

Zone Builder Implementation Manual

Overview

The Zone Builder application is implemented using three classes:

- ZoneBuilder
 - This class was the main class of the application. It created the structure for a zone and set up the main scene.
- Station
 - This class defined a station. It held the get and set functions as well as setting up the station scene.
- WriteFile
 - This class took the information gathered by the other two classes and wrote it out to the .awl file.

Code Structure

- ZoneBuilder.java
 - Defines the array stationArray of type Station. Creates Zone Builder main scene. Allows for selection of correct zone and required stations and initiates generation of .awl file.
- Station.java
 - Defines structure and functions of Station. Creates Station screen for editing individual stations.
- WriteFile.java
 - Collects information for ZoneBuilder.java and generates .awl file.

Key Features

- Allow for selection of zone number. Selecting zone number enables station configuration buttons.
- Configuring stations on separate screens allows for less clutter on main screen and easy organization.
- Only the required blocks need be selected, while the code adds in some of the inputs and outputs to the block. This saves controls engineers hours of work with a couple of button clicks.
- The generated .awl file is immediately ready to be imported into a Siemens TIA Portal PLC project.

Known Issues

- Deselecting a particular station stops the station from being added to the .awl file, but does not reset the data in that station.
- There is no way to reset the data to create another .awl file.

Future Enhancements

- Add function to import existing .awl files so that the application can output the updated versions of each function block.