Cyclone Scan Registration

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Register Scan Worlds using scanner coordinate system

The Cyclone Registration Tool will register two or more scan worlds, and all individual scans within each scan world, by using one of two methods.

1.) Create Registration using Targets

a.) Initialize the Registration Tool

- Open Cyclone Navigator and browse to the project directory of the scan worlds you would like to register.
- Right-click on the Project folder and select "Create < Registration". Rename the new registration.
- Double-click the newly created registration to open the Registration window.

b.) Add ScanWorlds to registration

- Under the "ScanWorld" menu bar at the top of the window, select "Add ScanWorld"
- Browse to the Project folder with the scan data you want to register and highlight the ScanWorlds you want to register together.
- Move the selected ScanWorlds to the selection box on the right by using the cheveron keys. Select "OK".

c.) Add constraints

If targets were fine scanned during field data collection, Cyclone will automatically add the target scans as constraints for registration.

- Under the "Constraint" menu select "Auto-Add Constraints"
- Select the "Constraint List" tab and view the list of targets added by cyclone. Each constraint has current information displayed that can be sorted by column.
- Edit each constraint as desired by selecting the constraint then right-click to view the editable options. The constaint can be Enabled/Disabled, and the height, label and weight can be changed.

d.) Register ScanWorlds

- Select Register under the "Registration" menu.
- The "Error" values will populate to show the results of the registration. Evaluate each constraint. Are there errors in the label, height? Disable constraints or decrease the weight if a target is

showing large errors.
- Iteratively refine the registration to produce an acceptable error in the registered ScanWorlds. After each change to the constraint list remember to re-register.
- Evaluate the overall fit of the registration under the registration menu > "Show Diagnostics".
- View all the registered scans in a Model Space to see the results.

    1. Under the "Model Spaces" tab in the Registration Tool, Select (highlight) all the ScanWorlds to view in a single Model Space.
    2. Right-click and select "View Interim Results" to see the new Model Space and veiw the registered ScanWorlds.
    3. Close the interim Model Space and do not save the model view
- If the registration is successful, Finalize the registration by selecting "Create ScanWorld/Freeze Registration" found under the Registration tab in the Registration tool.
- Create a new Model Space by selecting "Create ModelSpace" under the Registration tab.
- Close the Registration Tool.

2.) Create Registration using Cloud-to-Cloud Wizard

a.) Initialize the Registration Tool

- Open Cyclone Navigator and browse to the project directory of the scan worlds you would like to register.
- Right-click on the Project folder and select "Create < Registration". Rename the new registration.
- Double-click the newly created registration to open the Registration window.

b.) Add ScanWorlds to registration

- Under the "ScanWorld" menu bar at the top of the window, select "Add ScanWorld"
- Browse to the Project folder with the scan data you want to register and highlight the ScanWorlds you want to register together.
- Move the selected ScanWorlds to the selection box on the right by using the cheveron keys. Select "OK".

c.)

Online URL: https://kb.unavco.org/article/cyclone-scan-registration-829.html