Testing

Test-phase 1:
Import/Export from/to CSV/Database

Test object:
Import/Export from/to the database and displaying of the lists in the JTable.

Expected action:
The database connection and the import in the lists should be done when the application starts. When the user clicks in the „Point“ or „Line“ table in the JTree the associated lists should be displayed in the JTable.
After several new objects were created, some were deleted and others changed the data is stored in the database.

Result of the test:
Worked as expected.

Test-phase 2:
Create/Change/Delete objects

Test object:
Changing/deleting/creating objects in the JTable.

Expected action:
With a double click the user should be able to change the attributes in the JTable. By changing the attributes of the last row (zeros) a new object is created. To delete objects it is necessary to select the row with the object. All three operations must be confirmed by choosing either “Add row”, “Edit row” or “Delete row” in the drop down menu. The JTable should be updated immediately. If the object is already drawn the graphic (OnPanel lists) is also updated.

Result of the test:
Worked as expected.

Test object:
Changing/creating objects on the Panel.

Expected action:
With the “Draw” tool the user should be able to draw points by clicking on the panel or draw lines by holding the mouse pressed and releasing it. With the “Move” button the user can move objects with drag and drop. If an object is created/changed the JTable is updated immediately:

Result of the test:
Worked as expected.

Test-phase 3:
Selection of objects

Test object:
Selecting points and lines in the JTable and drawing them on the Panel

Expected action:
It should be possible to select one/multiple/all objects in the JTable. This objects should then be transferred in the selection lists. By clicking on the draw button the objects of the selection lists should be drawn in the Panel and copied into the OnPanel lists.

Result of the test:
Worked as expected.

Test object:
Selecting points and lines in the JTable and drawing them on the Panel

Expected action:
It should be possible to select one/multiple/all objects on the Panel. This objects should then be transferred in the selection lists. By clicking on the “Select” button the user can select single objects. For the selection of multiple objects the user can choose the “select line objects” or the “select point objects” button. This buttons provide an area selection via drag and drop.
If something is selected the selection list is shown in the JTable.

Result of the test:
Worked as expected. But if two objects are in the search area of the click event only one is marked red but both are displayed in the JTable.

Solution:
Adapted for loop over the list including the objects on the panel and the loop over the selected items. Selected items won't be colored over in black again while looping over this point again.

Test-phase 4:
Additionally functionality

Test object:
“Clear” and “Save” button on the panel

Expected action:
When the user clicks on the clear button all objects should be removed from the panel. The save button should store the lists to the database.

Result of the test:
Worked as expected.

Test object:
Interaction between JTable and Panel

Expected action:
If a single object is selected in the JTable the corresponding object on the panel should be marked in red.
If an object is selected on the panel it is marked in red and display in the JTable with the heading “Selected-...”. This objects are then again editable in the JTable.

If something in the JTable or the Panel is changed/deleted or added the other I updated immediately.

Result of the test:
Worked as expected.

Remark:
During the testing some errors appeared. For example a line on the panel was not removed when the corresponding object was deleted. But after a restart the same function worked without a problem and the error didn't recur during several tests.

Test object:
Interaction of the Aldercroft JTree object

Expected action:
When the Aldercroft program starts, it should automatically connect to the database and the JTree component should be populated with "Points" and "Lines" tables. The JTree should further collapse and open when the root object is clicked.

Result of the test:
Worked as expected.

Test object:
Exit function

Expected action:
When File > Exit function is clicked, a Aldercroft program should exit.

Result of the test:
Worked as expected.

Test object:
Maximize and Minimize program

Expected action:
The user should not be able to maximize or minimize the Aldercroft program (in order to keep the boundaries of the drawing panel consistent)

Result of the test:
Worked as expected.

Test object:
Editing values in the JTable cells

Expected action:
In order to edit a particular cell value, the user should first select the row, then click the Table button and select the "Edit row" entry from the dropdown list. After this action, the user should be able to edit the cells of the selected row. The user needs to confirm the edit by selecting "Edit row" a

second time followed by “Save”.

Result of the test:
Worked as expected.
