

How to use the kmz files provided to interactively explore the data

Supplementary material to *Bouten et al. J. Ornithol. (2013) A flexible GPS tracking system for studying bird behaviour at multiple scales*

1. **Unzip the files Gig2.zip and Fig3.zip:** Two folders will be created. 'Fig2' contains the Fig2.kmz file and another sub-folder 'Fig2_png' containing 939 png files, and the 'Fig3' folder contains 6 kmz files.
2. **Download and install Google Earth:** You can use Google Earth to view the kmz files containing the data. To download Google Earth for Desktop (free), go to www.google.com/earth, navigate to the Explore>Products>Desktop, and then click on the 'Download Google Earth' icon. Under the terms of service, click on 'Agree and Download'. A window should open (possibly at the bottom of the window) asking you to save or run an .exe file. Save the file to your computer. Navigate back to the .exe file, double-click on it and press 'Run'. The installation should start automatically and when completed the program should appear under your computer's list of 'All Programs'; the Google Earth icon may also appear on your computer's desktop.
3. **Load the kmz files into Google Earth:** Both of the figures can be viewed by opening Google Earth, clicking on File>Open in the toolbar at the top of the window and then navigating to and clicking on each of the saved kmz and kml files. The files should then appear in the Temporary Places folder in the Places pane to the left of the Google Earth aerial image. All of the files can be viewed at once, or the files can be turned on and off by clicking the boxes positioned directly to the left of the file name.
4. **Pan and zoom:** If you cannot immediately see the symbols and paths representing the data in each file, you can quickly move to the data by double-clicking on the name of the file in the Temporary Places folder to the left of the image. You can pan using the mouse by positioning your cursor (i.e., white hand icon) in the center of the image, holding down the left mouse button and then moving your mouse around. Similarly, you can zoom in or out by holding the right mouse button and moving the mouse up or down. You can also use the mouse's scroll wheel to zoom in or out, or pan and zoom using the tools in the top right-hand corner of the window. You can tilt and rotate the image by pressing down the Shift key on your keyboard, holding down the left mouse button and moving the mouse.
5. **View the data points:** Detailed data for each point along the migration path can be viewed by clicking once on the symbol, causing a box to appear showing date, altitude, speed, etc. For Figure 2, a graph of 2 seconds of accelerometer measurements should also appear in each box.
6. **View an animation of the data:** Because the data is time stamped, a time slider will appear at the top of the image that allows the data to be viewed sequentially. You can slide the markers on the time slider to the left and right to change the time range of the displayed data, or click the clock icon to play an animation of the sequence. The animation is easiest to view if you slide the range markers closer together so that only a short time range is shown. You can change the speed of the animation sequence by clicking on the wrench icon.

In case of questions, please contact w.bouten@uva.nl