User Guide for Runway Redeclaration Tool
Group 2

Disclaimer: This user guide will not provide amsufficient guidance on its own. It is recommended that you refer to the relevant sections in the application help document

1 User guide

1.1 Logging in

The login page has three buttons; Login, Continue as Guest, and About. The about button opens up the application's help document. Continue as guest allows you to view the main screen and import past scenarios from XML. In order to Login, you must have valid credentials.

1.2 Loading an airport

All users can load airports and view runways. These options can be found on the left side of the screen. The airport is selected from a dropdown menu. After the airport is selected, you can then select a runway. Upon loading of a runway, its declared distances will show on screen.

1.3 Adding an obstacle

Admin, ATC and ground crew can add obstacles to trigger a redeclaration. This option is available through buttons underneath the runway selection dropdown. When an obstacle is added, the new distances will be rendered onto the runway. A notification will display when the obstacle is successfully added

1.4 Exporting data

Users can export the state of the system in XML format using the relevant button on the left side of the screen.

1.5 Importing data

All users can import any previously exported data in XML format. This allows users to review previous scenarios which caused redeclarations to occur.

1.6 Using the UI

The user can switch between views using the tabs ("Top down view" & "Side view" at the top of the screen. The user can see the original and redeclared distances in the tables on the right side of the screen.

Below those tables, the user can view calculation breakdowns for each distance and also export the calculations and renderings as a PDF. Refer to the help documentation (page 3) to see the UI in detail.

1.7 Adding an airport

Only admin users have the ability to add an airport to the system. If you are an admin, the option can be found in the admin dashboard in the bottom right of the screen main UI.

In order to add an airport, all distances must be positive. Each logical runway must be added with its own declared distances. For more information on logical runways, refer to the FAQ below.

1.8 Registering users

In the admin dashboard, the option to register a new user exists. Every user must be assigned a role as well as an airport (e.g. EGLL for Heathrow). Passwords must be minimum eight (8) characters long and contain a combination of lowercase, uppercase, numbers and special characters.

1.9 Editing users

Admins also have the ability to edit users. They can edit the user's username, password, assigned roles and airport association.

2   FAQ

Q. Why isn't the screen rotating?

A. The rotation feature aligns the runway with its actual compass heading so that North is the top of the screen. If the runway you are looking at is already due East, the screen is already oriented.

Q. Can an existing name be used when defining a new airport?

A. No, every defined airport needs to have a name that is not already in use.

Q. Can any number be used for the measurements when defining a new runway?

A. No, measurements must adhere to the specification, and only positive values are permitted.

Q. What is a logical runway?

A. One runway strip can operate in two directions. Logical runways represent these individual directions. Each runway has two logical runways (e.g. 09L & 27R).

Q. Can a logical runway be added to an airport with an existing identical runway?

A. No, the user cannot add the same runway to an airport more than once.

Q. Can more than one obstacle/airport be imported at the same time?

A. No, only one obstacle/airport can be displayed at any given time.

Q. Can I import anything other than airports and obstacles into the application?

A. No, only airports (and their corresponding runways) and obstacles can be imported into the system.

Q. How do I place the obstacle above or below the runway strip on the visualisation?

A. Using negative values for "distance from centerline" places the obstacle North (above) of the centerline, positive values place the obstacle South (below).

Q. Is there a limit to the dimensions of an obstacle?

A. There is no limit to the dimension of the obstacle, but if the location of the obstacle is too far off the centerline, the calculation will not occur.

Q. How should I place an obstacle that occurs before the left threshold or after the right threshold?

A. To place an obstacle before a given threshold, use negative values for the distance to the relevant threshold, the other field should populate automatically.

Q. Where is the application data stored?

A. Your data is saved as XML files in the Resources folder of the application.

3   Known issues

- Pressing the compass to rotate too quickly will result in the screen over rotating.
- Zooming out on side view results in the ground zooming out as well. This results in the render appearing as an island.
- Some rendering on mac computers, cause unknown