

Item #	WUG Development Action Items for 2018	Requests and Discussions By
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**Tuesday October 3rd and Wednesday October 4th, 2017**

**Analysis Discussions:**

1	Add a 128-bit hash code to the Wavewin.net download website next to the software zip file link. The Hash code will be supplied on the web site to authenticate the zip file. The users download a suggested	Amir, Mario
2	Supply a search engine to search the digital and analog channel titles. Display only the ones that match a part of the search.	Patrick, Maria
3	Add a new tab to the single ended fault location dialog to calculate 3	Robert, Patrick
4	Add the 4 single ended fault locations (Radial, Reactance, Multi-Phase, and 3 Phase) results to the double ended location dialog.	Robert, Patrick, Amir
5	Provide a fault summary report with "confidence level" that takes into account the % Overlap (OL) and Angle.	Robert, Patrick
6	Document the signatures of possible fault causes (trees, lightning, etc.) and add the fault cause to the fault location summary window.	Robert, Patric, Don, Amir
7	In the double ended fault location dialog show all result for +, -, and 0 sequence. Calculate standard deviation of all results (toss out the	Robert, Patrick
8	Save the auto scale mode to the views.	Mark, Maria
9	Allow for changing the Auto Scale mode from the status bar.	Mark, Amir
10	Add a way to turn off/on RMS calibration for each analog channel. Determine a way to identify whether a waveform is periodic or non-	Patrick, Reese
11	Add a way to indicate missing data in appended files to show a true time line (Best efforts to define "Null" data).	Bob, Amir
12	Add a way to write fault location template processing results to a	Angie, Patrick
13	Add the remote end information to the IEEE Comnames format.	Drew, Robert
14	Add support for the Bewley diagram for traveling wave fault location Comtrade files. Display the Bewley diagram where the phasors are	Robert, Patrick, Zach, Don
15	Add a new field to the Comnames dialog to support a reference file. Use the time code, device, substation and company fields from the reference file and the rest of the fields extracted from the event file.	Bryan, Bob
16	Add a new option in the Save As menu under the File menu to save a waveform file to the xml format.	Mario, Maria

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| 17 | Mario to supply the latest Comtrade XML file format to the WUG  | Mario             |
| 18 | A DLL was missing when running the Comtrade Conformity Check  | Drew, Maria       |
| 19 | Version 1.5 on Drew's Computer. Add the api-ms-win-core-timezone-<br>l1-1-0.dll to the Comtrade Conformity Check zip file downloaded  | Maria             |
| 20 | Added an FTP Drop Site off the wavewin.net server to exchange files<br>between WUG members: site name = ftp.wavewin.net, Username =<br>usergroup2017, Password = Wug@2017.                | Drew, Maria       |
| 21 | X01 records not opening with new SCF format.  | Amir              |
| 22 | Calculate line impedance from fault records with sufficient fault<br>currents from both ends of a line.   | Amir, Don         |
| 23 | Plot fault impedance curve - Basic presentation first then add relay<br>Collect signatures of recording errors and put them into report form<br>(name each signature) and submit to IEEE. | Amir, Don         |
| 24 | Calculate "Let Through Energy" to be used for Mechanical Wear on<br>transformers loss of life (accordion affect).   | Angie, Drew, Amir |

#### **Data Collection Discussions:**

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| 1 | Support Dynamic Throttling for large scale data collection<br>applications such as AEP (up to 60,000 devices). However, adding<br>such large scale support from a central location is not advised.  | Amir, Zach  |
| 2 | Support Dynamic Configuration: Make the Device Manager as a<br>separate application running as a service and polling devices read<br>from a comma delimited text file (use a Microsoft Excel template to<br>import devices into the device manager as bandwidth becomes | Amir        |
| 3 | Eliminate the space-space-space before/after the comma in the<br>Wavewin Device Manager import/export files.  | Bryan       |
| 4 | Retrieve COMTRADE files from 311C-1 relays.   | Bryan       |
| 5 | When retrieving files from a FTP server get the fault date and time<br>from the Comtrade .CFG file to use as the fault date and time in the   | Bryan, Amir |

Add Date/Time checker - a "poll one time" checker that will connect to each device and check the date and time against system date/time and log errors.

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| 6  | a) Add a new button next to other poll buttons that starts the date/time checker.  | Bryan                               |
|    | b) Alternate "none" driver available that allows date/time checker to run on device. Device is ignored on all other polling jobs.  |                                     |
|    | Add a new drop down to the Name field in the Save and Archive dialog to name the DTB files using the following naming format   | Bryan                               |
| 7  | <Master Station>_<Device #>_<Title>_<Station>_<Group>_<Group   |                                     |
|    | Connect the remote Wavewin computer to master Wavewin  |                                     |
| 8  | computer via serial connection (serial port to port server to IP).   | Bryan, Trey, Amir                   |
|    | Retrieve events and other data from the remote computer and store  |                                     |
| 9  | Add an Internal variable for "yesterday's date" that can be used in Drivers.INI scripts (DAYSBACK=X sets XYR, XYEAR, XMON, and XDAY).  | Bryan, Bob, Maria                   |
| 10 | Add the Inter-character delay field to be available in all   | Bryan, Amir                         |
|    | Save the last window position and size (e.g. Terminal window will  |                                     |
| 11 | pop up in the same place on screen with same dimensions as when it was last closed, like the Mark and Save). Plus add Save session and open session functionality (no automatic invocation, each session is Some type of integration with SEL Quickset software - manually connecting to a device in the Device Manager allows Quickset to communicate with that particular device. (Patrick will send example). | Don, Mario, Maria, Bob, Bryan, Amir |
|    | Save each setting on a separate line.  |                                     |
| 12 | -or-   | Bryan, Trey, Patrick, Robert, Amir  |
|    | ability to do a full setting download from a device and save to a format that can be imported into Quickset (just as if Quickset did a settings retrieval for the device). Send example format to Maria.   |                                     |
| 13 | Independent, user definable path for settings checker files (.SET) and   | Bryan                               |
| 14 | Add support in file manager and the fault data manager for "network locations," as opposed to "mapped drives."   | Bryan, Amir                         |

15	When dragging files in the in file manager and fault data manager, asks the user if the files should be "copied" or "moved" with radio buttons for selection. Always default to "copy".	Bryan, Maria
16	Support 4 different extensions for collected SEL Event files: EVE, REV,	Bryan
17	Setup a "Sharing Forum" for users to understand what others are doing and to learn about Wavewin functions.	Don, Maria
18	Allow for COMTRADE "Optional Fields" to have Fault Location, Line Le	Don
19	Allow for the Save Event Folder to use the COMNAME designation for	Robert, Don, Amir

### **New Products Discussions:**

1	Work with the SARA team for Wavewin to interface to RDB Databases and collect settings as needed.	Amir, Luke
2	Work with the SARA team for Wavewin to interface to ASPEN for automatic fault location from real life fault records (and CAPE also).	Amir, Luke
3	Allow for saving waveform chunks from Comtrade records to support Transient State testing.	Mario
4	Allow for archiving streamed data from the Wavewin DAU using	Bob
5	Add Interfaces to VAISALA NLDN Lightning Database.	Zach, Maria, Patrick, Robert
6	Add interfaces to Google Earth Transmission Maps.	Zach, Maria, Patrick, Robert
7	Collect COMTRADE records and summaries from TW FL devices.	Zach, Amir
8	Develop simple algorithms to calculate fault location from TW FL	Zach, Amir
9	Write fault location and summary results to a database.	Zach, Amir, Maria, Angie

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