BestXYZ Processor

Requirements, Design, Implementation, Testing (RDIT)

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| User Story | Text |
| SETPOSITION | The user was able to specify the GPS Antenna Position as ECEF (E, F, G) coordinates in meters in the main window |
| GETPOSITION | The user was able to load the GPS Antenna Position as ECEF (E, F, G) coordinates in meters from a file using a button in the main window |
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1. Requirements
   1. The user was able to type into 3 separate text fields corresponding to E, F, and G coordinates in meters on a GUI interface.
   2. The user was able to load E, F, G coordinates in meters from an input text file by searching for the file on their local computer.
2. Design
   1. Use a framework to create a main GUI dialog
   2. Add in 3 text fields for inputting GPS Antenna position as ECEF(E, F, G) in meters.
      1. One text field for E
      2. One text field for F
      3. One text field for G
   3. Add in a Button to browse using a standard file open dialog.
      1. Browsing for a file fills in the three input text fields for antenna positions.
3. Implementation
   1. Create a QT Window
   2. Use the QTCreator GUI Editor to organize GUI objects
      1. Add three QTextFields text fields onto the main QT Window
      2. Add three Qlabels onto the QT Window
      3. Add a QButton onto the QT Window
         1. Pops up a file selection window
         2. On a file selection parses a file that contains the E, F, and G values separated by commas. For example: “1,2,3”
      4. Add Horizontal and Vertical QSpacers to organize the Qlabels and QTextFields
4. Testing  
   Test Setup: A computer with the BestXYZ Processor application loaded and containing at least one reference receiver dataset.
   1. Open the BestXYZProcessor application
   2. Verify that a text entry field is present on the GUI
   3. Verify that the user can type into the text entry field
   4. Verify that a button with a folder icon exists to the right of the text entry
   5. Use the folder button to pop up the open dialog
   6. Cancel the dialog, verifying that no file path is entered in the text entry