DELAIR AFTER FLIGHT 6.0.11

RELEASE NOTES

April 29, 2019

1   Scope

These Release Notes contain information about the **Delair After Flight** software, version 6.0.11.

<u>Important Notice</u>:

High accuracy processing and filtering with PPK (Post-Processed Kinematics) will cease working on earlier versions of the software at the end of May 2019. If your UX11 or UX11 Ag aircrafts are PPK-enabled, please upgrade to this new version.

2   Objectives

Delair After Flight 6.0.11 is a corrective maintenance version, also including a few enhancements and highly demanded features.

3   New features

3.1   Improvements to the PPK base station management.

- Time overlap of base station and flight data.

    For a successful high accuracy trajectory post-processing, it is very important for the imported base station files (RINEX) to fully cover the duration of the flight. Therefore, for an easier verification, the application now shows whether the base station files overlap the same time period as the flight.

    The information is available as a horizontal bar graph in the PPK base station window, as well as in the flight information window (opened when clicking ⓘ on a flight).

    Press and hold down your mouse on the graph, and move the mouse cursor to display the exact time at each element (base station validity time and flight data).

Figure 1: Improved flight information window. In this example, two RINEX files were declared in the PPK base station window, but they happen not to overlap. Hopefully, the second one starts slightly before our flight, which is thus fully covered.

- Base station information pop-up window.

The accuracy of the trajectory computation significantly depends on the base station being appropriately located and reasonably close to the flight location.

Clicking the base station icon on the map now opens an information window displaying various details on its location and distance from the flight. The distance indication is colored in green (0-10 km range), orange (10-25 km) or red (above 25 km).
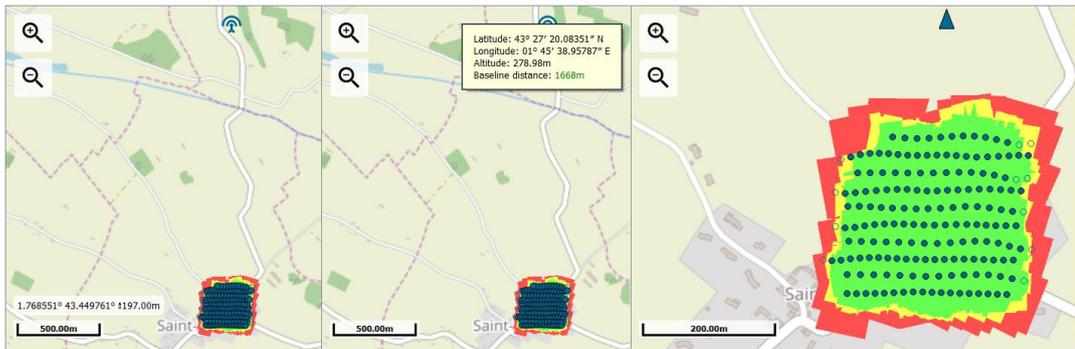

Figure 2: (Left) Base station in this example is somewhat away from the flight. (Center) Clicking the base station icon now displays some information in a pop-up window. (Right) When the base station is no longer visible, an arrow at the edge of the map view indicates its direction.

- Easier way for locating the base station on the map.

When the map is zoomed in and the base station is no longer visible, an arrow at the edge of the map view indicates its direction. (See figure 2 above, right side.)

Click the arrow to display the base station information window. Double-click the arrow to directly jump to the base station location.

3.2 Improvement to image filtering options.

- When mission polygons (cover areas) are present in the flight folder – which is actually the case since Delair Flight Deck 6.0.10 –, they are now automatically imported and used as image filtering criteria.
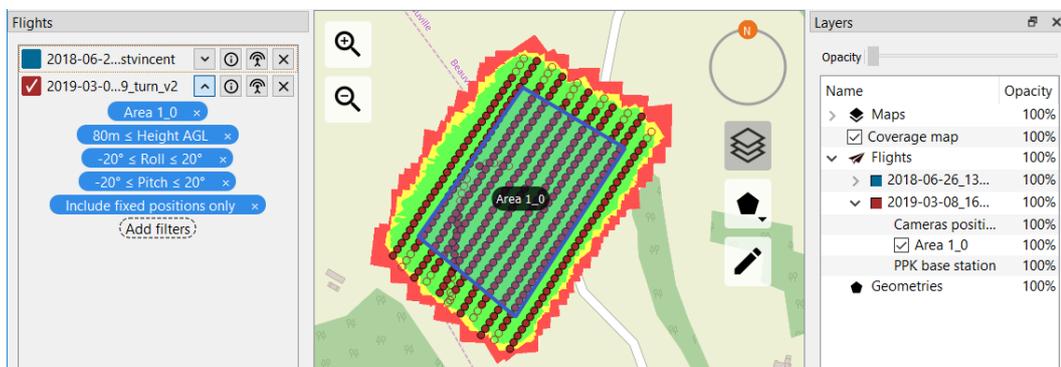

Figure 3: Cover area "Area 1_0" was automatically imported, resulting in a few extra pictures (here, at the beginning or end of lines) to be removed from the selection.

This feature allows images outside the cover area to be automatically unselected, resulting in smaller data sets without the user having to manually import a vector file.

The filter can be edited and modified by the user, so that to manually tweak the polygon if need be or to add a margin buffer.

3.3   Other improvements

- The user is now able to manually (re-)launch the PPK post-processing.

Click 📡 on a flight and the PPK base station window will open, allowing to (re-)set all input parameters and relaunch the post-processing with the new values.

Figure 4: New button 📡 for each flight in the "Flights" panel.

- The ratio and number of fixed PPK solutions is now also reported in the flight information window. (See figure 1 above.)

- A flight may now be opened multiple time in the application.

Previous versions prevented the user from importing a given flight several times. This restriction has been removed – So if there is any reason you may need for re-opening the same flight again (e.g. possibly applying different PPK settings and compare the results), you are now free to do so.

Please just check, however, you haven't selected all the flights for export, as you might not want all the duplicates in your final data set!

- Selected picture on map are made more visible.

When clicking an image center point on the map, the application previously highlighted the corresponding projection (and likewise, when double-clicking an image center point, a preview is displayed). The selected image center point is now also colored distinctly, so that the user does not have to remember which point was clicked.
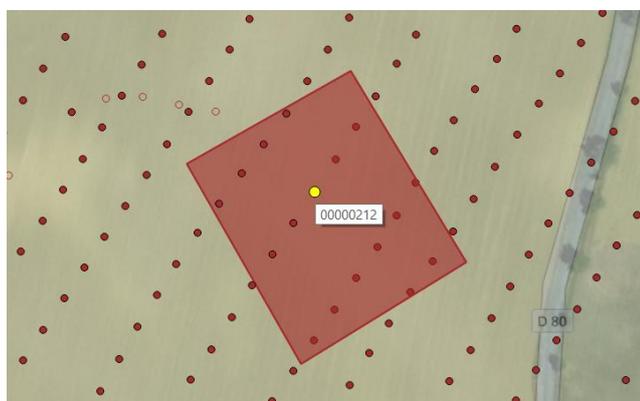

Figure 5: Selected image center is colored in yellow. (By the way, in case you did not know, the image identifier is shown when briefly hovering the mouse pointer over it.)

4   Resolved issues

- Improved accuracy in WGS84 to EGM96 height conversion: the application now includes a more precise geoid model (5-minute grid).

- Improved image colorimetry.

- Fixed lever arms offset computations, for improved position accuracies.

- Some combinations of filters on some datasets could resulted in the coverage map not being (re)computed.

- Geometries from imported vector file import (KML or ESRI shapefiles) may lack names for proper display and selection for filtering. In that case, a default name is now computed.

- Compatibility fix with Delair Flight Deck 6.0.11 for the UX11 Ag.

- Miscellaneous application robustness fixes.

- Enhanced crash-handling system: If the application experiences an abnormal termination condition, it now attempts to dump a report file to disk. If such a case occurs, please forward this file to your Delair distributor or submit a support ticket on the Delair community portal (https://mydelair.com). With your help, we can analyze and debug the issue.

5   Other changes

- Compilation tools used by Delair and 3rd-party dependencies have been upgraded.

- 3rd-party PPK processing licenses have been renewed. (See introductory note above.)

6   Documentation updates

Please refer to the *UX11 User Manual*, chapter 9.

7 Installation information

Prerequisite:

- Windows 10, 64-bit desktop computer
- Minimum:
  - Any CPU
  - RAM: 4 GB
  - Storage: HDD, 30 GB free space (approx. 2000 images in JPEG 100% quality)
- Recommended:
  - Quad-core Intel CPU
  - GPU: Intel HD Graphics
  - RAM: 8 GB
  - Storage: SSD, 100 GB free space (approx. 3000 images in TIFF)
- The computer must be connected to the Internet during the installation process.

1. Go to https://download.mydelair.com
2. Download the **Delair After Flight** installer **delairafterflight-windows-x86_64-*version*.exe** (where version stands for the latest available version).
3. Launch the installer and follow the instructions.
4. During the installation, you will also be prompted to download Digital Elevation Model (DEM) files locally. Select a subset of the DEM according to your needs.

   CAUTION: To ensure that **Delair After Flight** works properly when computing photo projections and performing quality checks, the Digital Elevation Model (DEM) must be available for the geographical areas of interest. It is therefore strongly recommended to install the DEM. In the application's "Help > Options" menu, you may alternately point to the online Delair SRTM90 web service, but in that case an Internet connection is required during the entire work session. Moreover, Delair does not guarantee the service to always remain available.

7.1 Obtaining PPK licenses

For high accuracy photogrammetry (PPK, Post-Processed Kinematics), a commercial license is required.

1. Contact your Delair distributor or sales representative.
2. Select the appropriate license package among those proposed.
3. You can view and check the status of your PPK licenses on MyDelair (mydelair.com), the Delair community platform.

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