

Appendix A. Manual matching of photographs and timestamps.

In some cases, the number of photographs does not match the number of time stamps collected during aerial photography. To solve this problem, the TOPODRONE Post Processing program provides an algorithm for manual matching of photos and time stamps.

To activate this mode, you need to check "Manual matching" in the aerial photo settings.



The "Geotagging Algorithm" tab contains parameters that help the program match photos and tags in case of quantity mismatch. There are three options for matching:

- Normal: The photos are combined in the order in which they are taken.
- Increase time weighting: the matching is done by the time the photos and tags were created.
- Increase coordinate weighting: matching is based on navigation coordinates contained in photo tags and high-precision label coordinates resulting from post-processing.



During processing, the program displays information about the number of timestamps and the number of snapshots in the "Logs" window.

```

Logs
- NUMBER OF COORDS: 179
> The type of base station antenna is not specified in the header of the Rinex file.
> Parse E:\Datasets\Photogrammetry\TOPODRONE Autel EVO II Pro Nahabino
\reach_raw_20221129083535.obs...
> APPROX POSITION X = 2857617.4745, Y= 2171162.1293, Z= 5255200.8581
> ANTENNA: DELTA H/E/N = 0
> TIME OF FIRST OBS = 29/11/2022 8:35:53
> TIME OF LAST OBS = 29/11/2022 12:13:05
> Start calculating flight №1:
> Calculation of coordinate catalogs FIX AND HOLD...
> Parse coordinate catalog FIX AND HOLD...
> Found 179 coordinates FIX AND HOLD
> After mixing (FIX AND HOLD), there were 179 labels
> Read metadata from photos...
> Read tags from 176 photos
> The time offset is -10780.61400604248 seconds.
> Successfully combined 176
> Waiting for transition to manual matching...

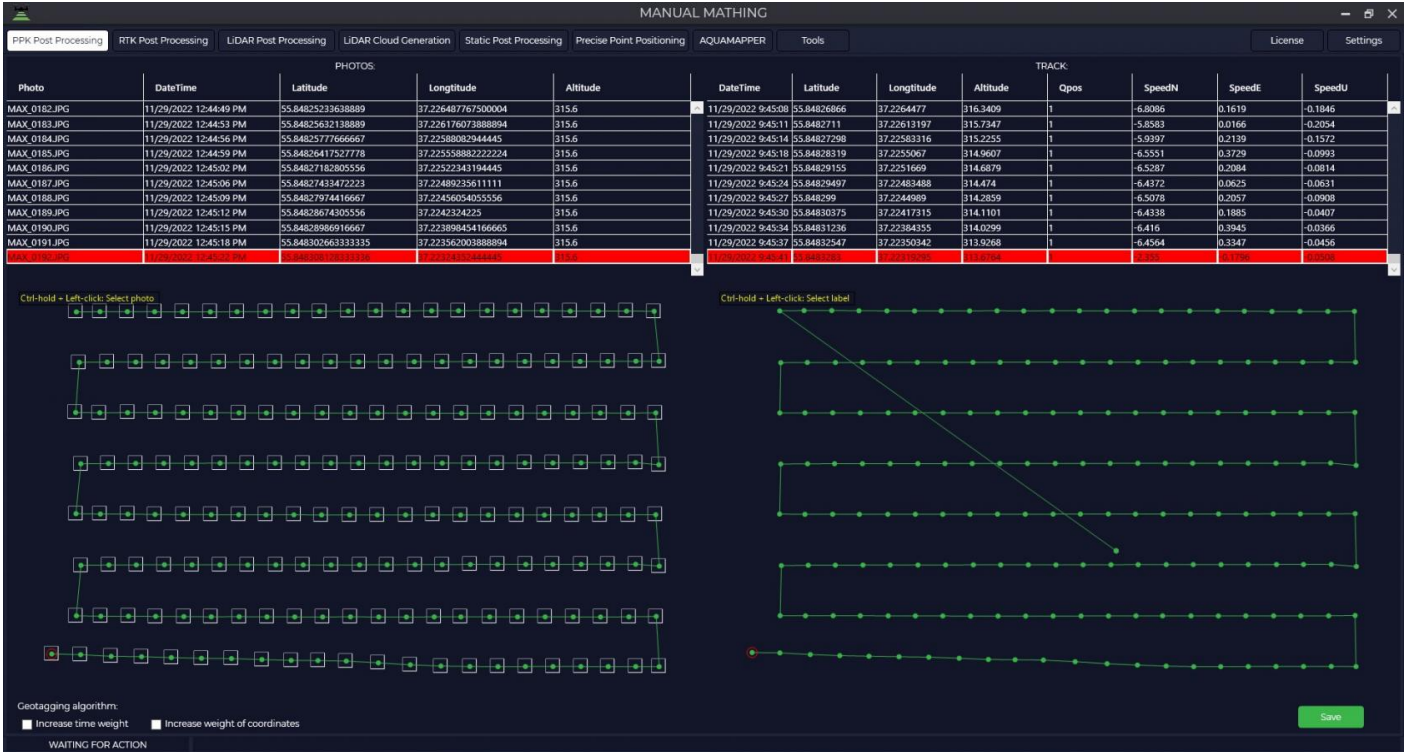
```

If the number of labels and images do not match, an additional window appears with information about the number of images, coordinates in the catalog and the number of matches. If you need to perform manual matching, you should answer "Yes" to the program's question "Match manually?".

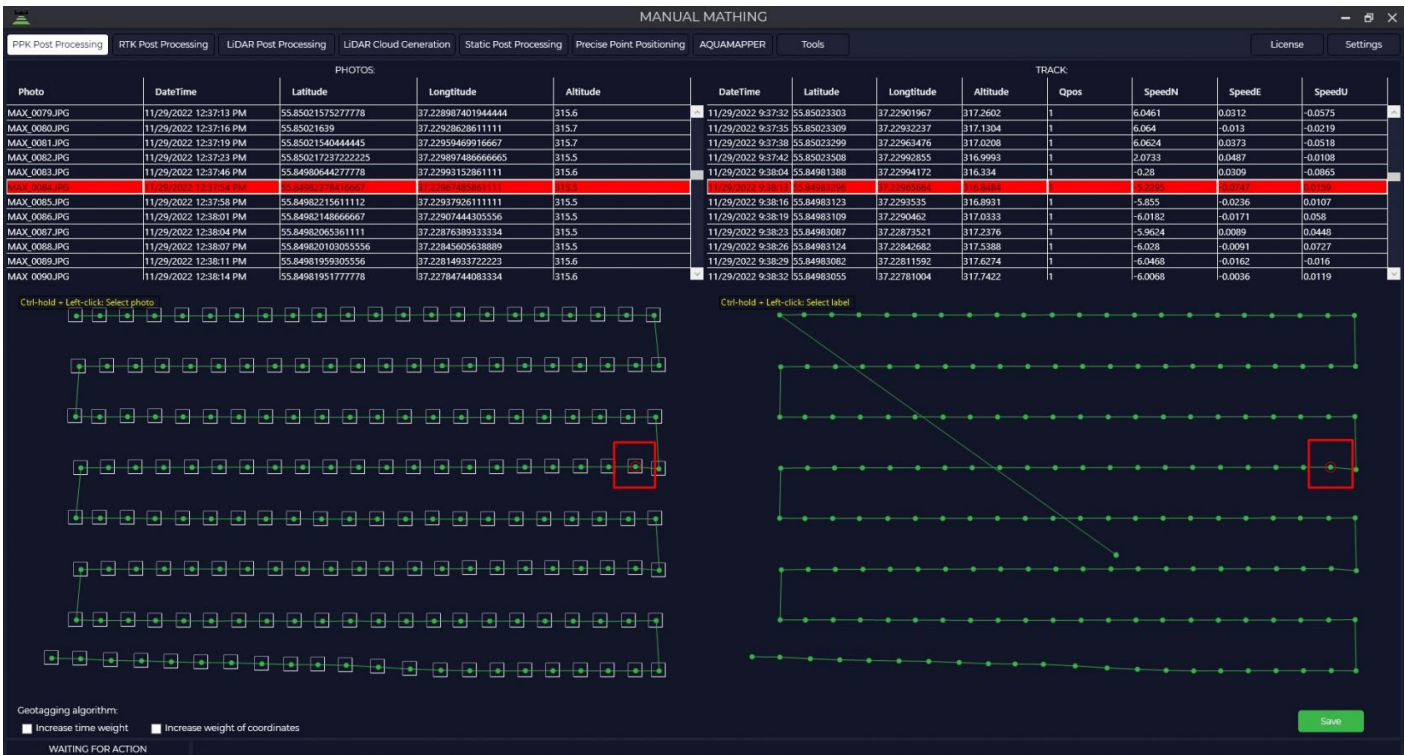
The screenshot shows a window titled "MATCHING RESULT" with a dark background. On the left, there is a grid of 176 small green boxes, each containing a number from 001 to 176. These boxes are arranged in 8 rows and 22 columns. Red lines connect some of the boxes, indicating matches between photos. On the right side, there is a metadata panel for a file named "MAX_0093.JPG". The metadata includes: Date/Time: 11/29/2022 12:37:46 PM; Latitude: 55.84980644277778; Longitude: 37.2299315280111; Gimbal Roll: 0; Gimbal Yaw: -93.66; Gimbal Pitch: -89.98; Flight Roll: -0.62; Flight Yaw: -93.62; Flight Pitch: 8.55; Speed: 0; Exposure: 0; Camera Pitch: 0; Camera Yaw: 0; Camera Roll: 0. At the bottom left, there is a summary: "Number of photos: 176", "Coordinates in the catalog: 179", and "Matched: 176". At the bottom right, there is a "Manual matching?" prompt with "Yes" and "No" buttons.

Then in the next window, the left side contains information about the photos and the right side contains coordinates. The upper part of the data is presented in tabular form, the lower part - in graphical form.

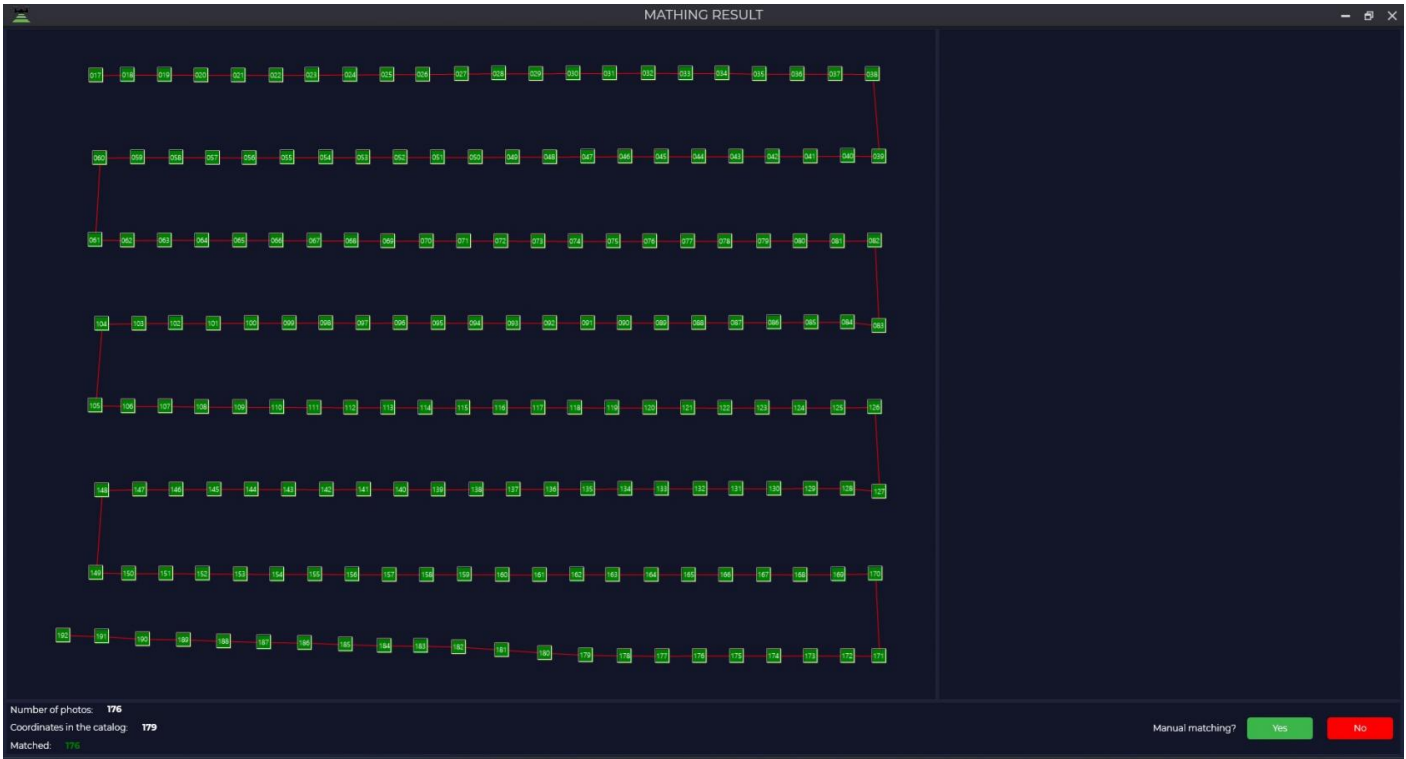
If your dataset has no navigational coordinates, the



To perform a match, you need to select a photo and its corresponding label with the left mouse button while holding down the CTRL key, and then click the "Save" button.



If the matching is successful, you must answer the program's question "Match manually?" with "No".



The program will form a catalog of photo centers and you can proceed to photogrammetric processing.

Revision #3
Created 23 August 2024 08:35:12 by TOPODRONE SUPPORT
Updated 25 November 2024 14:33:15 by TOPODRONE SUPPORT