AIRPORT BRIEFING EFB APPLICATION
3D SCENE EDITOR GUIDE

Copyright © 2026 Synapse Aviation, all rights reserved

Airport Briefing 3D Scene Editor Guide

Copyright © 2026 Synapse Aviation, all rights reserved
Str. New Delhi no. 11A
1000 Skopje, Macedonia

This document supports the back-end 3D Scene Editor tool of Airport Briefing by Synapse Aviation LLC.

The 3D Scene Editor is part of the Airport Briefing Windows EFB Application, and available to Administrators only.

Controlling Document Number: SYN-AB3DG
Revision: 1.2

TABLE OF CONTENTS

1 INTRODUCTION 5
1.1 PURPOSE 5
1.2 APPLICABILITY 5
1.3 TERMINOLOGY 5
1.4 GLOSSARY 6
1.5 OVERVIEW 7
1.6 ADDITIONAL REFERENCES 8
1.7 TECHNICAL SUPPORT 8
1.8 SYSTEM REQUIREMENTS 8
2 LOGIN AND ACCESS 8
3 3D SCENE EDITOR 10
3.1 MAIN INTERFACE 10
3.2 SLIDE MANAGEMENT 11
3.3 SLIDE EDITOR 11
3.4 BASIC CONCEPTS 12
3.4.1 Moving Around 12
3.4.2 3D Gizmo 12
3.4.3 Deleting objects 12
3.4.4 Input fields – manual entry 13
3.4.5 Context Menu 13
3.5 MAGNETIC VARIATION 15
3.5.1 Physical (Visual) Impact 15
3.5.2 Numerical (Label) Impact 16
3.6 QUICK SLIDE GUIDE 17
3.7 SLIDE EDITOR – GENERAL TAB 18
3.8 SLIDE EDITOR – LIGHTS TAB 19
3.9 SLIDE EDITOR – 3D POINTS TAB 20
3.10 SLIDE EDITOR – OBJECTS TAB 22

3.10.1 Library objects 23
3.10.2 Primitive objects 24
3.10.3 Spline objects 25
3.10.4 Reference objects 27
3.11 SLIDE EDITOR – FLIGHT PATH WIZARD TAB 29
4 APPENDIX 1 – VIDEOS 34
4.1 Airport Briefing - Introduction to 3D Scene Editor 34
4.2 Airport Briefing - 3D Scene Editor / General Tab 34
4.3 Airport Briefing - 3D Scene Editor / LIGHTS Tab 34
4.4 Airport Briefing - 3D Scene Editor / OBJECTS Tab 34
4.5 Airport Briefing - 3D Scene Editor / FLIGHT PATH WIZARD Tab 34

RECORD OF REVISIONS

Issue	Date	Page(s)	Reasons for revision
1.0	01 FEB 2022	All	Initial version of the document
1.1	03 AUG 2022	All	Additional chapter Magnetic Variation
1.2	26 JUN 2026	1,2 & 3	New address
1.2	26 JUN 2026	9	Access via the Application

1 INTRODUCTION

1.1 PURPOSE

This guide provides detailed instructions and considerations for the operation of the 3D Scene Editor as a stand-alone component of the back-end in Airport Briefing. This document is designed for back-office administrators and support specialists who are new to Airport Briefing. These considerations were identified by Synapse Aviation and their implementation by the user contributes to a safe and efficient operation with the Airport Briefing EFB application.

The guide does not substitute for, or prevail over, any of the terms of the Synapse Aviation application End User License Agreement (EULA) or the operating hardware and software product agreements.

This guide will be updated as necessary in case of changes to the Airport Briefing application, in-service feedback, EASA, FAA, or other Aviation Authority requests, or any other valid reasons (e.g. corrections).

1.2 APPLICABILITY

This guide applies to the back-end tools of the Airport Briefing EFB Application used on iOS and Windows-based portable EFB (PEDs).

1.3 TERMINOLOGY

The terminology used in this manual is adapted to the level of compliance expected from the user:

- ‘Should’ is used to specify considerations identified as necessary to ensure safe Airport Briefing operations.
- ‘Can’, ‘May’ or ‘recommended’ is used to provide additional considerations for efficient operations. Adherence by the user with these considerations is recommended.

1.4 GLOSSARY

AMC	Acceptable Means of Compliance
APPR	Instrument Approach Procedure
ARINC	Aeronautical Radio Incorporated
EFB	Electronic Flight Bag
EASA	European Aviation Safety Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
GM	Guidance Material
HMI	Human Machine Interface
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
NAA	National Aviation Authority
NOP	Normal Operating Procedures
OEI	One-Engine Inoperative
OM	Operating Manual
OS	Operating System
PED	Portable Electronic Device
REF	3D reference slides or programmed instructions
SA	Synapse Aviation
SID	Standard Instrument Departure

1.5 OVERVIEW

Thank you for using Airport Briefing. Synapse Aviation 3D Scene Editor, Admin Panel, iOS and Windows EFB applications are continually modified to be fully compatible with the latest operating systems and devices.

Synapse Aviation Airport Briefing is a mobile electronic flight bag (EFB) solution designed for commercial and business aviation flight crews.

Airport Briefing lays down a technological instrument to effectively comply with the applicable aerodrome competency qualification requirements.

The Airport Briefing software platform has three main components:

- Admin Panel
- 3D Scene Editor; and
- EFB Application

The Airport Briefing Admin Panel is a cloud-based administrative back-end component. It enables operator functions for fast creation, management, and secure dissemination of high-quality aerodrome briefings.

The 3D Scene Editor is a sophisticated tool for development of visual briefing/training content in 3D.

The Airport Briefing EFB Application is an insightful briefing application with high fidelity. Through well-structured briefing data and extensive use of visuals, Airport Briefing significantly increases the efficiency and situational awareness of flight crews and empower them to handle abnormal and unexpected situations, with readiness.

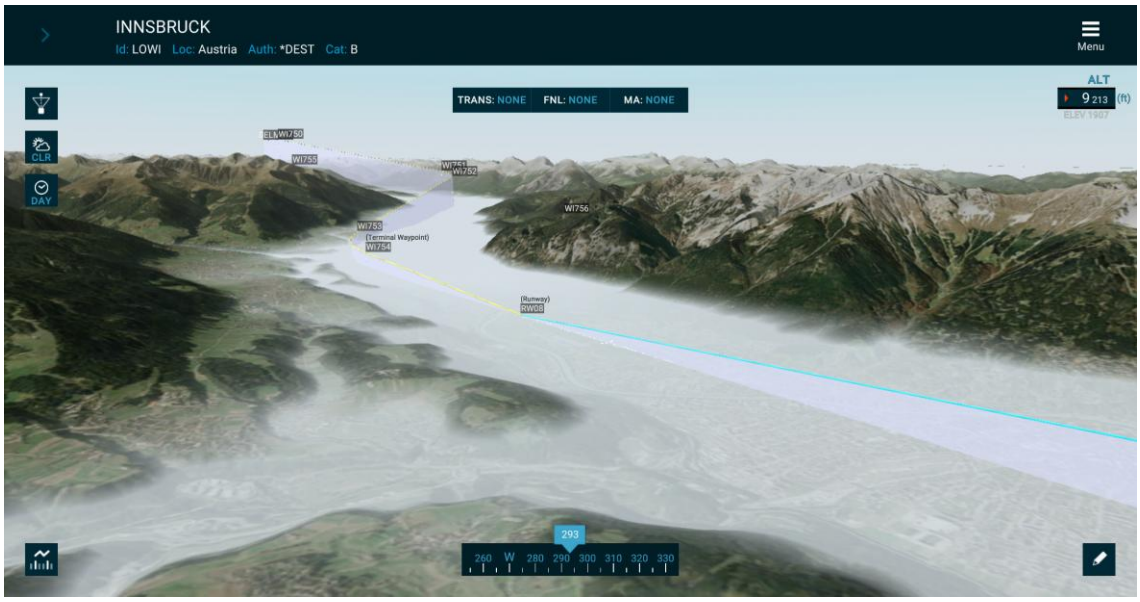


Figure 1 High fidelity interactive 3D graphics

Important notes:

- The system does not present an own-ship symbol, nor provides any information that can be used to derive the aircraft position
- Airport Briefing is not a navigation tool, nor any information it presents shall be considered for that purpose
- Airport Briefing does not calculate or output any mass and balance or performance information

1.6 ADDITIONAL REFERENCES

In addition to this Guide, Synapse Aviation provides detailed, task-oriented training videos and documentation for Airport Briefing users on the web at the [link] Airport Briefing Training and Documentation web page.

1.7 TECHNICAL SUPPORT

Many operators provide their own technical support for Airport Briefing. In addition, Synapse Aviation provides technical support during official business hours from 08:00 to 16:00 CET (Central European Time) at:

- International: +389 2 3113 963
- Email: support@airportbriefing.aero
- Synapse Aviation Customer Support Page on the Web at: airportbriefing.aero

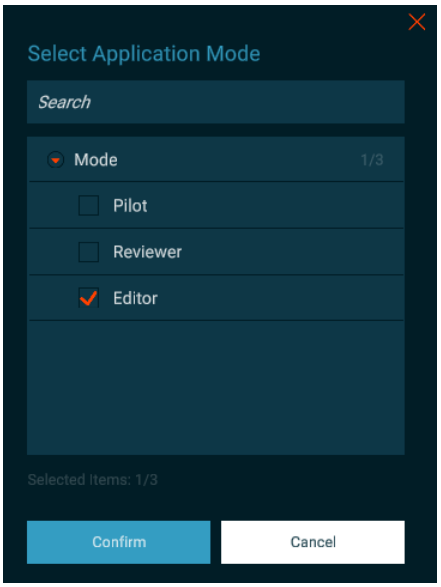
1.8 SYSTEM REQUIREMENTS

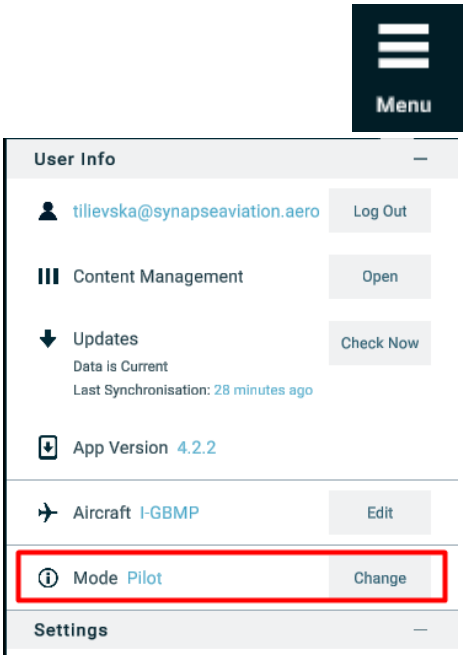
The minimum operating system for Airport Briefing 4.0 is iPad OS14 or Windows 10. At the time of release, Airport Briefing 4.0 was tested and is compatible with iOS 18.6. The minimum device capability required to run Airport Briefing 4.0 on iOS devices is iPad Air (3rd generation) or equivalent (A12 chip or better). Devices running on the Windows platform require a minimum of 4GB of RAM memory.

2 LOGIN AND ACCESS

To get started with the Airport Briefing application for Windows and access the 3D Scene Editor refer to the Airport Briefing Pilot User Guide and Airport Briefing Admin Guide documents.

IMPORTANT: 3D Scene Editor can be accessed via the **MENU** tab - **Mode - Change Mode - Editor)** in the Windows EFB application. Make sure your User Role is set as 'EFB Administrator' or 'Administrator' before attempting to access.



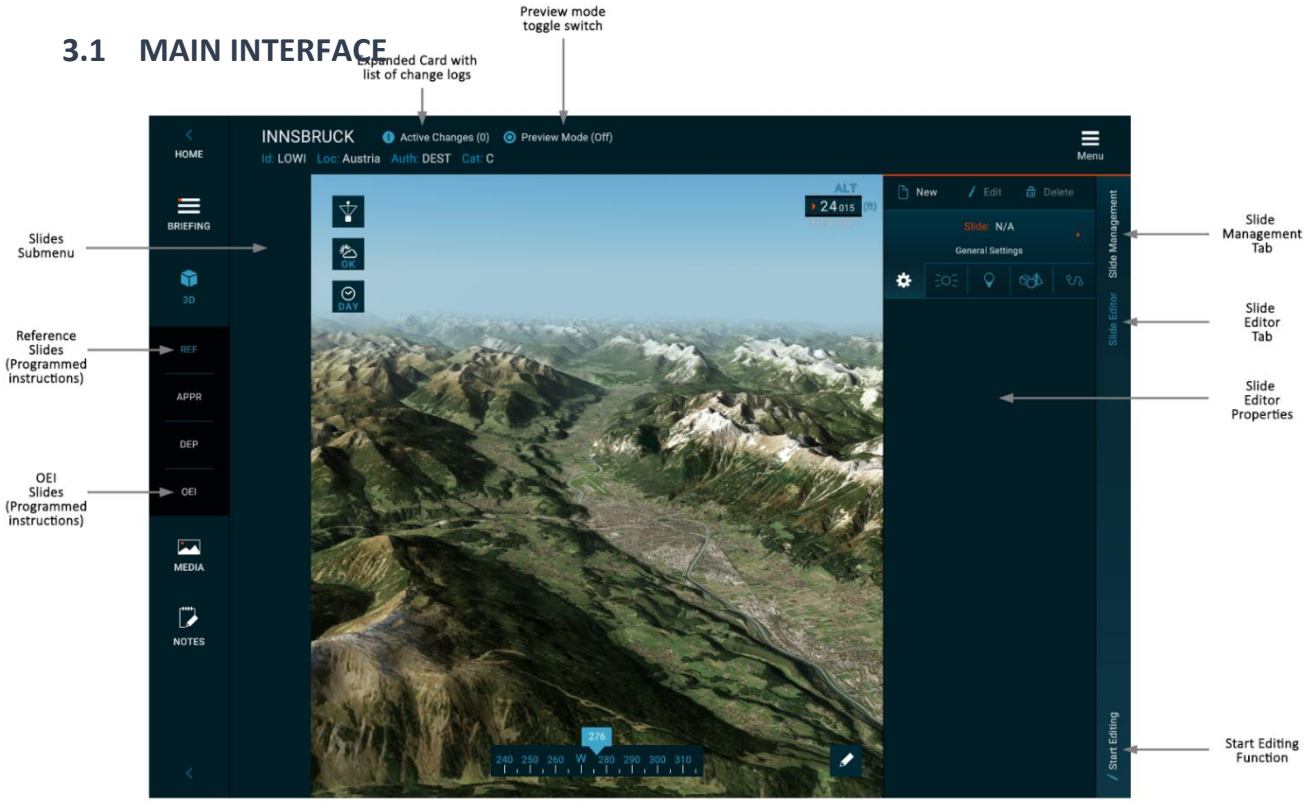


After successfully installing the airport, you wish to edit, open the airport and click to 3D feature to access the 3D Scene Editor.

Note: When opening an airport in Editor mode, Airport Briefing will always download the latest data from the server.

3 3D SCENE EDITOR

3.1 MAIN INTERFACE



The 3D Scene Editor allows the creation of slides or programmed instructions in 3D. The Slide Editor Properties window provides tools and functions for managing content on the screen.

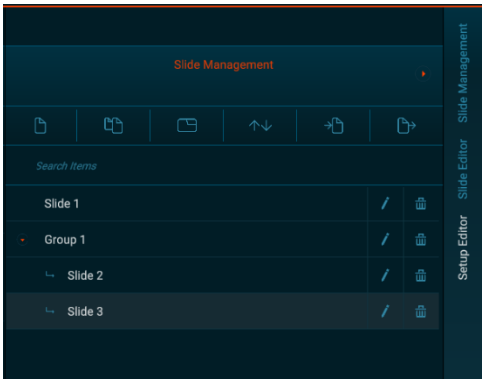
Reference Slides (REF) and OEI Slides (OEI) sections hold tailored slides that are part of the 3D briefing. Each new slide is added to the Slides Submenu. They can be reordered using the controls on the Slide Management tab.

The Active Changes link will open a pop-up with a read-only list of changes that have been made to this airport since the last time it was published.

The Preview Mode toggle switch, If turned ON will show additional Aircraft and Date filters for you to preview the output of the content as it would show in the EFB application.

Start Editing will give you exclusive control and editing rights as it is not permitted to have more than one administrator working simultaneously at the same airport.

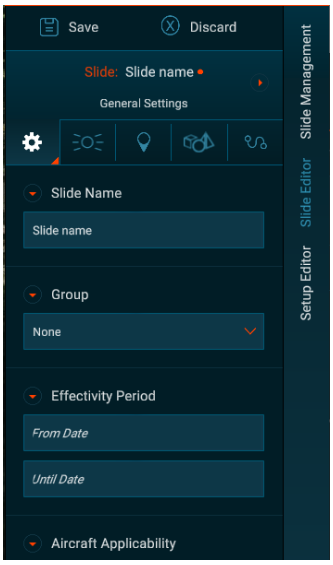
3.2 SLIDE MANAGEMENT



Slide Management is used for additional functions like:

1. Create new slide
2. Clone existing slide
3. Create new group
4. Re-order slides
5. Export slide to file
6. Import slide from file
7. Edit/Delete slide

3.3 SLIDE EDITOR



The Slide Editor contains a complete set of tools and features for developing comprehensive 3D Slides.

It has five distinctive tabs:

1. General tab
2. Lights tab
3. 3D Points (floating labels) tab
4. Objects tab
5. Flight Path wizard tab

Each tab will have its properties that are enabled when edit mode is selected.

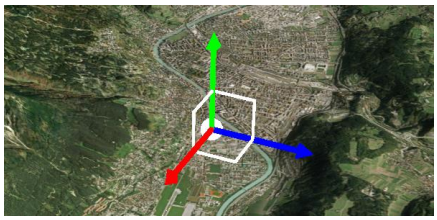
3.4 BASIC CONCEPTS

3.4.1 Moving Around

Moving around the 3D scene is identical to moving in Pilot mode.

[video tutorial available]

3.4.2 3D Gizmo



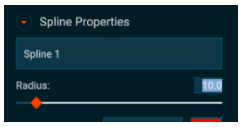
All objects on the scene will show their gizmo when selected. You can grab any of the handles or planes to move the object in the desired direction.

Some objects will have to option to rotate and scale as well. In such cases, the Slide Editor Properties window will show additional parameters that will allow you to do so.

3.4.3 Deleting objects

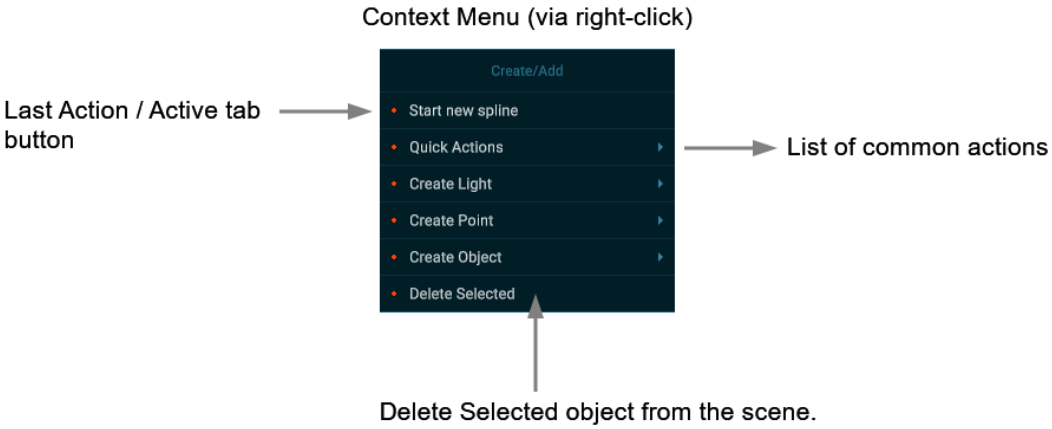
You can delete an object from the scene including parts of an object like the splines by selecting the object, right-clicking anywhere on the screen, and clicking the Delete Selected option from the context-menu.

3.4.4 Input fields – manual entry



All fields in the properties window can be selected by clicking on the value itself. You can also insert a value that is larger than maximum value like in this example, of the slider. This can be particularly handy when modifying the size of primitive objects like the box.

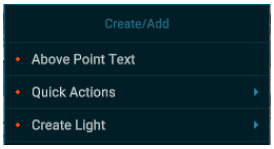
3.4.5 Context Menu

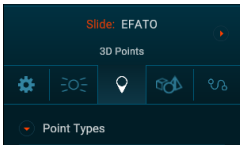


The Context Menu allows you to quickly choose and process actions in the scene. Simply right-click anywhere on the scene to open the context menu.

3.4.5.1 Last Action / Active tab item

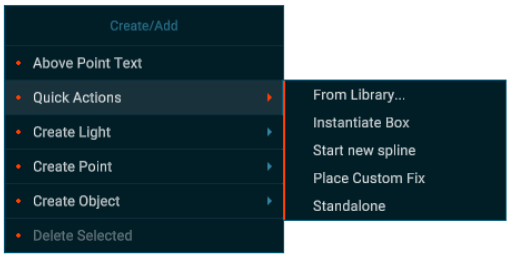
This specific item in the menu changes with each respective tab in the properties window.





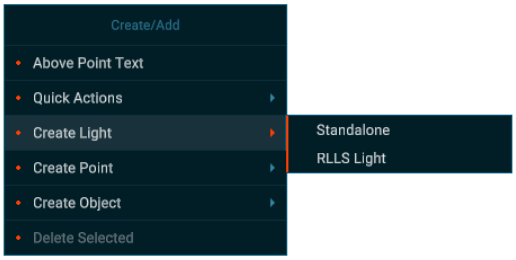
3.4.5.2 Quick Action item

The quick action item lists the most common actions in the 3D Scene Editor.



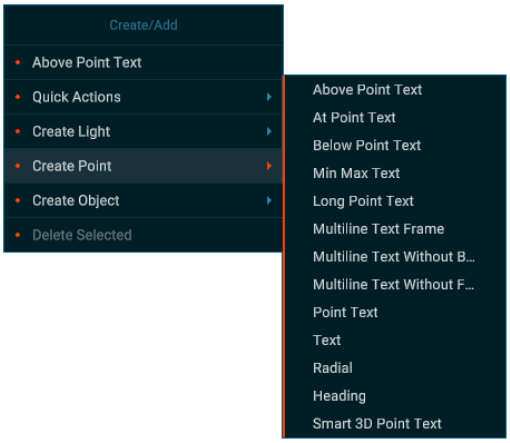
3.4.5.3 Create Light item

The create light item allows you to quickly add a standalone light on the scene, or start adding an RLLS sequence of lights..



3.4.5.4 Create Point item

The create point item allows you to quickly add one of the 3D Points on the scene.



3.4.5.5 Create Object item

The create object item allows you to quickly create objects on the scene.

3.5 MAGNETIC VARIATION

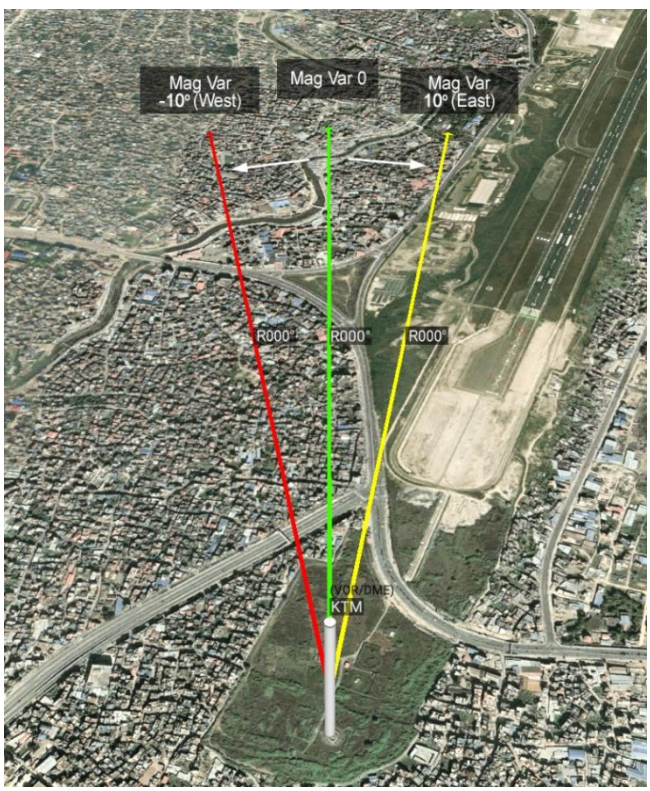
The magnetic variation information is updated regularly via the ARINC 424 data stream every AIRAC Cycle, whenever applicable.

3.5.1 Physical (Visual) Impact

The application of magnetic variation in Airport Briefing is automatic and has a direct impact on the visual representation of all magnetic bearings on the scene. This is due to the fact that the scene is referenced to the Magnetic North including the readings of the magnetic compass.

Therefore, all bearings and courses that are being recalled from the database (flight path legs, radials, QDRs, QDMs, etc., are subject to automatic correction by applying the latest magnetic variation during the process of visualization on the scene.

To better understand the impact of the magnetic variation on all applicable objects in the scene, this example shows a Radial defined with magnetic bearing 000˚ from the VOR, and how it would propagate outbound from the station in three different scenarios.



Consequently, the physical location or representation in 3D is subject to change whenever there is a change in magnetic variation and the object has been defined using reference to magnetic north. Some examples of such use would include:

- Radials, QDMs, QDRs.
- Flight Path legs of Approaches, Departures, OEI procedures that are defined by a **course** or a **heading**, like CF (Course to Fix), CA (Course to Altitude), CD (Course to a Distance), CI (Course to Intercept), VA (Heading to an Altitude), etc.
- Any other reference based on course or heading.

In all instances described above, there will be a physical impact on the visual output whenever the magnetic variation has been changed, and in some instances, a correction of the designed procedure or object will be required.

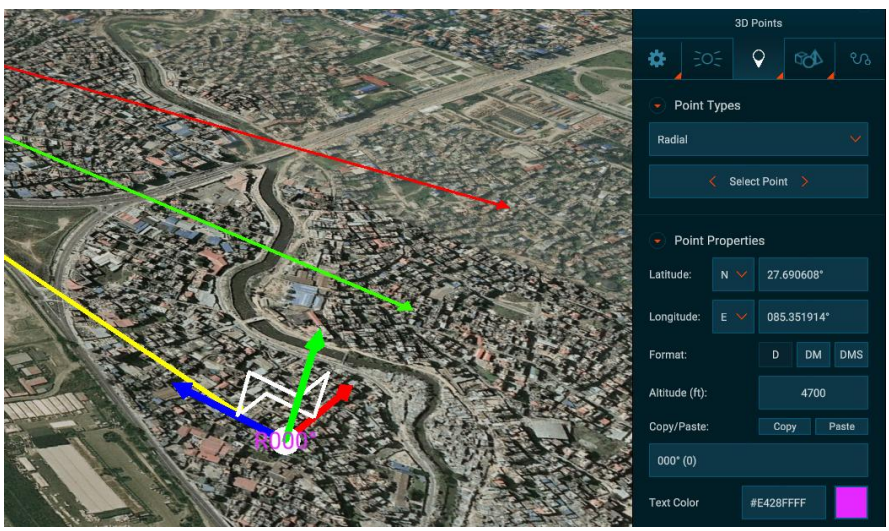
A change of the magnetic variation has no impact on the following:

- Flight Path legs such as IF (Initial Fix), TF (Track between Fixes) and DF (Direct to Fix).
- Location of Library object imported on the scene
- Location of Primitive objects created on the scene
- Location of Reference Fixes created on the scene
- Location of Lights on the scene
- Location of 3D Points on the scene (see numerical impact below)

3.5.2 Numerical (Label) Impact

There are two special 3D Point types in Airport Briefing that relate with the value of the magnetic variation. They are the “Radial” and the “Heading” 3D Point types.

3D Points are being created and positioned on the scene manually by the Admin using Latitude, Longitude and Altitude (i.e. x,y,z), the label/content of these two types represents a magnetic bearing value in degrees. Whenever these types are used on the scene, the system takes the user-specified value (magnetic bearing) and stores it in the database by firstly converting it to true bearing. As such, whenever the label is recalled for render on the scene, the system reads the stored ‘true’ value and then reverse-applies the latest magnetic variation to it before rendering the label, which may result in a different value from originally entered.

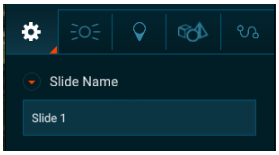


For example, if the user created a Radial or Heading 3D Point with a value of 000 degrees and there has been a change in the magnetic variation by 1 degree, from that moment the system will render the 3D Point with a value of 359 or 001 depending on the change in magnetic variation, whilst the physical location of the 3D point remains unchanged on the scene.

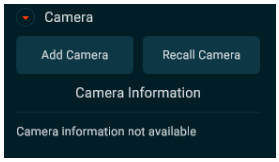
3.6 QUICK SLIDE GUIDE

1. Click the Start Editing button.

2. Click New Slide from the Slide Editor menu. This will in turn create a new button on the Slide Submenu named “Slide Name”.

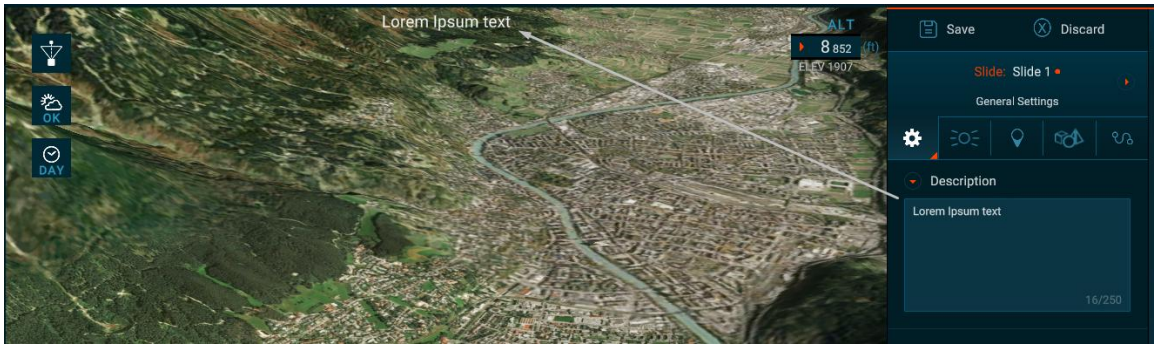


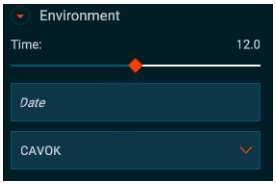
3. In the properties window insert the new slide name e.g. “Slide 1” and note the same change on the button itself.



4. Click Add Camera and position the view by moving around the scene as required. When ready click on the Save Camera.

5. Insert slide Description

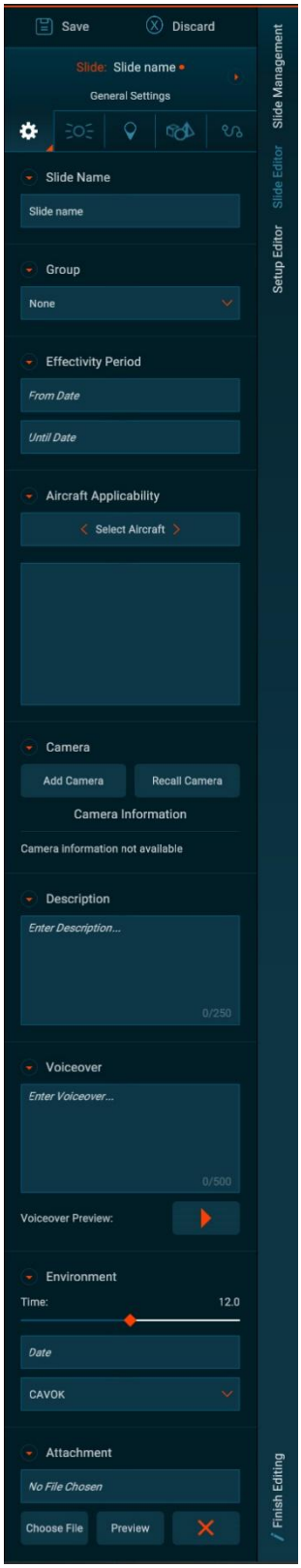




6. Set the local Date, Time, and Weather, if required.

7. Click Save.
   The newly created slide will upload to the database.

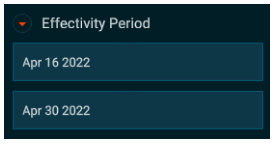
3.7 SLIDE EDITOR – GENERAL TAB



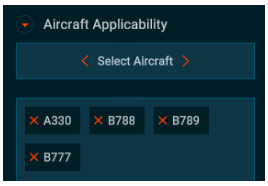
The General tab contains basic information and settings about the slide.

Starting from the top:

1. Slide Name
   Note: Hit ENTER to start a new row if required.
2. Group – You can assign the slide to be part of an existing group or choose to create a new one.
   Note: You can rename a group via the Slide Management tab.
3. Effectivity Period – You can select a date from which the slide is valid and a date after which the slide is no longer valid.

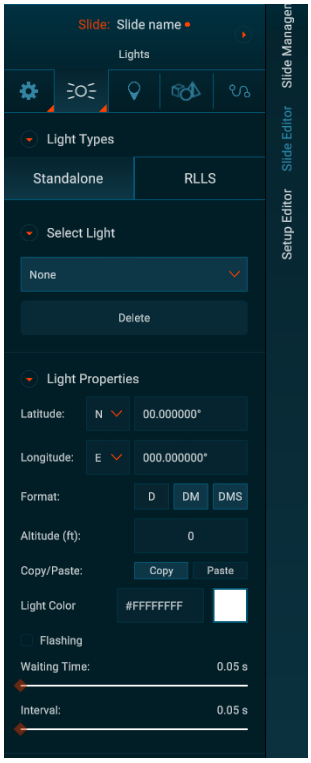


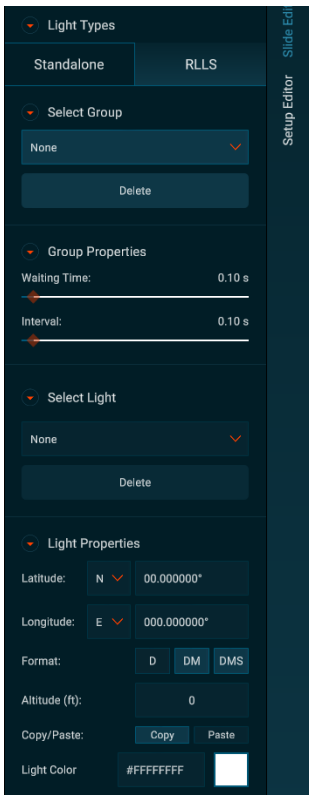
4. Aircraft Applicability – You can assign specific aircraft for which the slide is applicable.



   Note: No selection is equivalent to applicability All.
5. Camera –You can set and save the active camera to act as the starting view of the slide on the initial load.
6. Description –You can add a specific slide description that will appear at the top of the slide.
7. Voiceover –You can insert a text to be read-out-loud by the application. This will add the voiceover feature to the slide.
8. Environment – You can set the local time, date, and choose one of the weather presets.
   Note: Without specifying the time/date will open at the current local time/date of the user's device.
9. Attachment – You can attach and upload an image or PDF document to supplement the slide. This will add the attachment feature to the slide.

3.8 SLIDE EDITOR – LIGHTS TAB





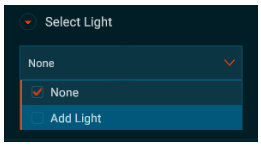
The Lights tab has tools for adding lights to the scene.

There are two types of lights that can be created, standalone and RLLS.

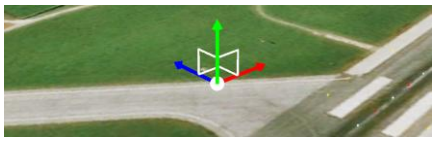
The standalone lights exist by themselves, in user-defined color, and can be set to flashing.

The RLLS lights have similar properties with the standalone lights, and can hold multiple lights in a single RLLS group. These lights are automatically set to flashing and waiting time / interval properties apply to the whole group.

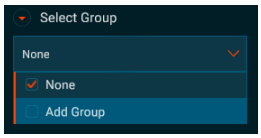
To add a standalone light in the scene, open the dropdown list and choose Add Light as shown below.

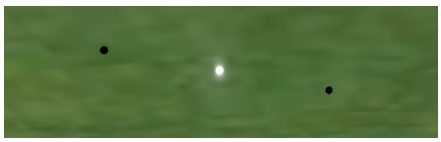


Then, click on the terrain in the scene where you wish to position the light. As you do that, the light will be created and selected.

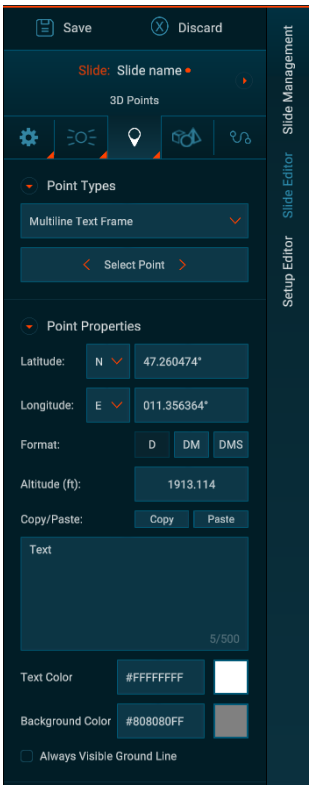


To add an RLLS group, first, you need to add a Group, and then add individual lights in sequence to that group.





3.9 SLIDE EDITOR – 3D POINTS TAB



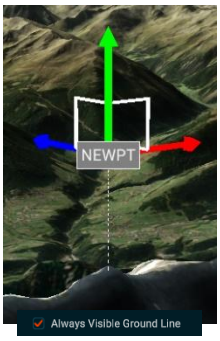
3D Points are 'labels' with text that can be positioned on the scene and fixed in the 3D space. They are used to mark or highlight certain positions on the scene and provide additional brief information.

Their main properties are:

1. Latitude
2. Longitude
3. Altitude
4. Text
5. Color

The image above shows an example of how 3D Points may be used in the scene.

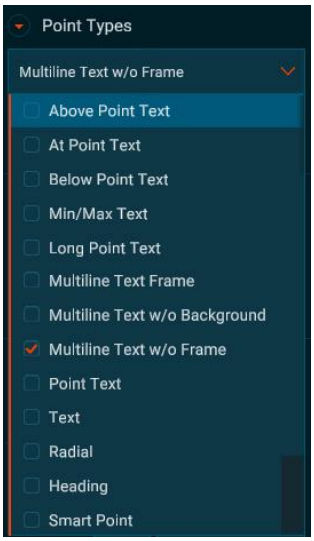
Note that the 3D Points just like most of the objects on the scene have a property called Copy/Paste, which is used to quickly transpose one object's location to another object.



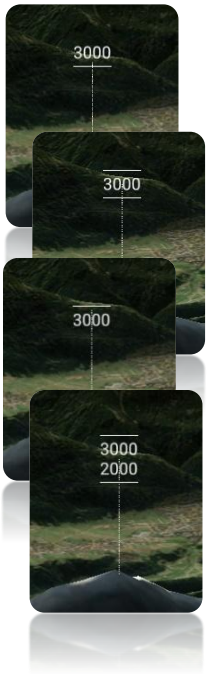
Always Visible Ground Line feature, if turned on it will project a dashed line from that object's center to the ground.

To create a 3D Point in the scene:

1. Right-click on the scene position where you want the point
2. From the context-menu, go to Create Point option, and select the desired point type.



There are 13 point types from which you can choose.

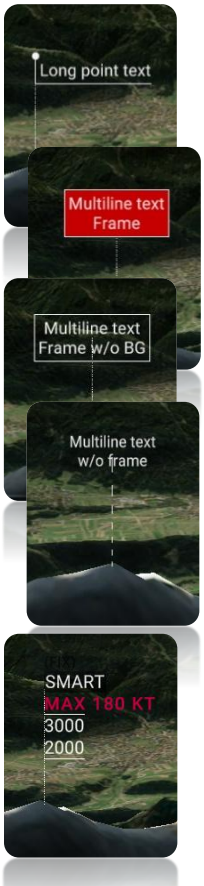


Above Point (At or above altitude)

At Point (At altitude)

Below Point (At or below altitude)

Min/Max Text Point (Between altitudes)



Long Point text (Underlined text)

Multiline Text Frame

Multiline Text w/o Background

Multiline Text w/o Frame

SMART Point with
SPD LIM & ALT Constraints

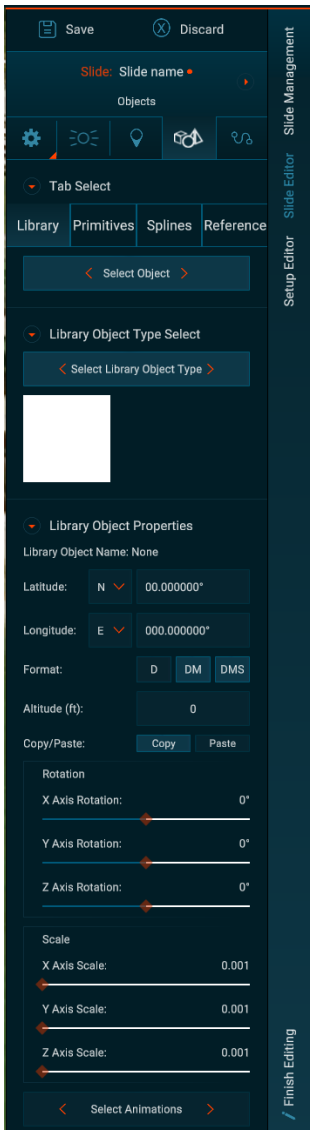
Point Text Point

Text Point

Radial (see Magnetic Variation above)

Heading

3.10 SLIDE EDITOR – OBJECTS TAB

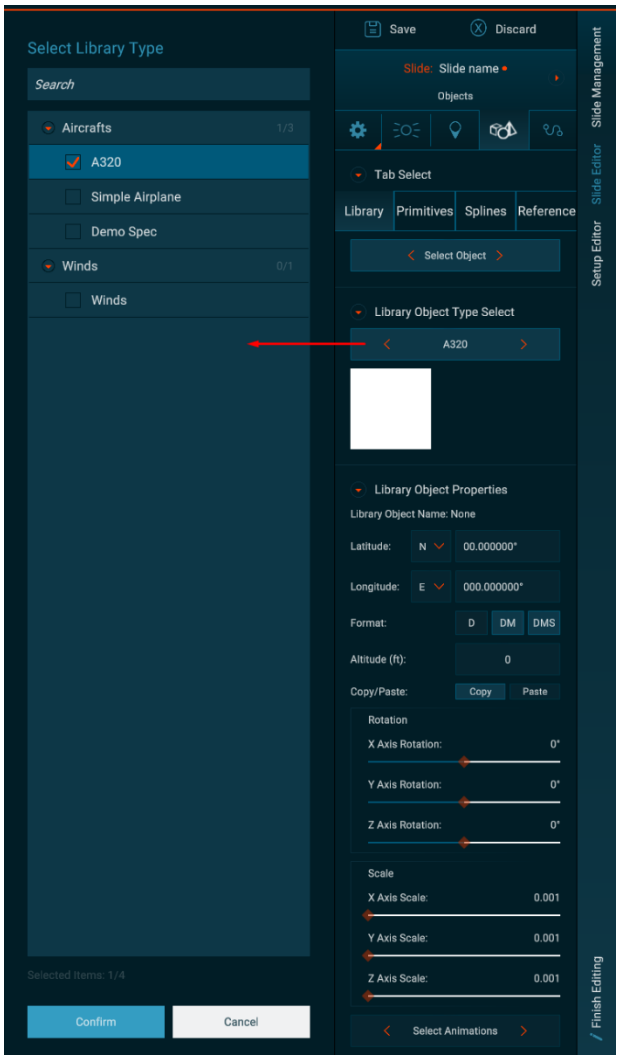


The Object tab contains tools for adding physical 3D objects to the scene. You have four distinct tabs to choose from:

1. Library – containing pre-made 3D objects stored on the server that you can download on the scene.
2. Primitives – list of primitive objects such as boxes, spheres, pyramids, etc., that you can create on the scene.
3. Splines – you can draw visible 3D lines, straight or curved on the scene to depict taxi routings, flight paths, or other types of visualizations.
4. Reference – where you can add or create reference fixes on the scene and further add elements to the fixes such as radials, arcs, holding, etc.

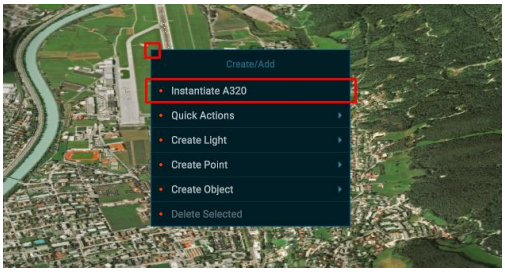
Each of these tabs has its own set of properties to help you finetune and modify the objects.

3.10.1 Library objects

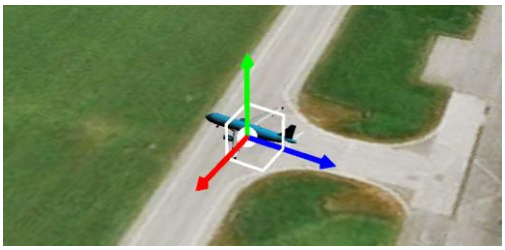


To add an object from the library, click on the Library Object Type Select, choose an object from the list and click Confirm. This will ARM the object in the tool.

Next, you can right-click anywhere on the scene to open the context-menu from where you can Instantiate the object.



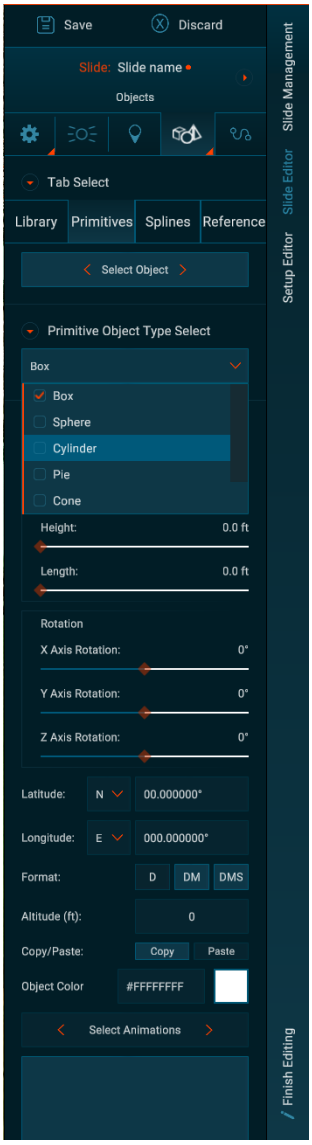
This will download and position the object on the scene.



Using the Library Object Properties you can now modify and finetune the object parameters on the scene.

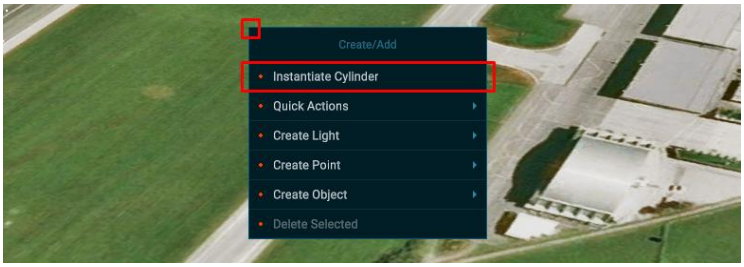
Note: The object library is maintained by Synapse Aviation and it is intended to offer a great variety of pre-made objects. If you require a specific object not included in the library, please contact the Synapse Aviation team.

3.10.2 Primitive objects

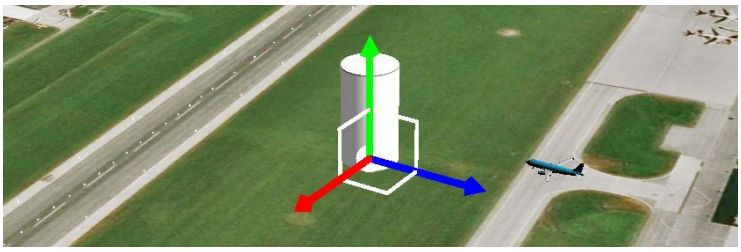


To create a primitive object from the library, click on the Primitive Object Type Select, and choose an object from the list. This will ARM the object in the tool.

Next, you can right-click anywhere on the scene to open the context-menu from where you can Instantiate the object.

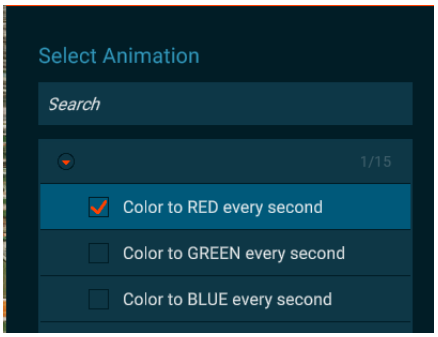


This will add the primitive object to the scene.



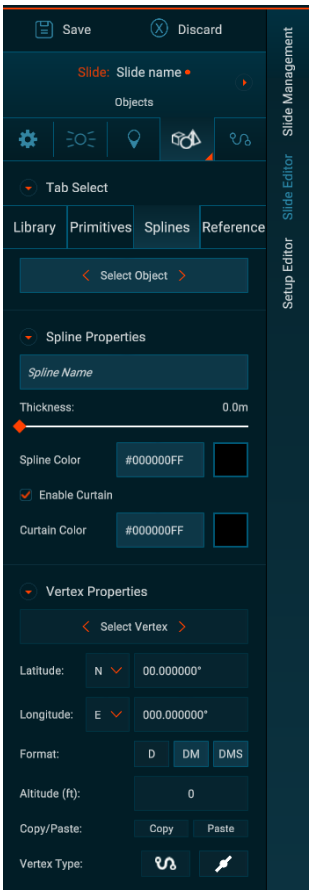
Using the Primitive Object Properties you can now modify and finetune the object parameters on the scene.

You can also add one or more of the pre-built animations to your objects by clicking on the Select Animations button to choose from the list.

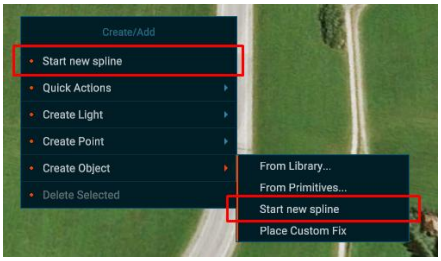


Note: The choice of animations is managed by Synapse Aviation.

3.10.3 Spline objects

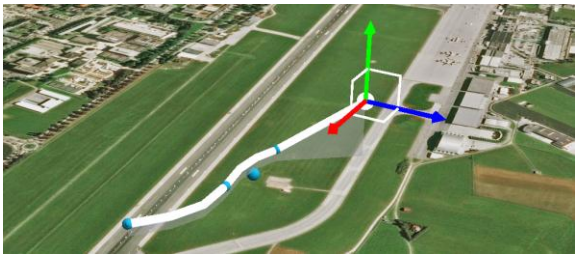


To create a spline object, you can select the Splines tab and that will automatically ARM the quick action button in the context-menu. You can also navigate to the context-menu > Create Object > Start New Spline to do the same.

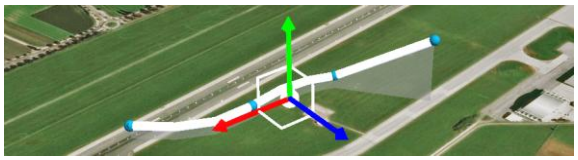


This will position the initial point (vertex) of the spline on the terrain. You can now continue drawing the spline on the terrain. Each click on the terrain will create a new point. To finish the spline and exit the drawing mode, you can right-click anywhere on the screen and click Finish Spline from the context-menu.

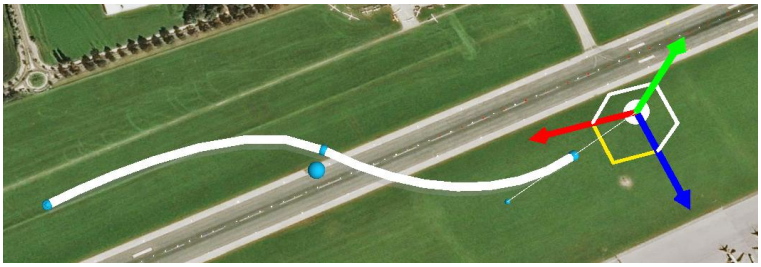
All points of the spline are visible and depicted with blue spheres. Each can be selected and further modified.



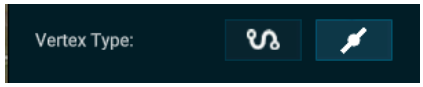
If you wish to edit or delete the entire spline, you need to select the 'master point' indicated by a larger sphere.



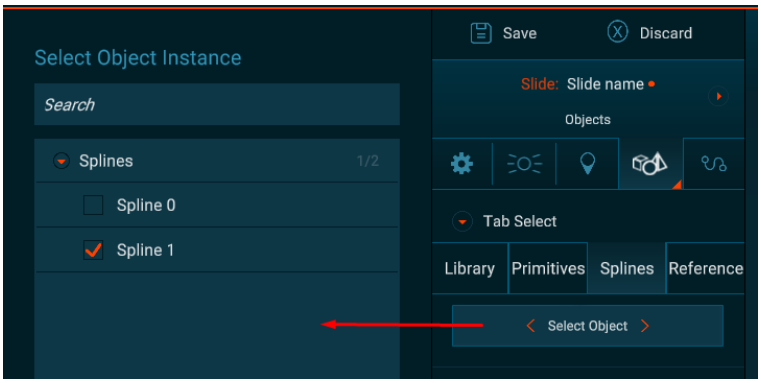
To create a smooth (curved) transition between consecutive points, you can hold the CTRL key while drawing the spline, and click and drag your mouse until you get the desired curvature.



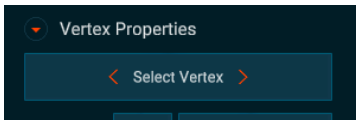
Alternatively, you convert any of the spline points to show the curvature handles on the Vertex Type buttons:



If you are working with multiple splines at once, you can quickly find the desired spline via the Select Object button.

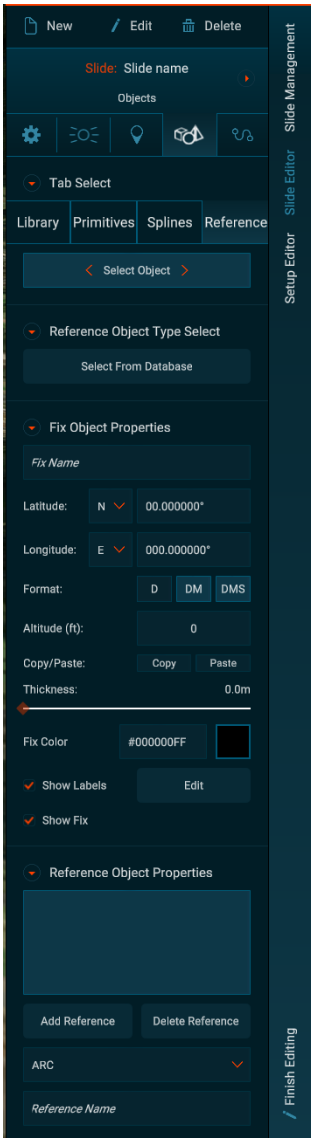


You can do the same for spline points (vertices) by opening the Select Vertex window.



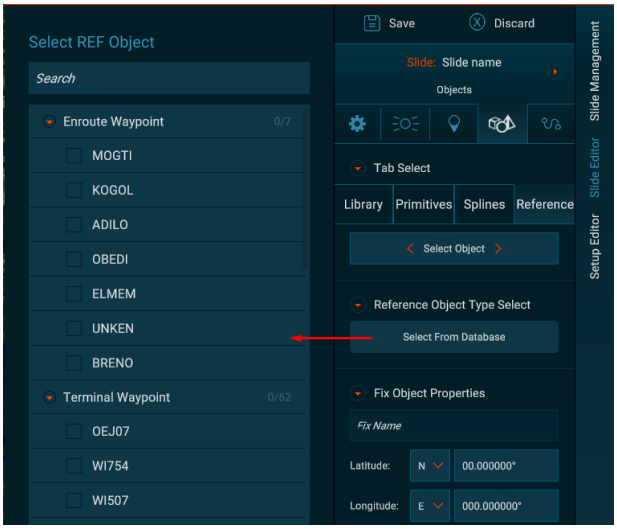
The properties will also allow you to modify the spline thickness, change the color of the spline and its curtain (if enabled), and more.

3.10.4 Reference objects

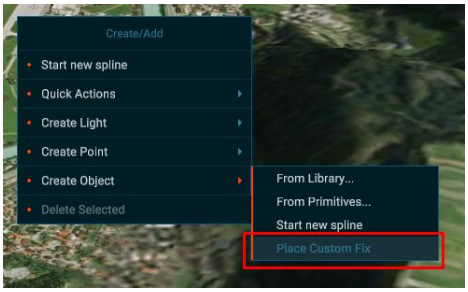


The reference object refer to Fixes and is used to import existing fixes from the aeronautical database (waypoints, navaids, etc.) or create new custom fixes.

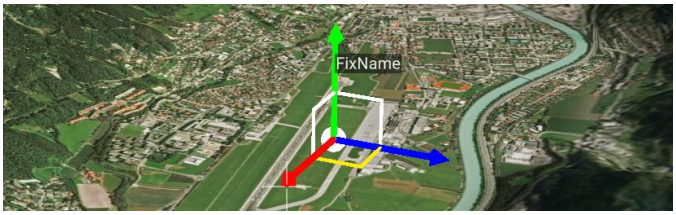
Importing existing fixes is done by clicking on the Select From Database list.



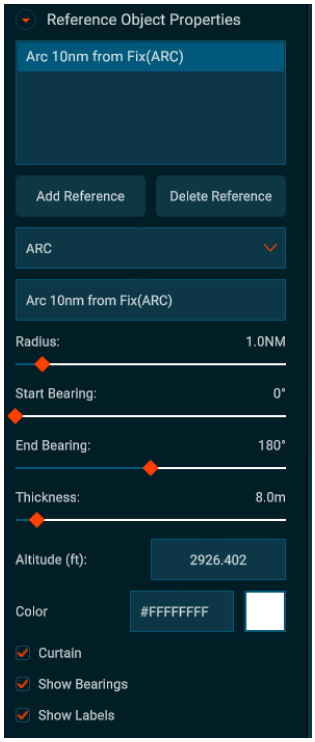
To create a new reference fix, you can select the References tab that will automatically ARM the quick action button with 'Place Custom Fix' in the context-menu. You can also navigate to the context-menu > Create Object > Place Custom Fix button.



Placing a new reference fix will create new pix at the selected position.

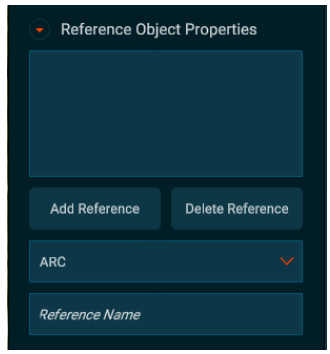


Using the Fix Object Properties, you can change the name of the fix, alter its position, height (altitude), thickness, color, hide certain components of it, and more.



Additional reference objects

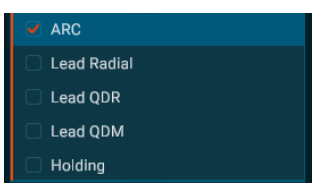
You can use the Reference Fix to add more reference objects to it via the Reference Objects Properties section.



With the reference fix selected, select the type of additional object you wish to create, give it an optional name and click on the Add Reference button.

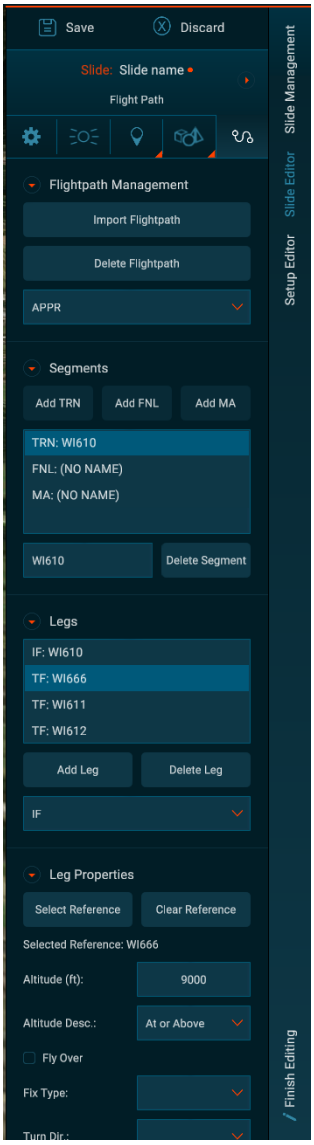
The newly created object (ARC in this example) looks like this:

Using the new properties that open when the ARC reference is selected from the list, you can modify its parameters to match the desired outcome.



Other types of additional reference objects include the ARC, Lead Radial, Lead QDR, Lead QDM, and Holding.

3.11 SLIDE EDITOR – FLIGHT PATH WIZARD TAB



The Flight Path Wizard tab allows you to create or import flight paths in the scene.

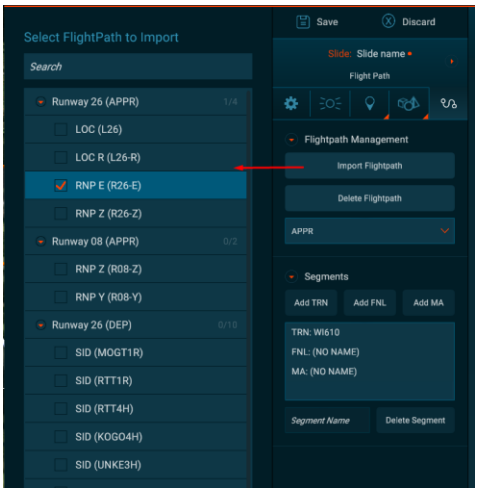
IMPORTANT: Basic knowledge and understanding of Path Terminators and ARINC 424 coding principles are required.

There are two types of flight paths that you can add, APPR – approach or DEP – departure.

Note: You are limited to creating only one complete flight path using the wizard per slide, either an approach or departure. This limitation is planned to be removed in the future upgrades of Airport Briefing.

Import existing flight path

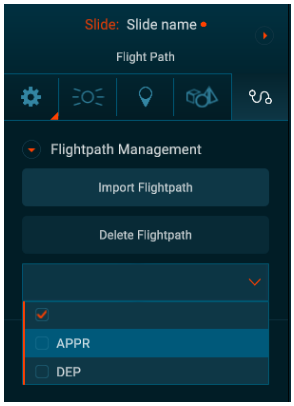
To import an existing flight path to the scene use the Import Flightpath button and select the desired flight path from the list.



The import will automatically populate the required flight path segments and their respective legs with details, based on the ARINC 424 coding principles and Path Terminators.

Creating or importing a flight path on the slide will automatically activate and add the simulation feature to the slide.

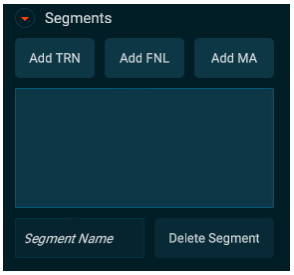
Create a new approach



If you wish to create a slide specific to OEI operation, you can create it under the OEI section of the main menu.

First, you need to select the type of flight path to be created.

Selecting APPR – Approach type will present three distinct types of approach segments:

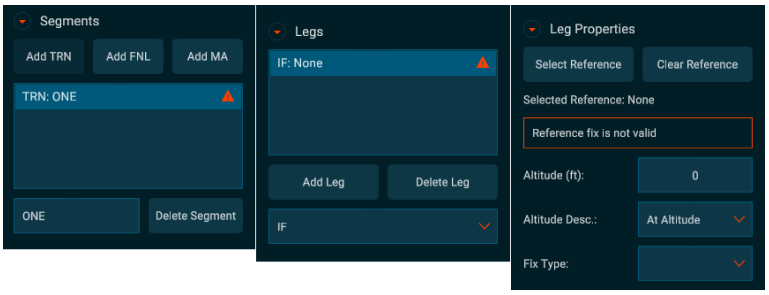


1. TRN – Approach Transition (optional)
2. FNL – Approach Final (required)
3. MA – Missed Approach (optional)

   The key difference between the three types of segments is the color in which they are depicted on the scene and the fact that MA is ascending upwards.

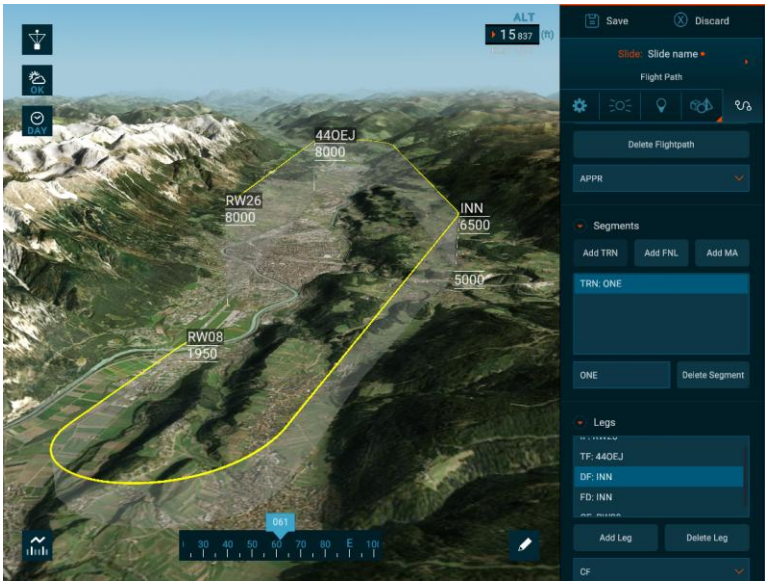
To start building the approach path:

1. Add a TRN or FNL segment.
2. Add your first leg to the selected segment.

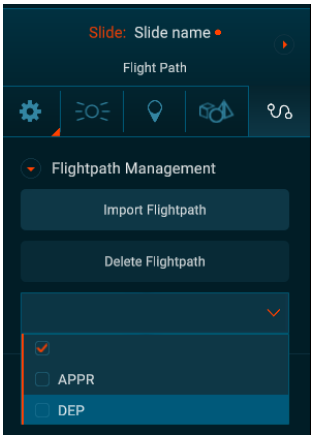


3. Select an existing reference fix via the Select Reference list. This will be the starting (Arrival or Initial Fix) of your approach.
4. Set the initial altitude and then add your next leg.
5. The following example has 5 transition legs:
   a. IF (Initial Fix)
   b. TF (Track to Fix)

c. DF (Direct to Fix)
d. FD (Distance from a Fix)
e. CF (Course to Fix)



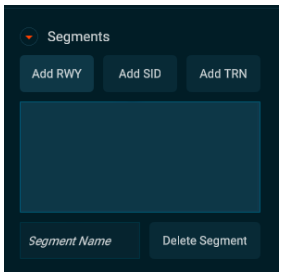
Create a new departure



If you wish to create a slide specific to OEI operation, you can create it under the OEI section of the main menu.

First, you need to select DEP as a flight path to be created.

Selecting DEP – Departure type will present other three distinct types of departure segments:

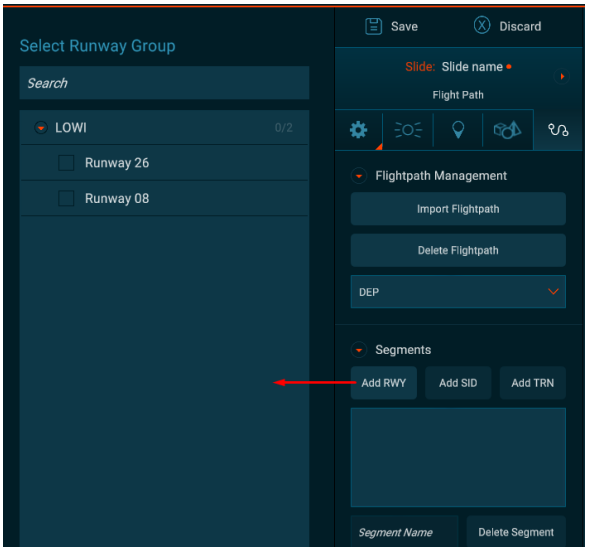


4. RWY – Runway (required)
5. SID – Common departure (required)
6. TRN – Departure transition (optional)

The key difference between the three types of segments is the color in which they are depicted on the scene.

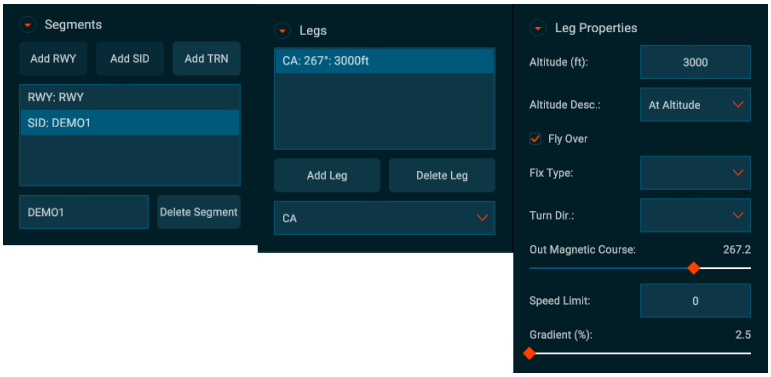
To start building the departure path:

6. Add a RWY (runway) by choosing it from the list.



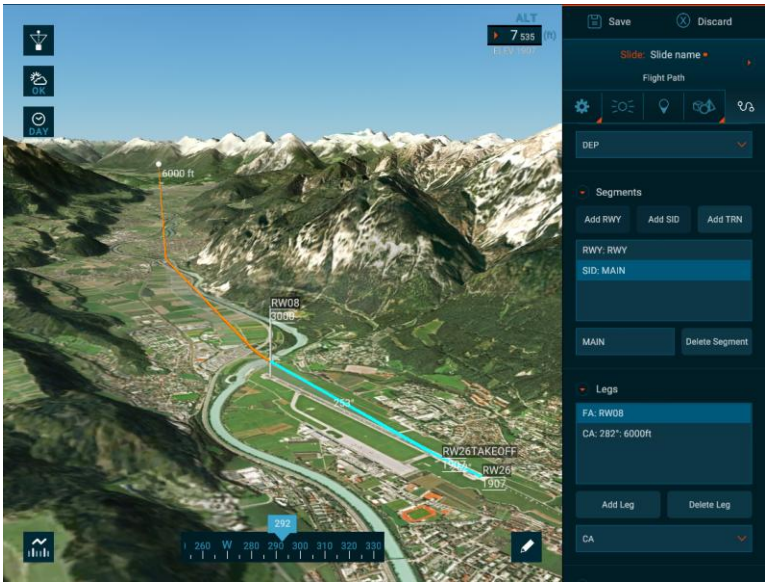
This will create a flight path made of three legs, over the selected runway and ending by default at 400 ft above the departure end of the runway. If required, it is permitted to modify the legs settings.

7. Add an SID segment.
8. Select the SID segment and add your first leg, as in this example an CA leg.



9. Depending on the leg (PT) type, you may be required to select a reference fix, or in this example, an altitude as the leg is CA – Course to Altitude.
10. Set the course and the initial altitude and then add your next leg. Repeat this process by adding as many legs as required until the flight path is complete.
11. The following example has 2 segments and 5 legs:
    a. RWY: IF (Initial Fix)
    b. RWY: TF (Track to Fix)

c. RWY: TF (Track to Fix)
d. SID: FA (From Fix to Altitude)
e. SID: CA (Course to Altitude)



4 APPENDIX 1 – VIDEOS

4.1 AIRPORT BRIEFING 3 - INTRODUCTION TO 3D SCENE EDITOR

Video url: https://youtu.be/q4mvzfJ7mII

4.2 AIRPORT BRIEFING 3 - 3D SCENE EDITOR / GENERAL TAB

Video url: https://youtu.be/o8B3qK86_AU

4.3 AIRPORT BRIEFING 3 - 3D SCENE EDITOR / LIGHTS TAB

Video url: Reserved

4.4 AIRPORT BRIEFING 3 - 3D SCENE EDITOR / OBJECTS TAB

Video url: Reserved

4.5 AIRPORT BRIEFING 3 - 3D SCENE EDITOR / FLIGHT PATH WIZARD TAB

Video url: Reserved