RUNWAY REDECLARATION TOOL USER MANUAL

INTRODUCTION

This software application is designed to help users determine the safe takeoff and landing distances for aircraft on a particular runway when an obstacle is introduced. The tool takes into account various factors to provide accurate declarations for pilots and air traffic controllers. This user manual is designed to provide guidance on how to use and navigate the Runway Redeclaration Tool effectively and to ensure that users understand the tool's capabilities and limitations.

Please note that this tool is built to aid the process of redeclaring distances. It does not act as a replacement of the official process.

GETTING STARTED

IMPORTING XML FILE

To import a runway from an XML file, locate the menu bar at the top of the window and select the option under **File>New Runway>Import Runway**. This will open a file chooser window that allows you to navigate to the XML file you wish to import. If the file is in the correct format, the new runway will be added in a new tab of the same name as the file.

BUILDING FROM SCRATCH

This option allows you to build a new runway without having to specify it in an XML file. Simply select the option under **File>New Runway>Build From Scratch** and enter the desired values in the relevant fields. The new runway will appear in a new tab with the heading of the new runway set as the name.

USING PREDEFINED RUNWAYS

The program includes a list of predefined runways for you to choose from. To see the list of available runways select **File>New Runway>Predefined Runways** and an additional window will appear. This window includes a drop down menu of all the runways that come with the program. Once you have selected one, press the **OK** button and the runway will appear in a new tab with the heading as its name.

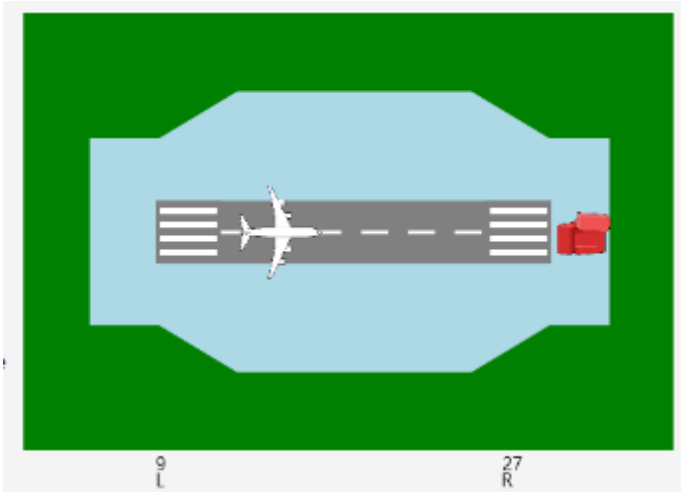
UNDERSTANDING THE VIEW

Clicking the redeclare button will allow you to update the view with the plane and obstacle placed at appropriate positions, given that the inputs follow the required rules. The runway will only display the plane and obstacle once parameters have been provided. Using any of the options presented in **File>New Runway** will open the runway in a new tab. The tab header allows you to switch between different runways.

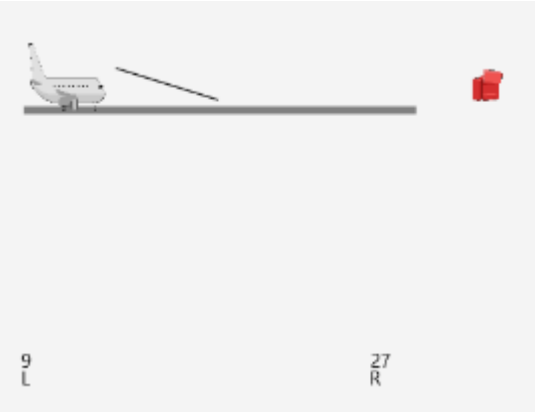
When clicked, the **Redeclare** button will update the positions of the plane and obstacle on the runway based on the input parameters. The inputs must adhere to the rules specified in the tutorial window. If multiple tabs are open, these can be navigated to by using the tab menu positioned just below the menu bar. Clicking the **Change View** button toggles the view to switch between the top down and side on representation. The **Rotate** button will automatically rotate the view to match the compass heading.

The images below show the top down and side on views containing both representations of the runway.

TOP DOWN VIEW



SIDE ON VIEW



EXPORTING DETAILS

Clicking on **File>Export Current Runway** will first open up a prompt to enter a filename. Then the file chooser will let you select a destination folder. After both have been chosen, the runway declaration will be written to the selected directory, in the XML format specified in the tutorial.

The **File>Export Runway View** lets you view the runways on a new window. This opens a new window with the top down and side on views side by side. Double click the area of interest to zoom in

and out of a specific region. The **Top Down View** and **Side On View** buttons can be used to hide or show the respective view. Use **Adjust Zoom Property** to alter the zoom factor.

n.b. The declaration of the tab currently viewed is the one used for exporting details.

FAQs

1. What are the system requirements for running this software tool?
    a. This software should be compatible with any OS. To run from the command line, ensure that Maven and required Java packages are installed.
2. What technical skills/knowledge are required to use the tool effectively?
    a. The UI is layed out to be simple to understand, so no technical knowledge is assumed. The tutorial window on the software provides a more comprehensive breakdown of the view components and other technical information.
3. Who can I contact if I have questions or issues with the program?
    a. If you have any queries about the program, send an email to support@email.co.uk (this is monitored 9am-5pm on weekdays).
4. Do I have to use the XML format specified in the manual?
    a. The imported file must be in the XML format specified in the tutorial menu on the tool. However, we are currently working on alternatives to ensure greater compatibility. If unsure, please use the 'Build from Scratch' menu option to create a runway from scratch, and export this information to be used as an input for another session.
5. Do I need an internet connection to use the software?
    a. No internet connection is required to use the software.
6. What happens when I perform an action not recognised by the software?
    a. Pop-up notifications are detected from invalid actions, which are more descriptive of the error that happened. More serious errors must be acknowledged before any other actions can be performed.
7. If I create a new runway, will my work be saved?
    a. Yes, creating the new runway will open it in a new tab. The tab menu will contain a list of the active runways, which can be navigated to by clicking on the preferred tab.
8. What should I do if the tool loads longer than expected?
    a. Our software has been tested to minimise the chance of receiving incorrect information. However, there may be situations where certain actions take longer than expected. Longer loading times are normal occurrences, and this does not indicate an issue with the tool. If this is persistent, contact support@email.co.uk for more guidance.
9. How secure is my data when using the tool?
    a. All inputs and changes are deleted when the tool is closed. No personal information is required to access the application. The only information that will be saved is the declaration of the current runway, only if **File>Export Current Runway** is selected.