Added to DataImport the ability to Import the VQuad/VQT events to the Central database. Note that the Export action will delete the records from the VQuad/VQT database. The Import action will delete the file after imported into the Central database.	**6.2.18**
499.	VQuad PTT	Add PTT On/Off button on Manual Call screen, Dual UTA Device Calibration screen, Dual UTA Manual RTD screen, and Script screen. The button is available only if PTT is configured as the device.	**6.2.18**
500.	Dual UTA RTD	Added Help on this screen.	**6.2.18**
501.	Dual UTA FXO Preset Tones	Made several modifications so that the FXO Call Progress tones work with all Networks and erroneous events are eliminated from the Call Events. Also added to the General tab the ability to specify number of Progress Tones before detection. This allows to minimize false detection when Call Progress tones are same frequency.	**6.2.18**
502.	VQuad Script	Fixed issues when using Send User Defined Events.	**6.2.18**
503.	VQuad Script	Fixed issues with Tx/Rx File Sync when controlling far end (remote) VQuad.	**6.2.18**
504.	VQuad Script	Add ability to specify VQuad Remote on the following script commands: RTD/OWD Measurement, Set RTD/OWD Threshold Voltage, Set RTD/OWD Fail/Pass Threshold.	**6.2.18**
505.	VQuad Script	Add SNR Calculation to VQuad script. This can run on Local or Remote VQuad.	**6.2.18**
506.	VQuad Script	Add Set VQuad Device for Bluetooth phone only. This allows user to switch between Bluetooth and Headset within the call. Also allows to set Mobile Headset Output/Input volume.	**6.2.18**

507.	VQuad Script	Modify Send Alert so the Alert goes directly to the DataImport. Both VQuad and VQT alerts will now go to DataImport. The DataImport will then send the alert (along with Status Alerts) directly to Command Center. The Command Center will generate the properly Configured email based on the Alert.	**6.2.18**
508.	VQuad Script	The Wait Event and IF statement has been modified to include: Volume Detected, Loop Current Off. Also added Elseif to If statement for Digit detection only.	**6.2.18**
509.	VQuad Script	Add ability to Start/Stop the GL FileMonitor from within the script. Note that the GL FileMonitor is automatically started when VQuad starts and automatically stopped when VQuad exits.	**6.2.18**
510.	VQuad Script	Added ability to Detect Volume (with user-defined threshold) and Stop Volume Detect. This is used with the Wait / If Volume Detected events to detect a certain volume threshold, then proceeding within the script.	**6.2.18**
511.	VQuad FXO	Bug relating to FXO calls if Call Progress tones are all the same frequency. Resolved.	**6.2**
512.	VQuad	Add support for FXO flash hook functionality within VQuad script.	**6.1**
513.	VQuad GPS	Add support for Dual UTA GPS which supports VQuad Lat/Long location and Sync for Dual UTA functionality. The synch provides OWD and Transmit/Receive automated functionality between geographically separated systems. Also support for Chain synch using same GPS interface providing OWD synch between two co-located Dual UTA units.	**6.1**
514.	VQuad dBase	All events from the VQuad can be automatically transferred to the Central Database (located at Central Location). If the connection is severed, all events are automatically saved to VQuad local database until connection is reestablished. At this time all events are sent to the central database.	**6.1**
515.	VQuad Delay Measurements	Made improvements to the method for generating RTD and OWD measurements. Also provide automated Threshold settings and SNR measurements. Added PDD (Post Dial Delay) measurements for Dual UTA FXO interface.	**6.1**
516.	VQuad Call Control	Added Caller ID for FXO, T1/E1, VoIP SIP and Bluetooth mobile. Called ID is shown in the Events screen as well as the Manual Call window.	**6.1**
517.	VQuad Traffic	Added ability to Send and Receive voice simultaneously between same Dual UTA or between geographically separated Dual UTA's. User can specify Send/Receive Voice files using Synch method or without Synch method.	**6.1**
518.	VQuad Traffic	Added automatic configuration for sending/receiving synchronized traffic. No longer need to create a configuration, only specify a few settings for each side of the call. The user still has access to creating a custom configuration if desired. Also added new Voice File structure so that VQuad Automated traffic can send/receive voice automatically based on interface selected (no need to specify file format). This supports 8-bit mu-law, 8-bit a-law, 16-bit RAW, 16-bit RAW 16K Samples (WB), 16-bit Raw Bluetooth.	**6.1**
519.	VQuad Events	All events associated with VQuad (Call Control, User Defined, Error) are automatically sent to the Central Database and includes, when available, the Called Number or Calling Number. This allows for specific search options within the Central Database using the WebViewer.	**6.1**

520.	VQuad GPS	Updated the GPS status screen so that it will display properly for either the older generation USB GPS (location only) or the next generation Dual UTA Serial GPS (location and synch).	**6.1**
521.	VQuad Auto Traffic	Added ability to bypass countdown timer in Auto Traffic configuration. Thus, when start Auto Traffic, the VQuad will immediately begin sending traffic upon next iteration. This is available in the Auto Traffic script setup.	**6.1**
522.	VQuad Help	Added context sensitive Help to several functions within the VQuad including RTD/OWD, Calibration and Script Timer. This help is available in both the GUI and the Script.	**6.1**
523.	Dual UTA SDK	Support using separate application for remote access of the Dual UTA without requiring the VQuad. The Dual UTA SDK connects directly to the Dual UTA hardware and provides most all functionality that the VQuad provides. The SDK supports both OCX and DLL and CLI functionality.	**6.1**
524.	VQuad Licensing	The VQuad and Dual UTA SDK can be licensed through the Dual UTA itself, thus eliminating the requirement for a dongle. Of course, the VQuad can still support licensing via the dongle.	**6.1**
525.	VQuad FXO	Support for user defined Call Progress tones within the FXO control. User can specify multiple Dialtone, Ringback, Busy, Fast Busy, and SIT tones. Also support auto calibration for automatically detecting the necessary Call Progress tones directly from the PSTN line. Support for multiple country pre-selects of Call Progress tones. Support for overriding the Call Progress tones thus allowing Auto Connect or Auto Dial in the event the necessary tone was not detected.	**6.1**
526.	VQuad Impairment Generator	Added to VQuad Dual UTA the ability to generate impairments on the outgoing voice file. The impairments are based on a noise file (user can specify) or White Noise configured by the user.	**6.1**
527.	VQuad Analysis	Added to the VQuad both Oscilloscope and Spectral Display screens available for the Dual UTA interfaces. Up to 4 screens can be displayed simultaneously (two ports per Dual UTA, two Dual UTAs).	**6.1**
528.	Dual UTA	Support for two Dual UTAs running simultaneously on a single VQuad or Dual UTA SDK. All functionality is fully supported simultaneously and independently on both Dual UTAs.	**6.1**
529.	VQuad PTT	Add full support for PTT (Push to Talk) for voice and RTD/OWD measurements.	**6.1**
530.	VQuad VoIP	Support Send/Receive simultaneously on VoIP SIP interfaces.	**6.1**
531.	VQuad T1/E1	Support for Send/Receive Simultaneously on T1/E1 interfaces.	**6.1**
532.	VQuad FXO	Support for No Call Control (Quick Connect) on FXO interface.	**6.1**
533.	Dual UTA Monitor	New application using the Dual UTA, Voice Monitor, which utilizes the Dual UTA FXO interfaces for non-intrusively monitoring and capturing on the 2-wire line.	**6.1**

534.	VQuad Script	Added/modified several functions within the VQuad script including enhanced Pause Timer, Generate RTD/OWD/Threshold, support for SNR, support for modifying the Call Fail Reason, send and detect User Defined events between VQuad probes, simultaneously and synchronously send/record voice as well as simple method for sending/recording voice files on local and remote VQuad probes, ability to send user-defined Comment to the VQuad events screen which is sent to the Central Database, added Break Timer (go to break point within script if timer is exhausted), added additional user-defined functionality for Detect Digits and Detect Tones, support for PTT, support for automated send/record voice with ability to set no countdown timer, support for full remote access and remote control between VQuad probes. Also added to this version of VQuad script is the ability to add to many Script function variable names. The variable names are accessed in a user configured Variable file with ability to increment and decrement variable names. This allows for much more flexibility within a single script and the ability to reuse one script for many functions.	**6.1**
535.	VQuad Dual UTA FXO	Support for both USA and European analog FXO options. The Dual UTA can be configured (internally) to support TBR-21 certification.	**6.1**
536.	File Monitor Utility	Created new utility, File Monitor Utility (FMU) which replaces the FTU. The FMU will reside at the VQuad and push all degraded (recorded) voice files from the individual VQuad probes to the VQT location. This allows multiple VQuad probes to work independently and without issue for sending degraded files to the VQT for analysis. The FTU is automatically started with VQuad application and is located at the taskbar.	**FTU 1.1**
537.	Dual UTA SDK	Added support on the Dual UTA SDK for OCX, DLL, and CLI. Most all Dual UTA functions have been added to the SDK and the UM has been updated.	**6.1**