Open Day: Project Overview

# What does it do?

Our project displays data about the world’s aircraft traffic. It uses 3D graphics to represent these data on screen in an easy to view format.

# How does it work?

The data entries are read from a source file, selected by the user. These entries are then placed into vectors, so that they can be accessed by the program later on.

The program then draws a representation of the earth. This uses a popular 3rd party graphics library OpenGL.

After, the program goes through a 24 hour cycle, at a default speed of 1 second real time to 1 minute of data shown. Each plane that has a data point for the current time is drawn on screen, with an optional trail of previous data points also drawn.

The GUI of the program uses custom built buttons that detect a mouse click, and which button the mouse cursor is on at the time of clicking. These buttons are mostly used for navigation and data filtering purposes.

# What can I use it for?

The program was designed for the observation of flight patterns. The trails feature is useful for seeing how different flights take similar routes and paths between airports.

The program can run with any compatible data source, so if a user has a specific set of data they wish to examine, such as a single airline’s plane data, or a particular region’s data, they can simply select the data file at runtime, and the program will display the data for them.

# Other Uses

Whilst primarily designed for showing plane data, the program could readily be expanded or modified to show other types of data, such as boat traffic data, or even car (truck) traffic, should a data set be available.