# PilotView

PilotView has three modules: PilotFlow (map), PilotTour and PilotGraph. This document is a short guide on how to use the PilotView to show activities of a single resource layer on the map (PilotFlow). The extension of these guidelines to show multiple layers is straightforward.

To use

To show the activities of a resource layer (trailers) on the map using PilotView, we provide three files that the user must use to enter information necessary to view the resource activities. As a convention, we recommend to use a PF extension for the three files, which are briefly described below.

1. **Paramaters file**: this file specifies the following global attributes of the dataset:
   1. The name of the map to be used (this optional). Even though this data if optional, the application requires that an entry should be used in this line (XXX).
   2. The name of the locations file (Locations.pf). The locations file is mandatory and each line of the file contains the following basic data of one single location: Name (string without spaces), Latitude (decimal number), Longitude (decimal number), Type (string without spaces). These records are separated by one single spane.
   3. The start date and time of the activities (Mar 29 2009 04:00 PM).
   4. The length of the horizon in **hours**.
   5. The length of the discretization steps in **minutes**.
   6. The information of the 1st resource layer to be shown in PilotFlow: Name of the resource (string with no spaces), the name of the resource **header file**, and the name of the **activities file**. These three records should be separated by a single space. If the use wants to show more than one resource, he/she should enter one line per resource layer each with a different name.
2. **Header file**: This file describes the columns of the resource activities stored in the activities file. The file must contain one single line with a number of entries separated by single spaces. The number of entries must be the same as the number of columns in the resource actives file. There is a number of mandatory data that must be included in the activities (header and activities files). These are (the order is not important):
   1. From: the location name of the activity origin. This name should be present in the locations file. If not, the record will be discarded.
   2. To: the location name of the activity destination. This name should be present in the locations file. If not, the record will be discarded.
   3. Time: the starting time of the activity. This is a number representing the difference, in minutes, between the activity start date and time and the dataset starting date and time (specified in the parameters file).
   4. Duration: this is the duration of the activity in minutes.
   5. Flow: this show the number (can be decimal) of resources involved in the activity.

The use can add other fields. If this name of the field starts with “CAT-“, PilotFlow will use the outcomes of such a field for coloring and filtering. In the name start with “NUM-“, the data column will be treated as numerical data and certain filtering will be used. The field with another naming convention will not be used. Here is a simple example that shows how the header file looks like:

*From To Time Duration Flow CAT-ActivityType NUM-Cost*

1. **Activities file**: This file contains the resource activities. The data records must be separated by a single space and the data of each line must follow the format described by the header file. Here are a couple of examples that to illustrate how an activities can be represented:

*Location1 Location2 20 260 2 Movement 1.25*

*Location2 Location2 280 360 2 Idle 0*

The fist line shows that there are 2 resources moved from Location1 to Location2 twenty minutes after the start time. The movement took 260 minutes with a cost of $1.25.

The second line shows that the 2 resources stayed at 360 minutes at Location2. The idling cost is $0.0.