

User Guide for Runway Re-declaration Tool

System overview

The “Runway Re-declaration” tool is supposed to be used by airside safety manager specialists who are responsible of deciding whether operations on runways can continue in case of an obstruction on the runway.

Once the tool is launched, the user must select the desired airport, or he can import details of another airport. Once an airport has been chosen, the main tool will launch automatically.

On the left hand side of the application is the graphical display of the physical runway for the simulation. The user will be able to zoom, pan, rotate and reset the top-down view. The values of the four parameters of the runway are stored at the bottom right in a tab section. The tab section contains 2 tabs, one for displaying original values of the runway and the other showing the re-calculated values of the runway after an obstacle is added.

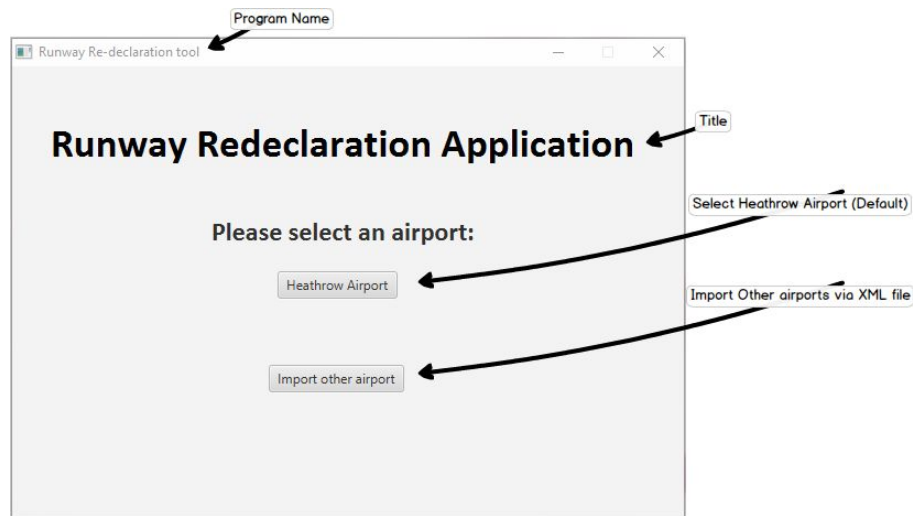
The user can select different runways and obstacles, import a list of obstacles using appropriate XML files, define his/her own obstacle. Once the selected obstacle is added to the selected runway, the calculations will be executed immediately. The user can find a breakdown of the calculations by pressing the “Show Breakdown” button from the “Control Panel”. The user also has the ability to save the views of the simulation and export the details of the airport as an XML file.

The compass found at the top of the application rotates as the user rotates the runway. By clicking on the compass, the runway strip rotates to match its compass heading.

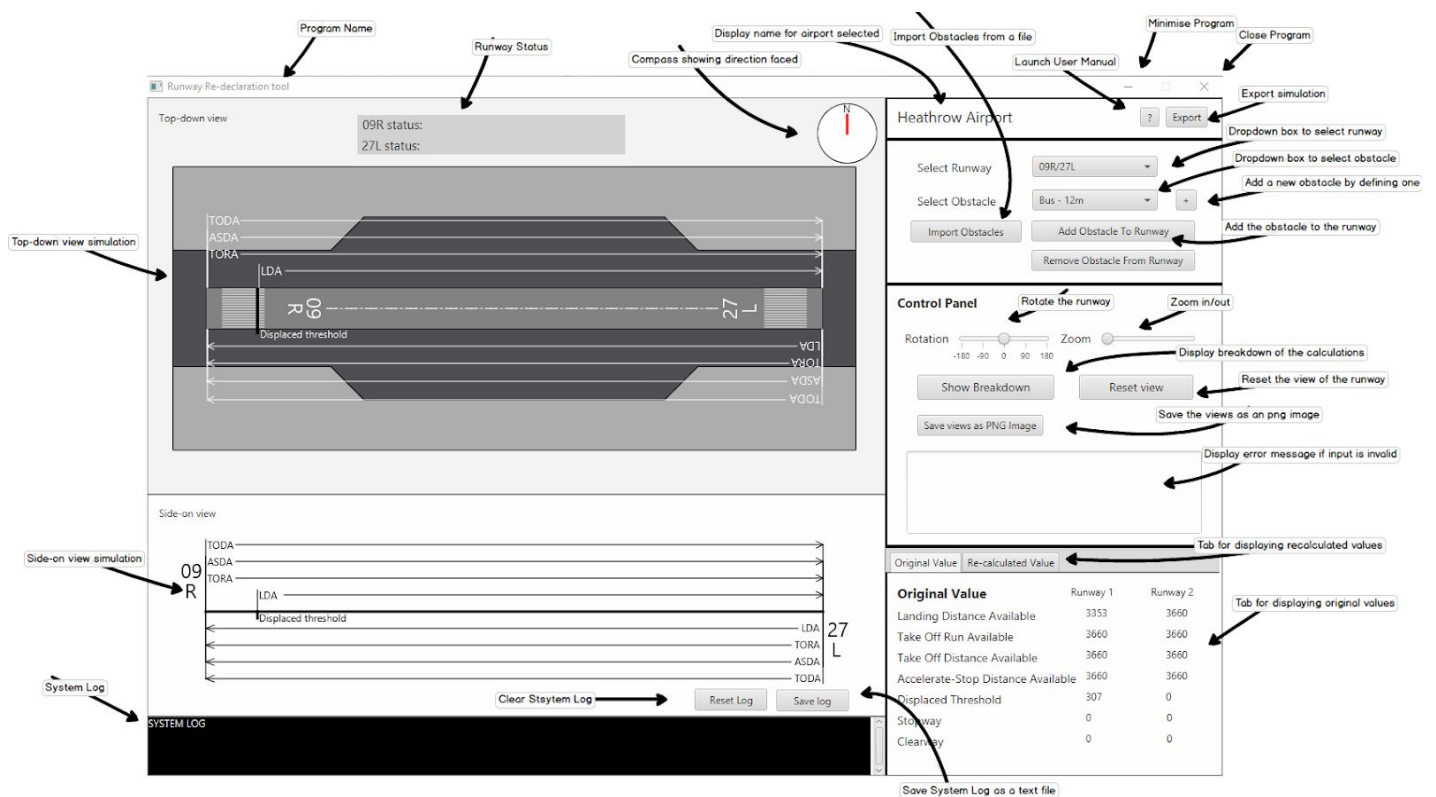
An area for a system log can be found at the bottom of the simulation. It will display notifications if there is a change in the settings of the simulation. The user can save the log as well as reset the log.

Main Interfaces:

1. Selecting Airport



2. Main Tool



Frequently Asked Questions

Q1: How do I use the application on an airport I desire?

A1: After launching the application, the user will be able to select the airport for the application to be operated on.

Q2: What if I want to use the application on a different airport?

A2: After launching the application, the user will be able to click on the button at the bottom to import other airports from a XML file.

Q3: How do I access the main tool?

A3: After selecting an airport, the main tool will be launched automatically.

Q4: How do I run a simulation?

A4: The simulation is automatically run once an obstacle is located onto the runway.

Q5: How to add an obstacle onto the runway?

A5: First, you select an obstacle from the dropdown box and click on the button on the right to add it onto the runway. After that you will be asked to provide the parameters of the selected obstacle.

Q6: What if I wanted to use an obstacle which is not in the dropdown box?

A6: You can either use the "Import Obstacles" button on the right to import obstacles from a XML file or you can create your own obstacle by pressing the "+" button.

Q7: How do I know whether the runway is still operational?

A7: Above the top-down view of the simulation, there is a grey box which displays the conditions of both runways.

Q8: How do I remove an obstacle from a runway after I finish a simulation?

A8: You can use the "Remove Obstacle from Runway" button. After pressing it, the runways will be obstacle free and the values of the simulation will revert to the original ones.

Q9: How do I save the views as an image?

A9: You can use the "Save views as PNG Image" button. After pressing it, a window allowing you to choose where to save the image, will appear. You have to save the image with the ".png" extension after the name(e.g. "image.png").

Limitations

The tool has some limitations which can be addressed in future versions of the system.

Firstly, when the views of the simulation are saved, the extension ".png" needs to be added at the end of the file's name. Secondly, when rotating a runway, the user does not have the possibility to enter the number of rotation degrees. Also, the user cannot rotate or zoom the "Side-on view"