COMBO\_Viewer v01(Beta)

The stand-alone app can be found in the ‘PETREL NSF GRANT/Software/COMBO\_App’ folder. It is called ‘COMBO\_Viewer’. There is also a folder called ‘Example\_Data’ where there are both RFID and MOM files that have been processed (i.e., not the raw MOM data). Navigate to the ‘COMBO\_Viewer’ folder. Download these to your laptop/desktop.

Double-click on the ‘COMBO\_App’ icon to start the app. It will take about 10 seconds to load. It opens a window with 3 buttons and 3 text boxes:

A screenshot of a computer

Description automatically generated

Although you can see a list of RFID readings and MOM traces by clicking on either of the ‘Load’ buttons, you just want to click on the ‘Join RFID+MOM Data’ button. It will tell you to open a folder that contains both RFID and MOM data. Every button asks you to choose a folder then deals with all the relevant files in that folder (Load RFID, Load MOM, Join).

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Description automatically generated

this opens the standard file dialog. Choose the ‘Example\_Data’ folder. Click on ‘Choose’.

There will be a short pause, during which all the text files that start with “RF” in that folder will be loaded and all the files that start with “Bird” will be loaded. Then both of those will be joined based on the burrow and the time of the MOM traces. Only the MOM traces with records that occurred after 8PM and before 7AM will be used. Then the 3 windows will show those 3 datasets. And you will be asked if you want to save the data. For now, decline.

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The window shows the following columns:

Burrow – burrow number in 3-digit format

MOM\_File – the filename of the source for this record is listed. Sometimes there are more than one file in the folder you chose that has this exact Trace record, but this column will only show one of them.

MOM\_Time – this is the record of the start of the trace

Wt – this is the bird’s weight taken from ‘Min\_Slope\_Wt’ in the Trace record

RFID – this is the RFID that was found to be the closest in time to the MOM\_Time and in the same burrow.

N – this is the number of RFID records that were found within 3 minutes of the MOM record’s MOM\_Time.

Rdr – this is the Reader Number of the RFID record that was closest to the MOM\_Time from the N records that were found.

RFID\_Time – this is the time associated with the closest RFID record.

RF\_File – this is the name of the file from which that record was found.

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You will notice that not all lines have an associated RFID record. This will happen when no RFID record from the same burrow and within 3 minutes of the MOM\_Time was found. Note that the software recognizes that the BSM is often on EDT and the RFID is on ADT, so an hour offset is not a problem. The listing shows the conversion between EDT to ADT.

Here are the most likely reasons why no RFID record can be found:

* The BSM’s RTC wasn’t working so it recorded something like “01/01/00 0:00”. Even if there was an RFID working for that BSM on that night, it can’t be linked with this record. N.B. because a bad RTC has all records as that null time, even the daytime calibration traces will be included in the list.
* The RFID RTC wasn’t working so there is nothing to link to. Examples such as: 1) file ‘RF\_06\_14\_2025\_975.TXT’ which has data, but is missing data at that time, 2) file ‘RF\_06\_16\_2025.TXT’ which showed no data from 23:47:41 until 06:28:15 in the year 2106, and 3) ‘RF\_06-20-25\_3.TXT’ which worked until 0800 then had dates from the year 1614.

Assumptions in processing the data:

* The names of the files follow the standard formats:
  + MOM data example: “Bird\_Weight\_Files\_June\_25th.txt”
  + RFID data example: “RF\_06\_14\_2025\_975.TXT” – If there is a duplicated file for this, such as “RF\_06\_14\_2025\_975 (1).TXT” that won’t cause a problem with the joining of the RFID and MOM data, but will cause some lines in the list of RFIDs (top left) because the Burrow can’t be identified from the file name. This only happens when you load RFID data using the ‘Load RFID Files’ button.
* MOM data problem within a ‘Bird\_Weight\_File’:
  + if there are non-standard lines in the Bird\_Weight files, there will be a problem with the list of Traces (top right). For example, inside Bird\_Weight\_Files\_June23rd.txt, there is a line from ‘DL\_06\_23\_2025\_3.TXT’ which has no data, just the words “no events or calibrations unusable baseline”. Again, that won’t cause a problem with the joining of the RFID and MOM data, just in how the raw data might be listed if you load MOM data using the ‘Load MOM Files’ button.