

Lorby Live Traffic Documentation

The screenshot displays the Lorby Live Traffic software interface. The top window shows a list of flights with columns for Flight, Type, Airline, From, To, Bearing/Heading, Distance, and Altitude. The flight UAL194 is highlighted. Below the list are settings for Mode (Live, Simulator AI), Datasource (OpenSky Network, Real Traffic), and various filters. The bottom window shows a 3D simulation of a Lockheed Martin Prepar3D v4 aircraft flying over a landscape, with a flight tracker overlay showing the flight path and details for UA194/UAL194.

Flight	Type	Airline	From	To	Bearing/Heading	Distance	Altitude
DLH4RY	A346	Lufthansa	???	???	309/351°	2 nm	3001 ft
VLG1BER	A319	Vueling Airlines	???	???	268/79°	3.2 nm	5082 ft
UAL194	B769	United Airlines	???	???	355/91°	6.7 nm	8048 ft
DLH1822	A320	Lufthansa	Bremen Airport	Munich International Airport L...	263/258°	9.1 nm	6527 ft
DLH9YW	A321	Lufthansa	Frankfurt International Airport	Padova Airport (Gino Alessi ...	68°/177°	10.2 nm	3838 ft
DLH5CF	A346	Lufthansa	???	???	72°/8°	10.6 nm	2725 ft
DLH03C	B748	Lufthansa	???	???	113°/260°	10.9 nm	5420 ft
EZ145WM	A320	easyJet	Bristol Airport	???	197°/213°	14 nm	37384 ft
SWR115M	A320	Swiss International Air Lines	???	???	90°/102°	16 nm	4326 ft
AZ4400	A320	Alitalia	???	???	280°/63°	16.5 nm	36718 ft

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1. Overview

The LorbyLiveTraffic (LLTX for short) is a simple application that connects to online services to provide live, real world AI traffic in your simulator. It will also add randomized helicopter, GA and military traffic if desired.

LLTX can operate in two different modes:

1. **Live**

The aircraft are generated where they currently are in the real world and follow the same flight path. They will taxi in to a gate if you want that, and they will take off. They cannot taxi out.

2. **Simulator AI**

Aircraft are generated as native simulator AI following a flight plan. This will not be the same route as in the real world, but in this mode the aircraft interact with you, with each other, and with ATC.

Please note that this has nothing to do with classic BGL based AI traffic. The AI aircraft are still created “live” by LLTX , and there are two options to make them fly plausible routes instead of great circle.

As a third option, when you don't select an datasource, LLTX will not create any live AI, but only randomized helicopters, GA and military traffic.

Feature list:

- AI are continuously monitored and guided according to the live online data
- Randomized helicopters, GA and military traffic.
- View the AI in Google Earth

- Several databases are provided that match real aircraft to the AI model libraries of
 - MyTraffic 6 Professional
 - UltimateTraffic 2 and UltimateTraffic Live
 - WOAI
 - BVAI and FLAI
 - AIG AIM OCI
- The model library assignments can be edited, and you can create your own AI model database

Important: The LorbyLiveTraffic does not contain any AI aircraft models. If you want to see real-world liveries and aircraft displayed, you will have to acquire a suitable model livery (like the above mentioned MyTraffic, Ultimate Traffic, WOAI or BVAI/FLAI)

You can click on the pictures with the product icons to either go to the shop where the payware products are sold, or to the website where the free ones are available for download.

Even more important: when using LLTX for the first time DO NOT use the “Add models to database” controls - DO NOT provide a path to your AI SimObject and DO NOT PRESS “Scan folder”. Just select the correct database on the top left side and close the dialog.

2. Installation

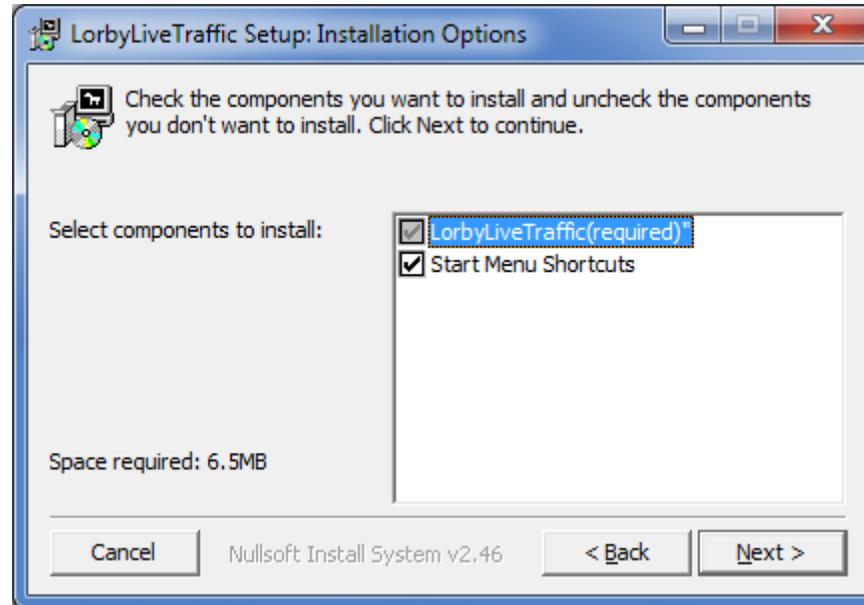
2.1 Distribution

LorbyLiveTraffic is distributed as self-extracting installer packages.

2.2 Installation

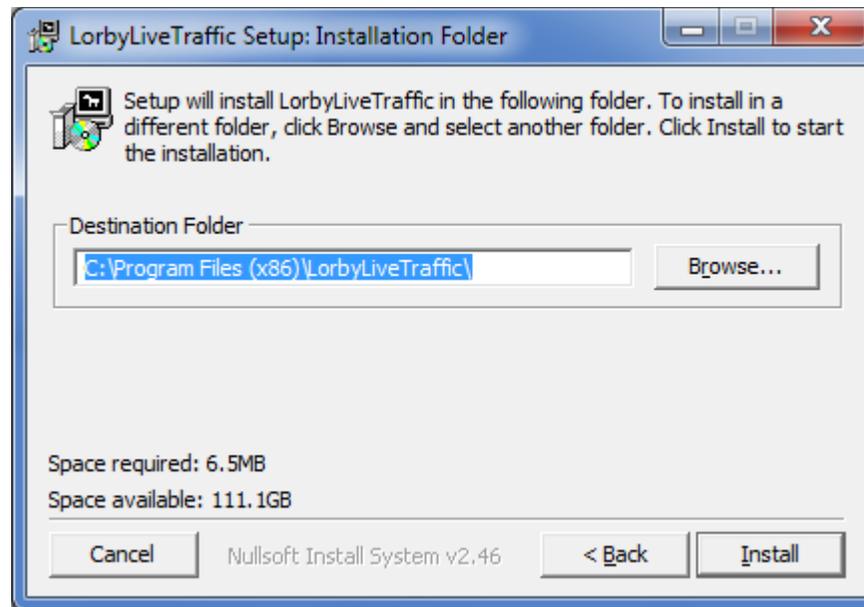
- Please use the installer intended for your sim:
 - FSX Acceleration boxed or dual install with SE: *LorbyLiveTraffic_Install.exe*
 - FSX SE stand alone: *LorbyLiveTraffic_SE_Install.exe*
 - Prepar3D V2.5: *LorbyLiveTraffic_P3D_Install.exe*
 - Prepar3D V3.x: *LorbyLiveTraffic_P3D_V3_Install.exe*
 - Prepar3D V4.x: *LorbyLiveTraffic_P3D_V4_Install.exe*

Running the installer:



On the first page you may select optional installation targets:

- “Start Menu Shortcuts”: LorbyLiveTraffic will be added to your Start Menu (advised)
- On the next page you choose the installation path for LorbyLiveTraffic.
THIS IS NOT THE PATH TO YOUR SIMULATOR DIRECTORY, IT IS USED EXCLUSIVELY FOR LorbyLiveTraffic!



- Selecting "Install" will begin the installation

2.3 SimConnect

LorbyLiveTraffic relies on SimConnect being installed correctly on your computer. SimConnect is a part of FSX/P3D and it is set up automatically when you first install the simulator. To save you the trouble of installing the SDK, the necessary SimConnect DLL for each sim is shipped inside LorbyLiveTraffic and gets deployed in your Temp folder when LorbyLiveTraffic is run.

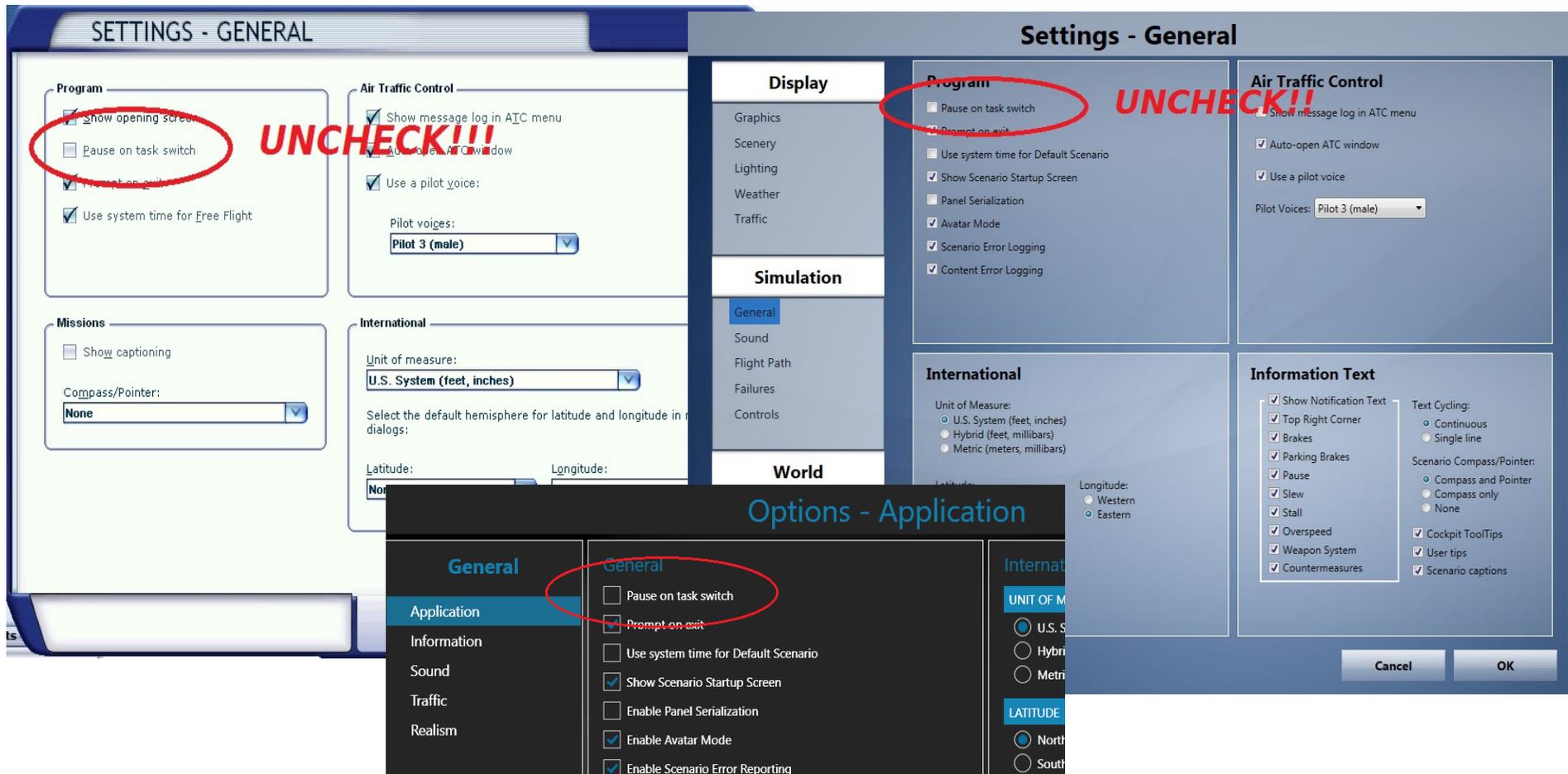
FSX only: In case SimConnect is not installed, and LorbyLiveTraffic does not start up, giving you an error message instead, you will have to install SimConnect manually:

- FSX boxed users can find the “SimConnect.msi” installation file either online or in the FSX SDK folder “..\Microsoft Flight Simulator X SDK\SDK\Core Utilities Kit\SimConnect SDK\lib”
- FSX SE users find it here: “..\Steam\steamapps\common\FSX\SDK\Core Utilities Kit\SimConnect SDK\LegacyInterfaces\FSX-SP1\SimConnect.msi “

SimConnect networked: it is possible to run LorbyLiveTraffic on another computer, but considering the huge amount of data that it needs to exchange with the sim, it is not advisable to use a configuration like that.

2.4 Pause on task switch

LorbyLiveTraffic is a separate application, a task independent from your simulator. It is therefore extremely important, that you switch the “Pause On Task Switch” option OFF in your simulator.



3. Operations

3.1 Introduction

The LorbyLiveTraffic is a research experiment to find out what is possible with online air traffic data today in the classic simulator environment.

The LLTX uses online data to create AI at runtime, where the aircraft really are in the real world, in two different modes:

- “Live AI” mode will constantly update their positions, but won't interact with ATC and won't be able to taxi out, whereas
- “Simulator AI” mode creates standard simulator AI flights from departure to destination airport. These will interact fully with ATC, and they travel “gate – to – gate”, including taxiing and parking.

For this, the sophisticated AI logic is leveraged that is inherent in the ESP based simulators FSX, FSX SE and Prepar3D. This logic makes it possible to move the AI fluently in Live AI mode, even though the position updates only happen at best every 15 seconds.

On top of this, LLTX can create randomized helicopter, GA and military traffic:

- Helicopters fly between the helipads in the scenery and virtual helipads, that you can add yourself.
- GA fly between small, civilian airports
- Military planes fly between any airports that have parking spots marked “military”.

A few considerations and observations:

- The data that is available online is far from perfect. It is often inaccurate, incomplete or it suddenly stops entirely
- **Due to this fact, there are limitations to what the AI can do in live mode in Live AI mode. In most cases, transponders are turned on too late / switched off too early for the logic to have any chance at following the actual taxi paths. So for taxiing in, a custom taxi path logic is used, and taxi out doesn't happen at all.**
- As the aircraft that are depicted in the sim are still AI, they will react in the usual fashion to these inconsistencies – they will float endlessly, crash or disappear when you least expect it
- Especially in live mode, when getting closer to the ground, the inaccuracies become obvious. So a function has been included to automatically remove aircraft that are below a certain altitude.
- The altitude provided by the online services is corrected for the local air pressure. If you are watching the aircraft near a specific airport, you will notice them being either too low or too high on their glidepaths. This can be adjusted by supplying the local QNH of the airfield to the app, which will then correct the altitudes accordingly. The app will try to do this automatically by querying the NOAA weather services in the background, but if this fails, you can adjust the value manually too.
- It happens quite often that the online aircraft data is lost before the aircraft even touches the ground. This is unfortunate but nothing can be done about it. The most probable cause could be the privately owned ADS-B receivers which provide the bulk of the data. These seldom are in close proximity to the airfield, so if the aircraft passes below a certain angle, there is no more data.
- Many areas of the earth still aren't part of these networks. There are large patches which do not show any traffic at all, although there are several large airfields in them.

IMPORTANT:

This app was developed to work with the current implementation of the online services mentioned above.

LLTX may stop working with no advance notice if said online services decide to change or shut down the mechanisms that provide the data for this application.

No support will be provided by LORBY-SI and no promises can be made that this app will be updated at any point in time to remain compatible.

3.2 A note on ground traffic in Live Mode

On most airports that LLTX has been tested with the online data coverage was not sufficient to control AI aircraft on the ground. This is mostly due to two factors:

1. The data stream depends on the aircraft's transponder being switched on. On most airports this is not the case as long as the aircraft is on the ground – the transponder is switched off after landing and switched on again during the takeoff checklist. Of course there are some airports where the transponder is supposed to be on for ground ops too, but there is no way one can rely on this. So there plain and simple is no positional data for ground traffic that could be used.
2. Especially with the free datasource, the transponder signal is not picked up below a certain altitude. That is because the ADS-B receivers are operated by private persons, who may live near the airport but of course not right on it. So at a certain point the data stream is lost, even if the transponder is indeed switched on.

You can see both issues in effect even on FlightRadar24 – just observe the traffic close to a major hub like EDDM – you will notice quite a few crazy movements on the ground (and even in the air). These seem to be caused because FR24 is anticipating the movement of the aircraft for lack of actual data – with sometimes very wrong results.

Especially the fact that the transponders are mostly turned on just before takeoff makes it impossible to anticipate a taxi route from a gate to the runway. There is no way of knowing in advance when and where the transponders will come on.

These problems affect the LLTX live mode in just the same way as they affect for example FR24. To counter this, the LLTX app uses its own internal coding and logic:

- Landing aircraft will disconnect from the data stream and touch down on the most plausible runway on their own.
- After landing, **aircraft will taxi in** to a randomized gate of suitable size and airline code, using a calculated route. **“Delete aircraft below...” must be set to 0 for this to happen!**
- **Aircraft will not taxi out.** The best that LLTX can do is to create the aircraft on the runway right before take off. In many cases this will result in a nice takeoff run. But if the data is not plausible, the aircraft will instead be created en route and already in the air.
- Aircraft will be parked at gates that suit their size and airline code. Please note that gate codes are not very common, especially on default airports. The gate is chosen either at random (taxi in) or by the simulator itself (static aircraft)

Since this action happens under control of the simulator AI logic, it is prone to conflicts between the simulated movements and the real-world data. Aircraft taking off on occupied runways will be quite common, because AI often need too much time to vacate them.

These advanced actions will only take place in a radius of 20nm around your own position, and only if the aircraft are in range of the lower altitude limit, if you are using it.

3.3 Starting the application

- Start your simulator
- Start your flight, wait until the simulator has finished loading
- Start the LorbyLiveTraffic app
- When first starting the app, click on “Manage Model Database” and select the correct database for your AI product
- Click on “Connect”
- Be patient – the LLTX will wait for two full update cycles from the web source until it starts displaying aircraft.

If you have selected a refresh rate of 15 seconds, you will initially have to wait for at least 30 seconds.

The aircraft displayed in you simulator are lagging behind their real-world counterpart by the refresh rate of **15 seconds** – the app needs this time to receive the next waypoint for the AI model. **After just having started the app, you will have to wait at least double that time until things start to happen!**

Depending on network lag or accuracy of the data, not all information is available at all times. Sometimes AI models may lose connection to their real-world “leaders”, for example when the aircraft leaves the coverage area of the online service or if the online service is not updating the data anymore.

In many cases the online sources do not provide all the information that would be necessary to fill all data fields in the app. This is not a malfunction, it is just a fact that especially the free online sources do not have all the data required or the coverage that is desirable.

Elements of the Main Window explained:

- **Scenery database clickspot:** LLTX needs a database compiled from your scenery library to function. Click on the globe symbol every time you add or remove scenery from your library. See also chapter 3.10



- **Buttons “Connect” and “Disconnect”:** with these you control the connection to your simulator and to the selected datasource. The **checkbox “Connect automatically”** will establish the connection to the simulator as soon as it is available.
- **Click spot “OPENSKY NETWORK” / “RealTraffic”** will open your internet browser and navigate to the respective Website of the data providers.
- **Main List:** The main list displays all AI traffic inside the selected radius around your current position in the simulator. This list can be sorted by clicking on the column headers.
- **Section “Aircraft Model Database”:** Shows the model database currently in use, button “Configure” will open the dialog to assign and manage the aircraft models that are used in the sim.
- Button **“Google Earth Live View”:** will open Google Earth and display the current air traffic on the map. This can be used over the network too, by using a shared folder.
- Button **“Taxi Guidance”:** will open the LLTX visual taxi guidance dialog.

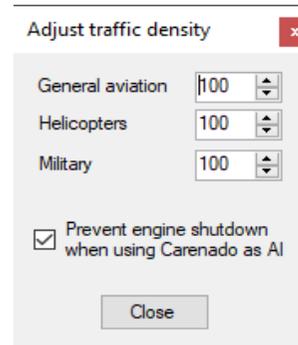
- Selection “**Mode**”: select the desired operating mode here:
 - “**Live**” if you want every aircraft to fly where they are in the real world
 - “**Simulator AI**”: if you prefer the in-sim AI that interacts with ATC.
 - “**Hybrid**”: is a combination of the two. On the ground, on approach and while departing, the aircraft are normal simulator AI that interact with ATC. Once they are en route, they are switched to live mode and follow the real world route (albeit with a significant delay).

With the cog wheel buttons next to each option you can access the individual settings that pertain to that mode

- Selection “**Datasource**”: select the desired data source for the flights
Select “No online traffic” if you only want to see the randomized helicopter, AI and military traffic.
- Slider “**Detection Range**”: adjusts the range in which AI will be acquired online
- Section “**Traffic parameters**”
 - Checkbox “**Fill in traffic**”: in those cases where the datasource is not providing enough information about an aircraft, activating this checkbox will instead create a random aircraft of the same airline. In “Simulator AI” mode a random flight plan is supplied too, which is not in any way realistic.

- Checkbox “**Lower altitude limit**”: when this is checked, only aircraft that are above you or less than 15000ft below you will be created. Example: when you are flying at 31000ft, other aircraft will only be displayed when they are at 16000ft or above
- Checkbox “**Auto range**” will automatically adjust the slider between 15 and 80 nm depending on your altitude
- Checkbox “**Remove Default liveries**”: when this is checked, only aircraft that could be matched to a model in the Aircraft Model Database are displayed
- Checkbox “**Add static aircraft**”: this will populate airports with a randomized collection of aircraft likely to be there. The numerical control sets the percentage of gates that you want to be occupied. Click on the cog wheel button to switch between the gate parking codes in the sim as source for the static aircraft, and using the current live traffic as source for the static planes.
- Numeric control “**Parking duration**” (minutes): after an aircraft has landed, it will be parked at a gate and deleted when this time in minutes has passed. This also controls the static aircraft mentioned above
- Checkbox “**Add offline GA, helicopter and military traffic**”: this will add randomized traffic to your simulator. This traffic is using a fully randomized algorithm to decide when and where aircraft will fly, they are not scheduled in any way.
 - Helicopters fly between the helipads in the scenery and virtual helipads, that you can add yourself.
 - GA fly between small, civilian airports
 - Military planes fly between any airports that have parking spots marked “military”.

Click on the cog wheel button to adjust individual levels of traffic:

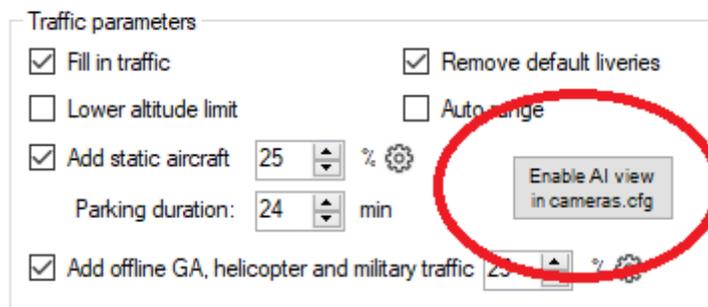


– Button “**Enable AI view in cameras.cfg**”:

This button only appears when the cameras.cfg file of the simulator is not configured correctly to allow LLXT to switch the view to AI planes.

- If you don't want to use the AI view from LLTX, then just leave the button be.

- Otherwise make sure that LLTX has been started “As Administrator”, Connect to the simulator, then click on this button.



- Section “**Weather**“:
 - **Local QNH**”: used to correct the altitude of AI on approach/departure at a certain airport. The app will try to set this to the actual QNH at your location (the real-world value, not the one in the sim!). If this fails and you notice AI coming in too high or too low on the glide path, please enter the correct value manually.
 - Button “**Show METAR**”: will display the current NOAA METAR string.
 - Button “**Set real weather**”: this will try to set the real-world METAR for you current location in your simulator.
 - Button “**Set real zulu time**”: this will query the current UTC timestamp from the Internet and set that time in the sim.
 - Checkboxes “**every 15 minutes**”: this will continuously download the METAR every 15 minutes and update the weather in the sim accordingly and/ or set the current UTC time.
- Checkbox “**Suspend on task switch**”: will disable the main list when you switch to another application, for example the simulator. This can help a little bit with performance.

3.5 Selecting a mode of operation

This is the most important setting, as it determines how the aircraft that are injected into the simulator behave.

3.5.1. “Live” mode

In Live mode, the injected aircraft are under continuous control of LLTX. They will follow the same route that their real world counterpart is flying.

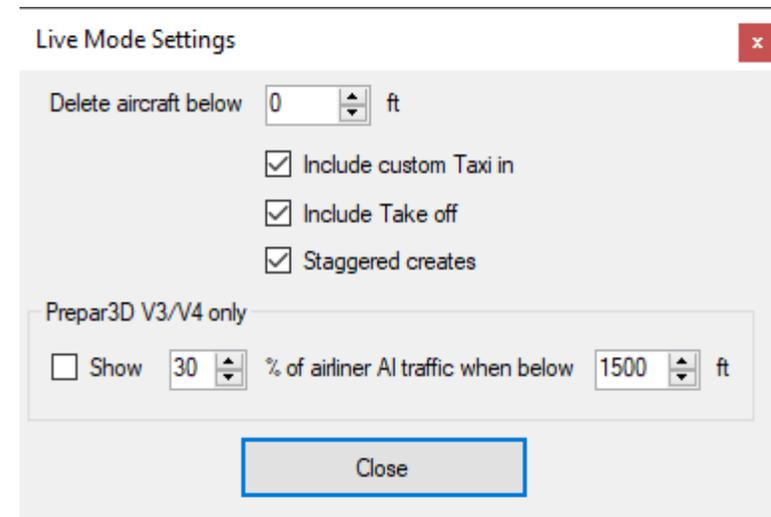
This mode has the highest accuracy, but a drawback: it is not possible to depict traffic taxiing out to the runways, and arriving traffic will taxi in, but not use the real-world gates.

Settings (cog wheel button):

Dial “**Delete below x ft**”: all AI that descend below this level are deleted.

Checkbox “**Taxi in**”: all AI that land properly will taxi in to a randomized gate of suitable size and airline code

Checkbox “**Take off**”: If LLTX picks up the transponder early enough, the AI will take off from the proper runway.



Checkbox “**Staggered creates**”: when activated, this will spread out the creation of the aircraft in the sim over a longer period of time. This can help to reduce stutters.

In Prepar3D version 3 and later you can activate the option “**Show x% of airliner AI traffic when below y feet**”. LLTX will then set your airline traffic slider in the sim to the desired percentage when you are below the threshold, and set it to 0 when you are above it.

3.5.2. “Simulator AI”

In simulator AI mode, the aircraft are created as normal simulator AI but with a flight plan that takes them from/to the same airports as their real world counterpart.

In this mode, the aircraft will behave much like the usual AI aircraft, with the exception that they fly approximately at the same time as their real world partner. So you will have ground traffic in this mode, aircraft will taxi to and from the gates – and they will interact with ATC (and with you).

Unfortunately the data quality concerning the departure and arrival airports is even worse than the movement updates – so please be prepared for surprises and many missing flights.

For example, it happens frequently that a certain flight number reports a previous or completely different departure/arrival airport pair.

Settings (cog wheel button):

The **Flight** section controls how LLTX calculates the routes that the simulator AI will take

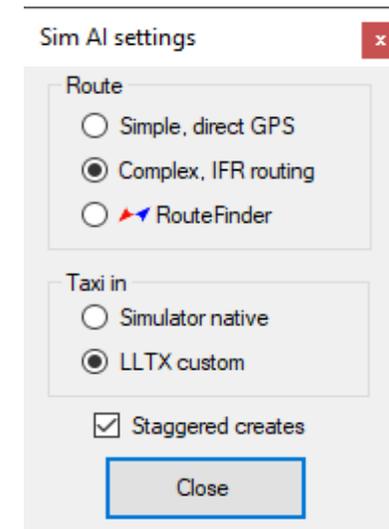
Simple, direct GPS: Aircraft fly directly from A to B

Complex, IFR routing: LLTX uses an internal algorithm to determine a plausible route, using simulator waypoint data.

Route finder: LLTX will open a browser window in the background and uses it to calculate plausible routes.

With **Taxi in** you can select how aircraft should behave when on ground. You can either choose the default simulator taxi behavior, or the LLTX algorithm. The LLTX option is more realistic when aircraft land, roll out and leave the runway, but it can lead to collisions with simulator controlled AI that is taxiing out – and it doesn't work well with the internal ATC of the simulator. This option is recommended only when you use an external ATC program.

Checkbox “**Staggered creates**”: when activated, this will spread out the creation of the aircraft in the sim over a longer period of time. This can help to reduce stutters.



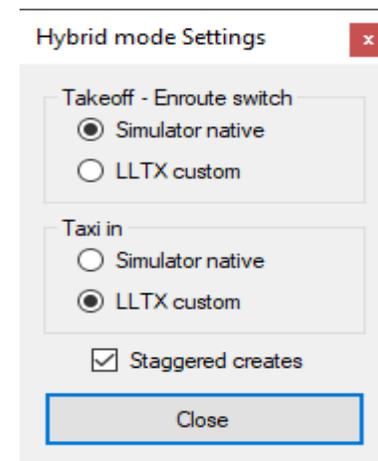
3.5.3. “Hybrid”

This mode is a combination of “Live” and “Simulator AI”. While en route, aircraft will follow the real world route, although sometimes with a significant delay. When on approach, departure and when on ground, the aircraft will be in Simulator AI mode, interacting with ATC.

Settings:

You can select the desired take off and taxi in modes.

The LLTX options are only recommended when you use an external ATC program. They don't interact well with the internal ATC of the sim. Their advantage is smoothness of operation and better roll-out behavior of the AI planes.

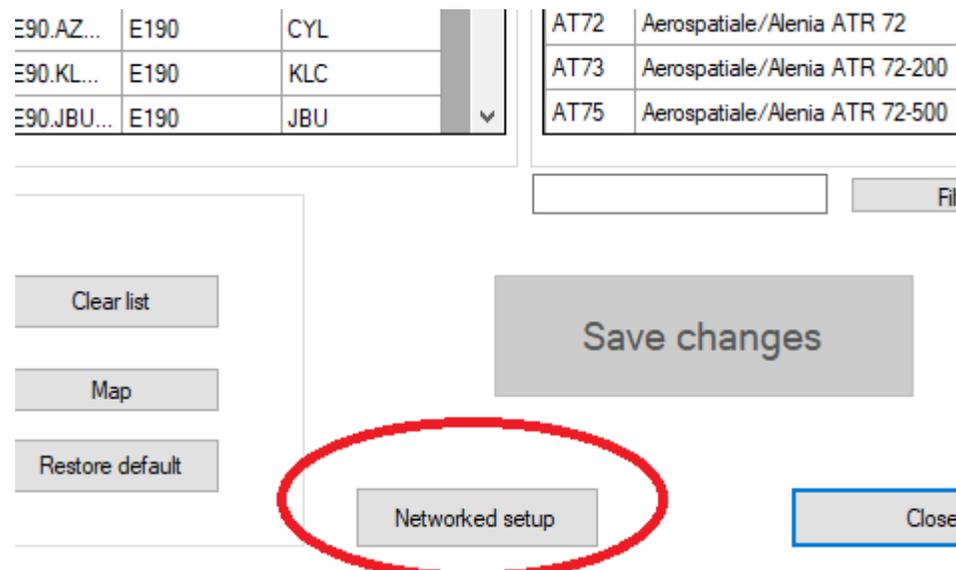


Checkbox “**Staggered creates**”: when activated, this will spread out the creation of the aircraft in the sim over a longer period of time. This can help to reduce stutters.

3.5.4. “Simulator AI” and “Hybrid” networked

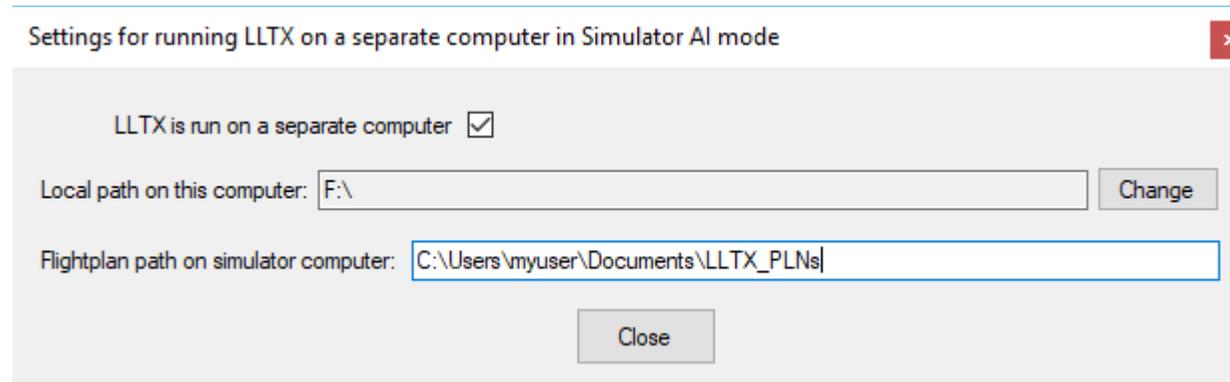
If you are running LLTX on a separate computer, you must tell LLTX where to save the flightplan files for the AI.

On the Database Editor Dialog, click the button “Networked setup”.



- Create a folder on your simulator computer that shall contain the PLN files
Example: **“C:\Users\<<yourname>\Documents\LLTX_PLNs”**
- Share this folder on your simulator computer. Make sure that your LLTX computer has full access privileges

- Map the folder as a network drive on your primary computer, for example as “F:”
- Now make the Settings look like this:



3.6 Selecting a data source

LorbyLiveTraffic can work with two different online sources

1. OpenSky Network

The OpenSky Network provides an online service free for personal use. This service is used to gather the basic flight data, like flight number and current position. Unfortunately this is all information that is available, so **this datasource is unsuitable for Simulator AI or Hybrid mode.**

Because that information is not enough to assign a suitable AI aircraft model in the sim, the LLTX then chooses **a random aircraft of this airline** to get the missing data. If you have changed aircraft models in LLTX so the correct aircraft type is known to the app, LLTX will use that information. The departure and arrival airports will be calculated as well, but they will be wrong most of the time. For the maximum accuracy, you will have to use a RealTraffic client and subscription.

OpenSky has a pretty good coverage, but it is far from complete. You will find many areas where there is no coverage, and as a consequence, no traffic can be displayed for these.

With this datasource, traffic can usually taxi in, but on many airports it will be unable to take off.

2. The RealTraffic application by Inside Systems:

“RealTraffic” is an application that works with a paid subscription service. It has a vastly improved coverage compared to OpenSkyNetworks, and it contains the necessary information for “Simulator AI” mode to work properly.

Before switching to this datasource, please visit “<http://www.inside.net/ss/realtraffic-for-psx/>” and buy the “RealTraffic” app.

After installation, please make sure to match the settings of the screenshot on the next page

“Broadcast traffic to 3rd party apps”: ON

“Disable PSX traffic injection”: ON

“Show GND TFC”: ON

“Show AIR TFC”: ON

“Auto select GND/AIR TFC”: OFF

“Simulator in use:” PSXT (P3D/FSX)

“Simulator Host IP:” as required, “localhost” when RT runs on the same computer.

“Simulator Port” 10747

RealTraffic will connect to LLTX automatically, when you press “Connect” in LLTX.

Settings

Broadcast traffic to 3rd party apps (e.g. Foreflight(tm), PSXT, LiveTraffic, ...) Disable PSX traffic injection

Show GND TFC Show AIR TFC Auto select GND/AIR TFC

Simulator in use: **PSXT (P3D/FSX)** Simulator Host IP: **localhost** Simulator Port: **10747** **Save** **License**

Spotter location: **Select airport:** **-- User coordinates**

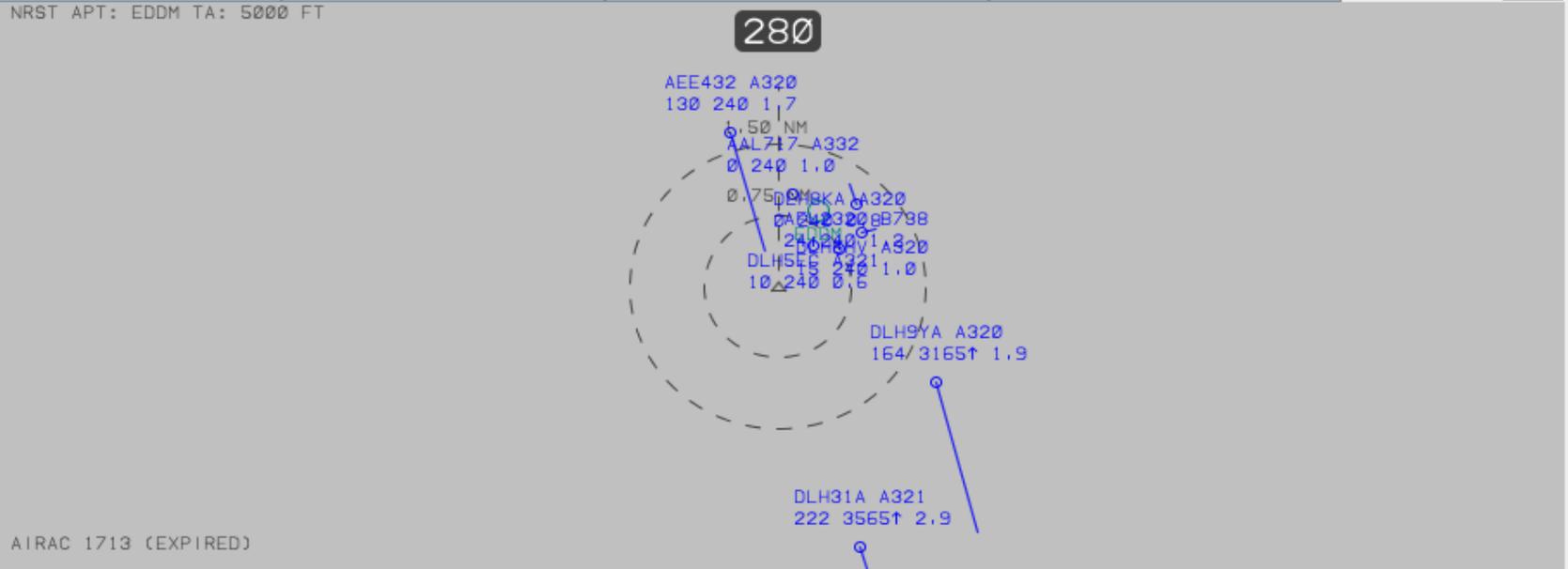
or manual lat/lon: Latitude (N=+/S=-): **-22,81524** Longitude (E=+/W=-): **-43,25607** Heading: **0,000**

Weather and Traffic

Time offset into the past: None (Realtime traffic)

Realtime 3h 6h 9h 12h 15h 18h 21h 24h

Find flight... **Emergencies...** **< Forward 1 minute <** **> Back 1 minute >** Days in the past: **0**



Show APT Names Show TERM WPs Show ENR WPs Show RWYs Show VORs Show NDBs **+** **-** **Change color**

3.7 Context menu options

Right-clicking on an aircraft in the main list will open a context menu:

“**Follow AI**” will switch the view in your Simulator to this aircraft. Please note that this requires that the cameras cfg file is set up correctly – see chapter 3.4

“**Autotune radios**” while you are following an AI, your radio will always be tuned to the same station that the AI is using.

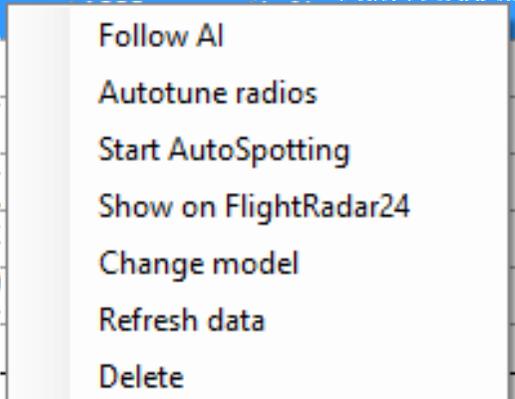
“**Start AutoSpotting**” will activate a feature that will follow different AI airplanes automatically based on a timer, using different camera angles for each aircraft. This also only works when the AI view has been enabled. See 3.4

“**Show on FlightRadar24**” will open your Internet Browser, call the FR24 site and move the map near the last known position of the real aircraft.

“**Delete**” will remove this aircraft from the list and the sim

“**Refresh data**” will remove this aircraft and recreate it with the current flight data

it	Type	Airline	From
FX	A320	easyJet	Cote D'Azur (MCE)
3	B736	Tunisair	Q)
64	A320	Alitalia	
L	B738	KLM Ro	(S)
72	A332	Hainan	(O)
45	B738		

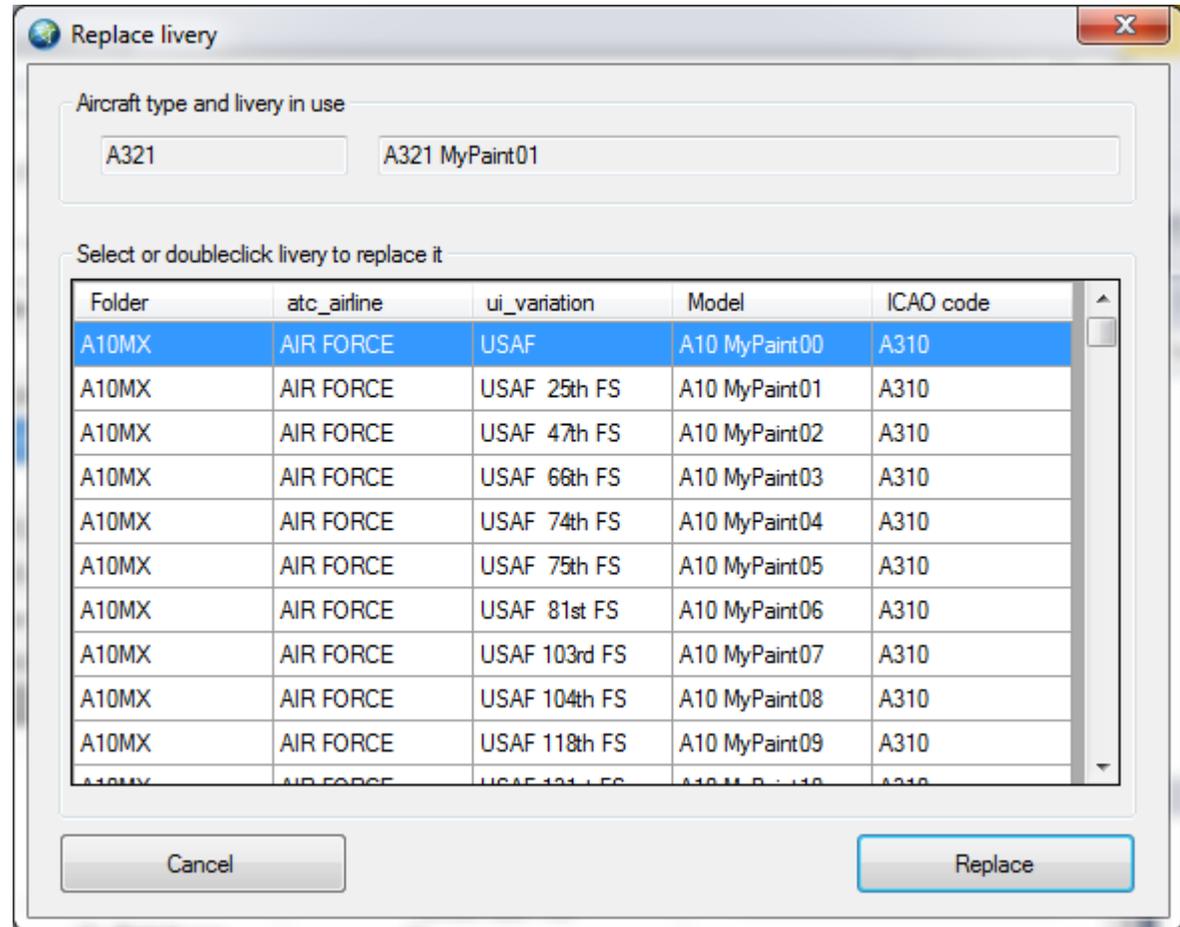


Use “**Change model**” to assign a different aircraft model/livery. This option will open an additional dialog:

This window shows the ICAO type of the aircraft and the livery that was selected automatically.

To change the model and livery, doubleclick on an entry in the list or select a row and press “Replace”

Note: this replacement does not change the automatic assignment, it is only temporary.



3.8 Manage Aircraft Models

All aircraft that can be matched to a simulator model will be displayed using that model. All others will be using default liveries and models.

To make this possible, several databases have been included, that match the simobject to the official aircraft ICAO designator. This, together with the airline name that was obtained online, is used to identify the correct model.

Manage the aircraft model assignment database

Model database

- MyTraffic 6 professional
- Ultimate Traffic 2
- Ultimate Traffic Live
- WOAI
- BVAI
- FLAI
- AIG AIM OCI
- Custom

Alpha India Group

Aircraft models

Folder	atc_airline	ui_variation	Model	ICAO Type	ICAO Airline
AIGAIM_FAIB_B...	NORTRANS		AIGAIM_Norwegi...	B738	IBK
AIGAIM_FAIB_B...	NORTRANS		AIGAIM_Norwegi...	B738	IBK
AIGAIM_FAIB_B...	AEROMEXICO		AIGAIM_Aerome...	B738	AMX
AIGAIM_FAIB_B...	LIANHANG		AIGAIM_China U...	B738	CUA
AIGAIM_FAIB_B...	NORTRANS		AIGAIM_Norwegi...	B738	IBK
AIGAIM_FAIB_B...	AEROMEXICO		AIGAIM_Aerome...	B738	AMX
AIGAIM_FAIB_B...	SUNTURK	Pegasus TC-AGP	FAIB Boeing 737...	B738	PGT
AIGAIM_FAIB_B...	NIUGINI		AIGAIM_Air Niugi...	B738	ANG
AIGAIM_FAIB_B...	NOK AIR		AIGAIM_Nok Air ...	B738	NOK
AIGAIM_FAIB_B...	BONDI		AIGAIM_Flybondi...	B738	FBZ

ICAO codes

Aircraft Type Airline

ICAO	Description
A500	Adam A-500
A700	Adam A-700 AdamJet
G222	Aeritalia C-27A Spartan
C27J	Aeritalia C-27J Spartan
LA60	Aermacchi / Macchi AL-60
AM3	Aermacchi / Macchi AM-3
L90	Aermacchi / Macchi M-290TP ...
Y130	Aermacchi / Macchi M-346

Filter

Add models to database

Use real airline names Add flight info to Live AI

Transponder assignments

GA, Helicopters & Military

Reset all broken models

Manage Virtual Helpads

Save changes

Networked setup

Close

3.8.1. Table rows shown in red

When creating an AI model fails more than 10 times in a row, LLTX will mark it as “broken” for the current session. These models are shown in red in the “Aircraft models” table. If you are certain that this model is present in your collection, and that it should work,

- you can reset the “broken” state, by right-clicking on the red row and selecting “Reset” from the context menu or using “Reset all broken models” to reset all
- you can mark a model as broken using the context menu

3.8.2. Checkboxes “Use real airline names” and “Add flight info to Live AI”

The checkbox “Use real airline names” controls the naming conventions of the aircraft when they are created in the simulator. When enabled, the airline names are replaced with their long version from the LLTX database. Otherwise the simulator will use the information from the aircraft.cfg of the corresponding aircraft model

If you are using LLTX together with an ATC app and the airlines are not spelled out correctly, try disabling this checkbox.

“Add flight info to Live AI” will try to add departure and arrival airport information to aircraft that are created in “Live” mode. This may be desirable when using an ATC app too. Be aware though that adding this information may crash your simulator if the flight data is not 100% valid (like with the free data sources).

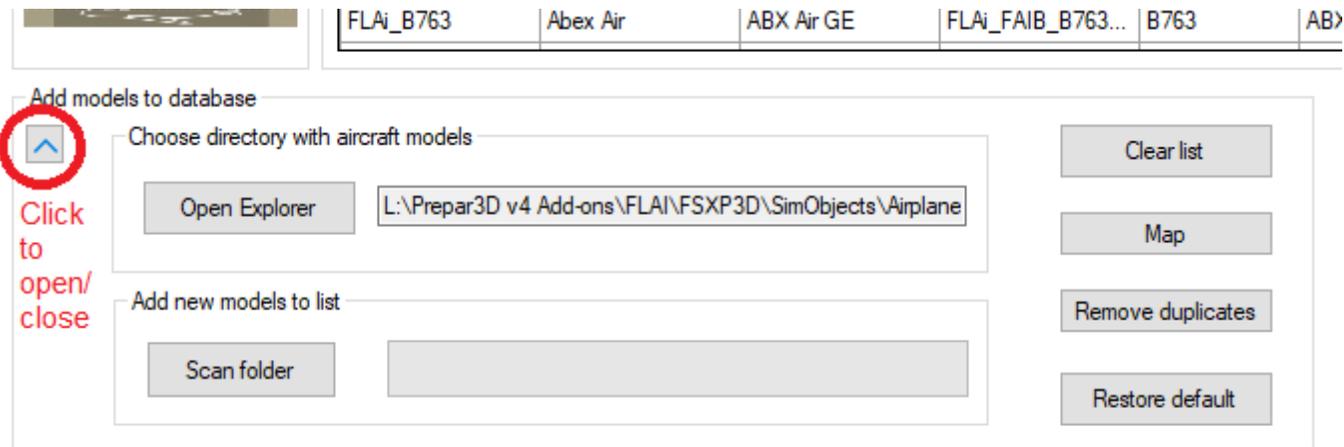
3.8.3. Assigning different ICAO codes

To assign a different ICAO aircraft and/or airline code to a model

- select the row containing the model in the left list (multiple rows can be selected at once)
- doubleclick on the desired ICAO code in the right list
- When you have finished, click “Save changes”

The ICAO lists can be edited, and you can add new rows by filling out the blank cells at the bottom of the list.

3.8.4. Adding models to an existing mapping database



If you want to expand a list with other models, for example when the model collection has been updated

- Provide a suitable directory with SimObjects by clicking “Open Explorer”
- Use the button “Scan folder” to identify the model contained in it, and add them to the left list
- If you press “Map”, the app will try to assign ICAO codes automatically, but in many cases this fails. You will have to check all your new models and assign the correct ICAO code for aircraft and airline
- If you have duplicate entries for “Model” in the list, you can clear that up using the button “Remove duplicates”
- When you have finished, click “Save changes”

3.8.5. Making your own mapping database

To create your very own model database

- Select the “Custom” radio button
- If you don't want to keep the models that are already displayed, press “Clear list”
- Proceed like in 3.6.2

3.8.6. Duplicating or removing rows

Right-click on a row to get a context menu that will let you

- Duplicate a row: if you want to assign multiple real world aircraft to the same AI model (for example Embraer E190/195 of the same airline)
- Delete a row: if you are certain that this mapping will never happen

3.8.7. Reset the whole database to default values

Use the button “Restore Default” to revert all values to their defaults in the currently selected database.

Please be careful, this action is irreversible!

3.8.8. Additional features

3.8.8.1. Button “Transponder Assignments”

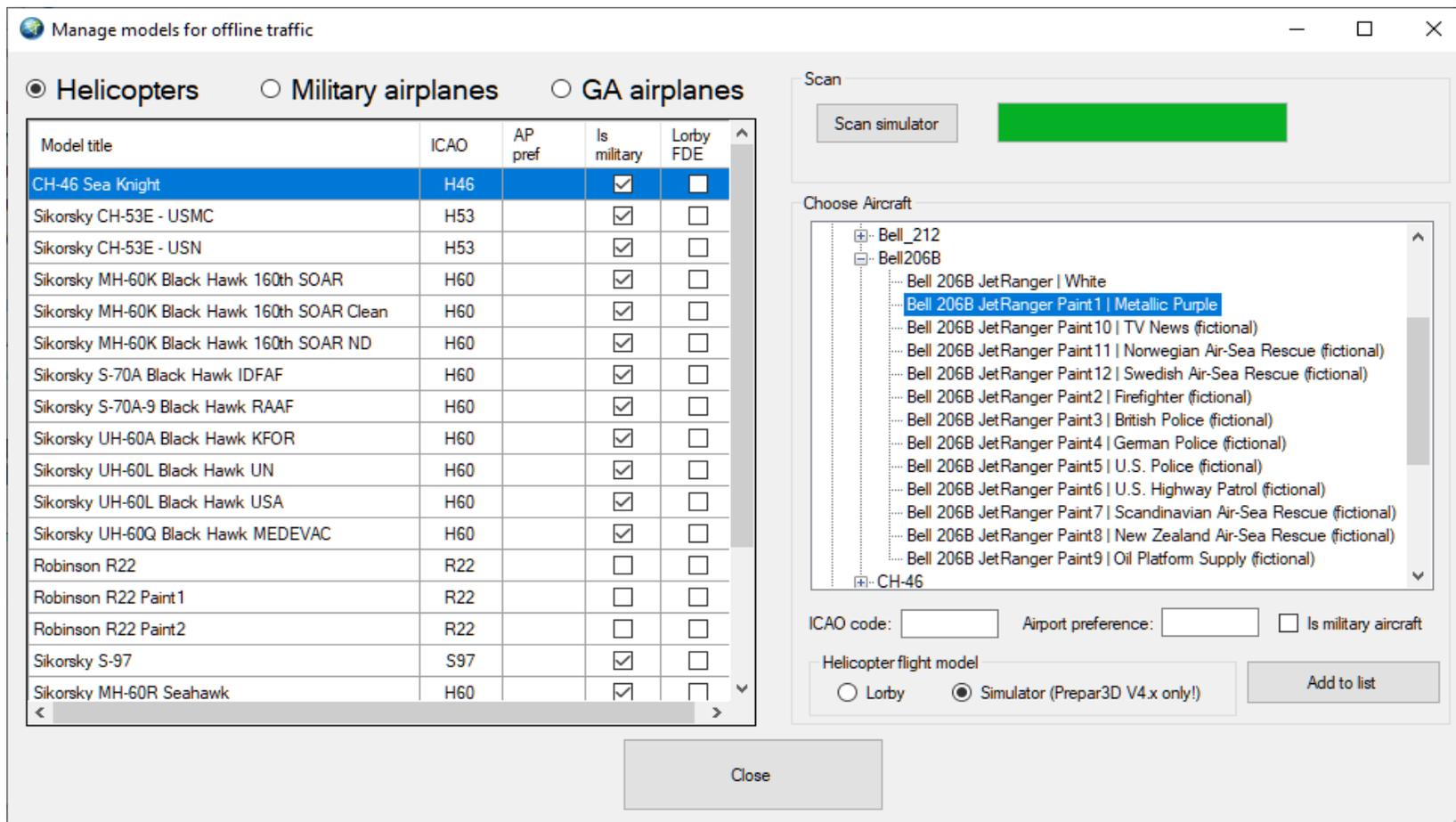
When you change the model of an aircraft in the online modes, LLTX will remember the transponder-ID of that aircraft and always assign the model that you selected. With this button you can manage those assignments, change or delete them.

3.8.8.2. Button “Reset all broken models”

This will clear all red rows in the table.

3.8.8.3. Button “GA, Helicopters & Military”

To create offline traffic, LLTX uses the default models that are present in the simulator. With this dialog you can add additional models to that list, and you can assign them regional codes, so not all aircraft appear everywhere on the world



- First step on this dialog is to press “Scan simulator” on the top right. This will populate the “Choose Aircraft” box
- Select the type of traffic that you want to add a model to with the radio buttons at the top: “Helicopters”, “Military airplanes” or “GA airplanes”.
- Highlight the desired model in the treelist by clicking on it once.
- Before adding the new model, take a look at the input fields below the treelist: “ICAO code”, “Airport preference”, “is military aircraft”.
 - If you know the **ICAO designation of the model**, enter it into the box “ICAO code”.
 - **If you want this model to be present in certain countries or even only on one specific airfield**, enter an ICAO code (or a part of it) into the “Airport preference” field
- Examples:
 - “ET” tells LLTX that you want this model to be created only on German military airfields (they all start with “ET”)
 - “ETSN” tells LLTX that this aircraft shall only be present at Neuburg Airbase
- Every model can be used more than once, you can add several instances of the same model and use different Airport preferences with them
- You can also control how many of those aircraft will be created on that airport. For example adding 5 Eurofighters and one C130, all using “ETSN” as preference, will make sure that at Neuburg there will be five times more Eurofighters than C130s.
- When using P3D V4, you can **choose the FDE** that each helicopter model should use.
 - The Lorby FDE works for all models, regardless of their internal properties and if they are compatible as AI or not.
 - The P3D simulator FDE is superior for performance and general flight behavior.

To **delete** a model, right-click on it in the list to the left.

3.8.8.4. Button “Virtual helipads”

On this dialog you can add virtual helicopter pads to your simulator. It is only available when LLTX is connected to the simulator, because it needs to know your own location in the simulator world.

The dialog will always track your current location. Just move to the spot where you want to have a pad, enter a “Name” and press “Add/replace” helipad.

You can tell LLTX to add a generic helipad object in that spot by selecting a “small” or “big” Pad object.

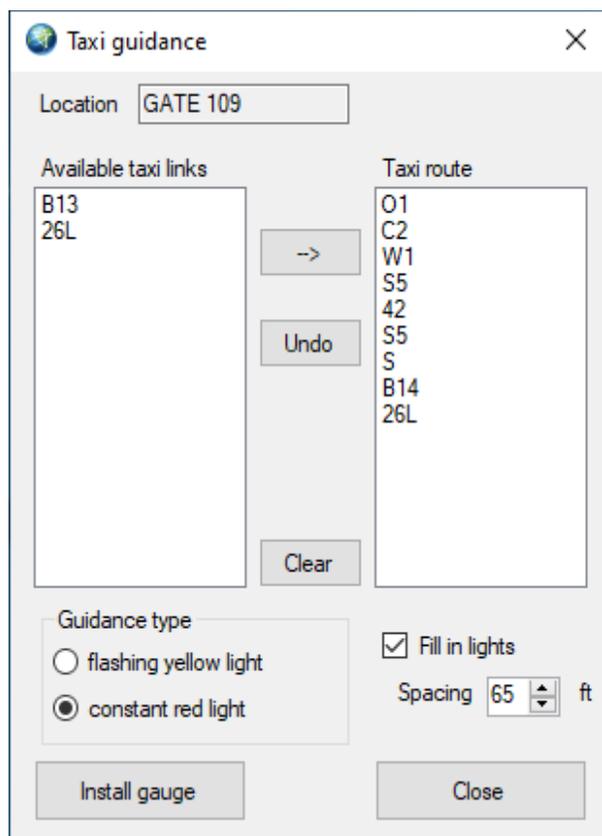
To select a pad for editing, right-click on it in the list and select “Jump here”

To delete a pad, right-click on the pad in the list and select “Delete”.

Name	Latitude	Longitude	Altitude	Orientation	Is military	Show Pad
EHTP	51.959372	4.0899278	0	120	<input type="checkbox"/>	small
NS01	52.200833	3.48733	147	210	<input type="checkbox"/>	none
NS02	61.214611	2.272951	116	210	<input type="checkbox"/>	none
ETEB_1	49.309491	10.642068	0	167	<input checked="" type="checkbox"/>	big
ETEB_2	49.309442	10.641688	0	167	<input checked="" type="checkbox"/>	big
ETEB_3	49.309402	10.64138	0	167	<input checked="" type="checkbox"/>	big
ETEB_4	49.309335	10.640862	0	167	<input type="checkbox"/>	small
ETEB_5	49.309272	10.640371	0	167	<input type="checkbox"/>	small

3.9 Visual taxi guidance (Perpar3D only)

With this feature you can create a visual taxi cue line in the simulator. The visual appearance of the line can be changed, you can choose between large flashing yellow lights and small, constantly glowing red lights. The visual density of the line can also be adjusted to your personal taste, from one light at each taxi point to a dense line of lights, 65ft apart.



Flashing yellow lights



Constant red lights

3.9.1. Using the dialog

- the “Available taxi links” list on the left will always contain those taxiways that are in your vicinity.
- Doubleclick on the desired taxiway
or
select it with the mouse and press the “-->” button
- This will add the selected taxiway to your taxi route on the right
- At the same time, LLTX will paint the guidance lights into the simulator world
- Continue until you have either reached the runway (taxi out) or the gate (taxi in)

“Undo” or a doubleclick on the right list will remove the last taxiway from your current route.

“Clear” will delete the entire route

“Guidance type” selects the type of lights on the ground

“Fill in lights” and “Spacing” fills up empty stretches on the taxi route with additional lights

When you “Close” the window, the taxi line will be removed from the simulator too!

3.9.2. Using the Lorby TaxiGuide gauge (Prepar3D V4 only!)

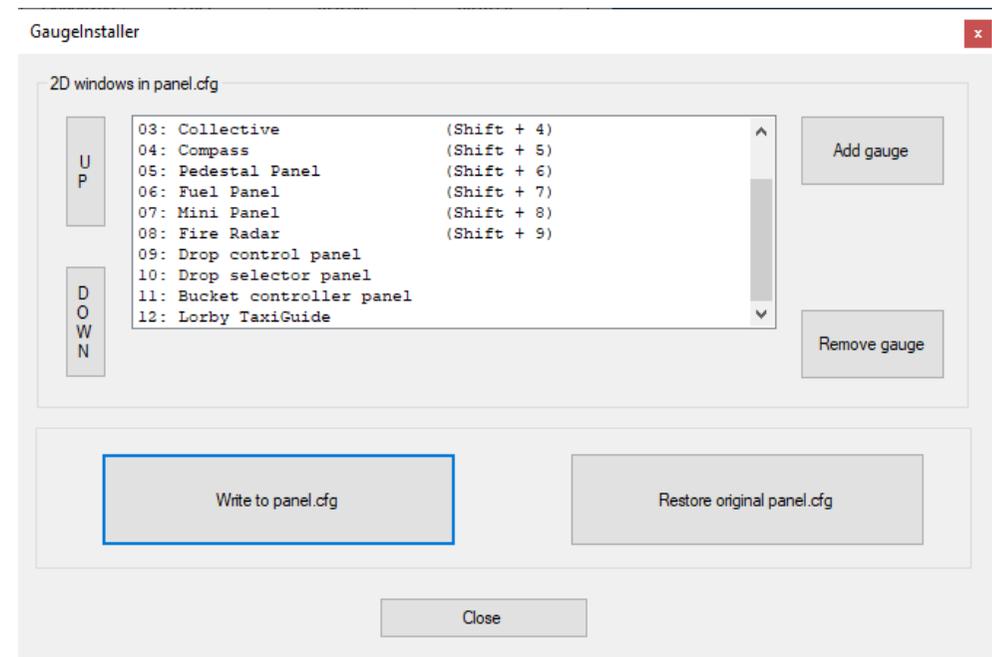
Note: the gauge will not work stand-alone. It can only function, when LLTX is running and connected to P3D at the same time!

3.9.2.1. Installing the gauge

Make sure that LLTX has been started “As Administrator”! Otherwise you may not be able to write to the panel.cfg.

Use the button “Install gauge” to open the Gauge Installer.

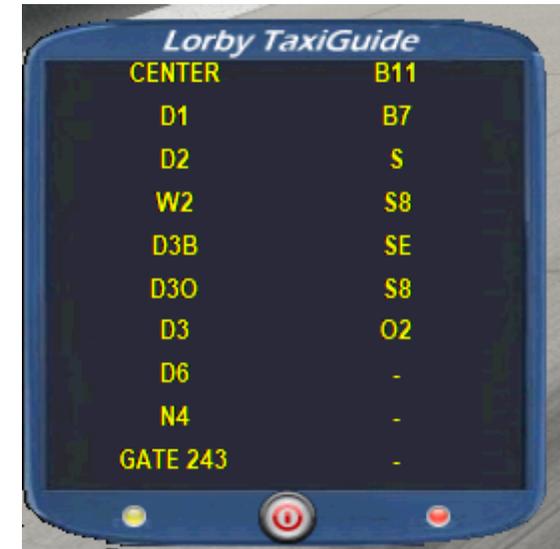
- “Add gauge” will append the Lorby TaxiGuide gauge to the 2D windows of your current aircraft
- “Remove gauge” removes it
- reorder your gauge entries with “UP”/”DOWN”
- “Write to panel.cfg” will apply the changes to your current aircraft.
- “Restore original panel.cfg” restores the initial state of the aircraft panel before the gauge has been added



3.9.2.2. Operating the gauge

The gauge can be opened via the P3D Menu “Vehicle->Instrument Panel”

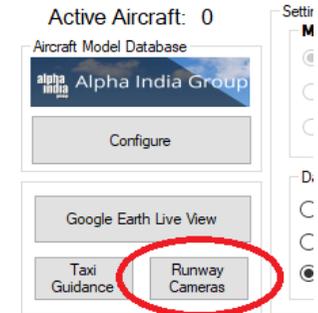
- Use the Power button at the bottom to activate the connection to LLTX.
- Doubleclick on a taxiway in the left list to add it to the route on the right.
- Doubleclick anywhere on the right list to remove the last node from the route
- The small yellow LED on the lower left sets the lights to blinking yellow
- The small red LED on the lower right sets the lights to constant red glow.



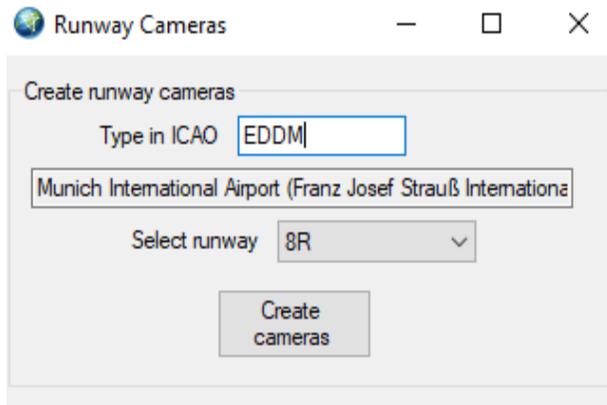
3.10 Runway cameras (Perpar3D only)

The P3D versions of LLTX have an additional button on the main dialog “Runway cameras”.

With this feature you can create a set of four P3D “Observer” type cameras at a runway of your choice. These observers are not permanent, they exist only in your current simulator scenario.



Creating observers



- To create a set of runway cameras, type the ICAO code of the airport into the textbox.
- When the name of the airport is shown, select the desired runway from the dropdown list
- Press “Create cameras”
- You can access the Observer cameras from within P3D



Observer control

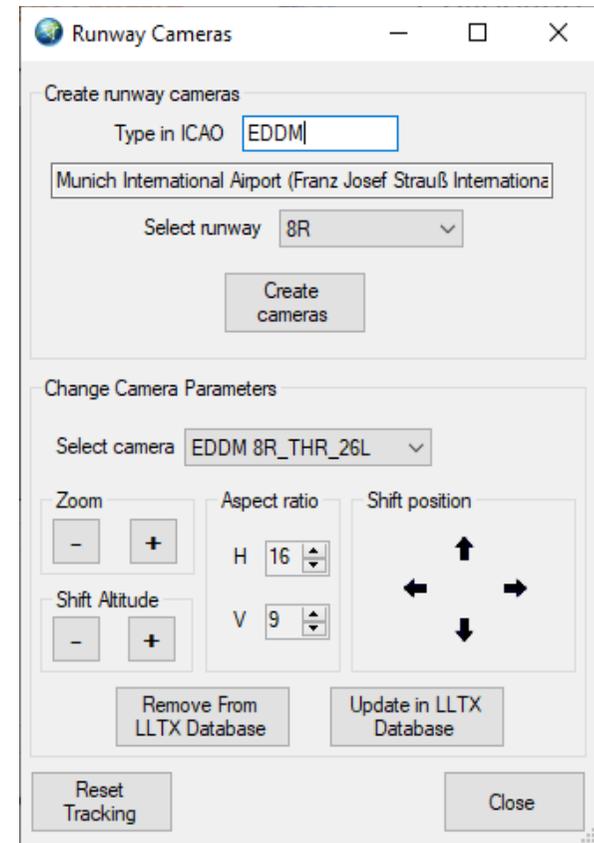
P3D Observers don't work the same way that cameras do. You cannot move the point of view, and you cannot zoom them from within P3D. You have to use the “Change Camera Parameters” functions to control the observer view.

- All controls can be operated with the mouse wheel.
- The arrows move the camera relative to the direction of the runway!
- The selected camera can be saved to the internal LLTX database, so it will be available next time when you run the app.

- The aspect ratio of an observer camera is fixed, it doesn't change when you resize the window displaying it.
To help with that, the horizontal and vertical Field Of View of the observer can be adjusted to fit the aspect ratio of the window.

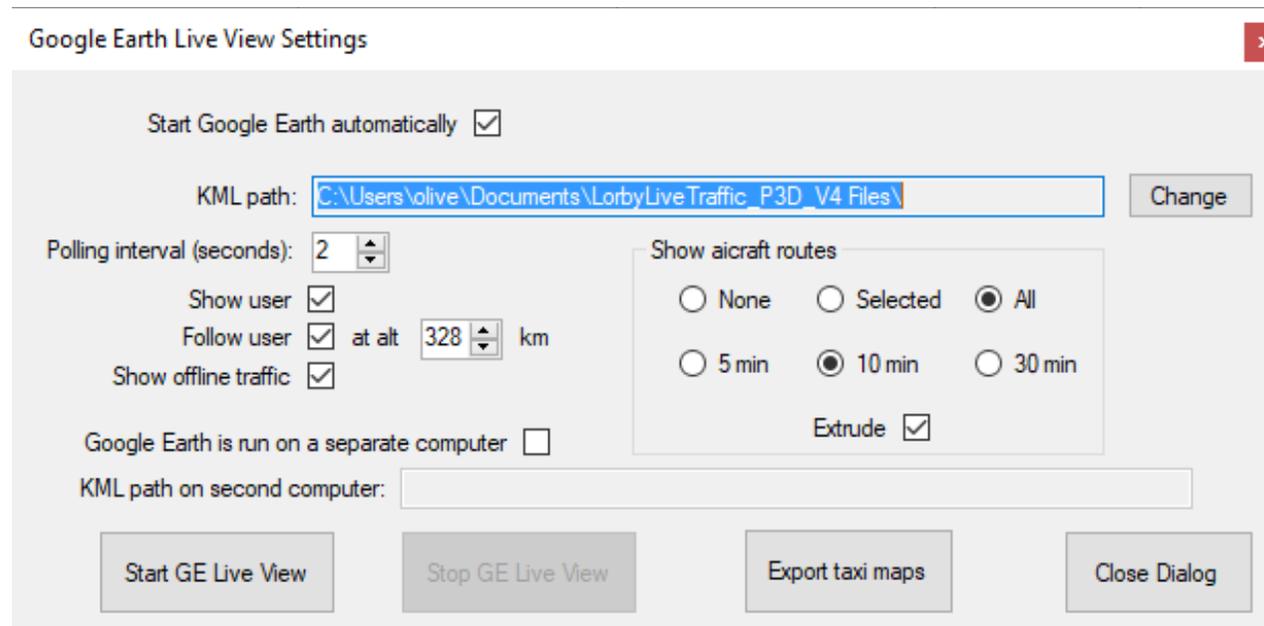
Examples:

- View open on the main 1920x1080 window: H=16, V=9
- View open in a separate square window: H=4, V=4



4. Google Earth Live View

LorbyLiveTraffic can make use of Google Earth to display the current traffic situation:

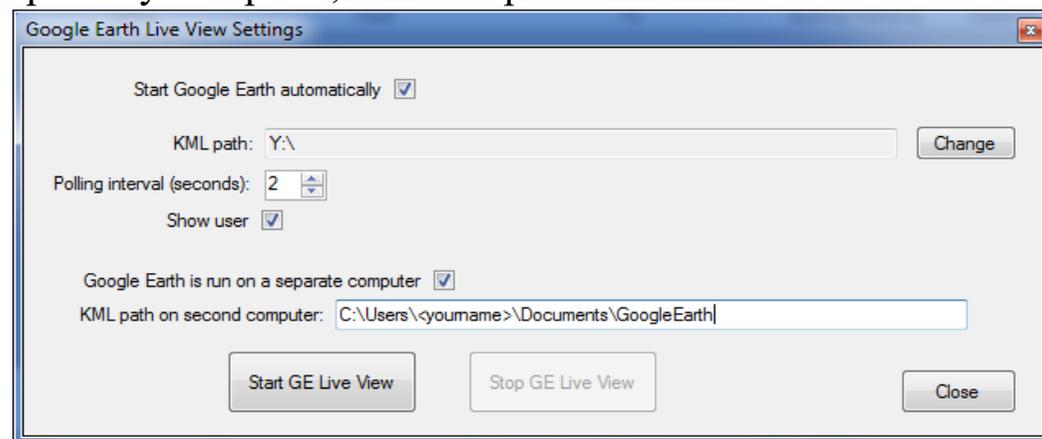


- *Start Google Earth automatically:* As soon as Lorby Live Traffic creates a Google Earth file it will try to start the application itself
- *KML path:* This is the path where LLTX stores the Google Earth file for the Live View feature. If you want to use Google Earth on a different computer, set this to point a connected network drive that can be accessed from the other computer and point Google Earth to the “...loop” file that will be created by LLTX
- *Polling interval (seconds):* sets the frequency that LLTX will use to update the Google Earth file
- *Show user:* Show your own position in Google Earth
- *Follow user:* Google Earth will keep on zoom in on your location when your plane is moving.

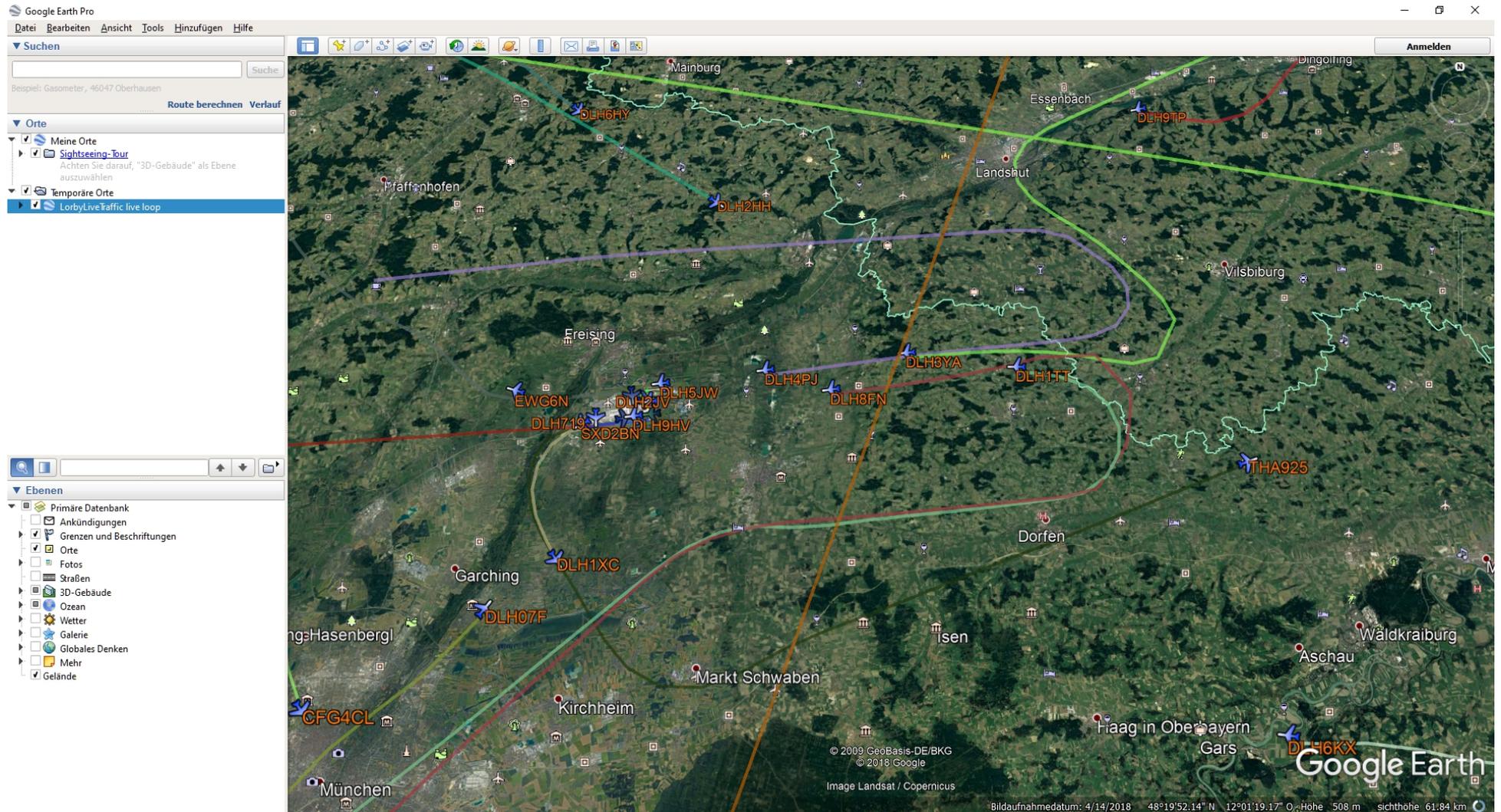
- *Show aircraft routes*: This will show the last 5 minutes of the current AI route. “Selected” will only display the route of the AI that you have selected for viewing on the main LLTX list, “All” will display all routes. “*Extrude*” will make the routes appear as solid walls instead of just lines
- *Export taxi maps*: Shows the taxiway layout of the airports that are in the LLTX cache
- *Google Earth is run on a separate computer*: Activate this, if your Google Earth is running on a secondary computer
- ***KML path on second computer*: complete path where the KML files will be saved on the secondary computer!**

It is possible to stream the Live View data to a second computer running Google Earth.

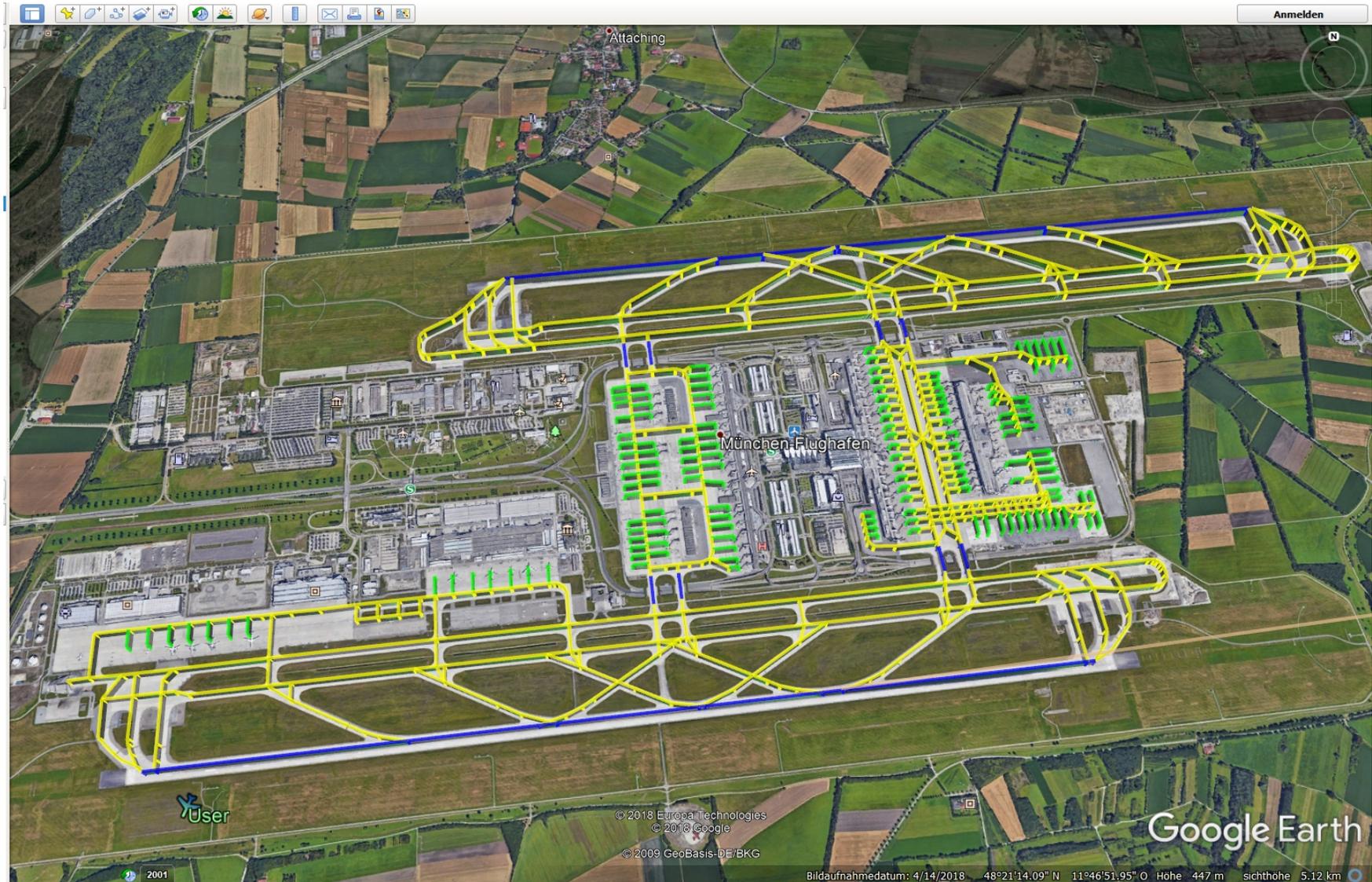
- Create a folder on your secondary computer that shall contain the KML files
Example: **“C:\Users*<yourname>*\Documents\GoogleEarth”**
- Share this folder on your secondary computer. Make sure that your primary computer has full access privileges
- Map the folder as a network drive on your primary computer, for example as **“Y:”**
- Now make the Settings look like this:



Aircraft routes



Exporting the taxi route maps:



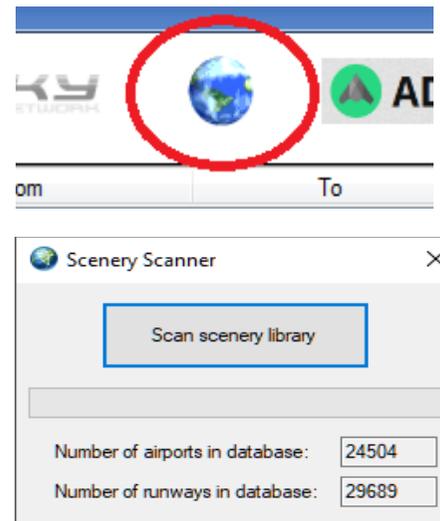
5. Updating the runway database

LorbyLiveTraffic requires a database of all runway endpoints in the scenery of the simulator. This data is used to help aircraft in live mode to actually find a runway when landing, before the online data cuts out.

For aircraft to land at all, you will have to set “Delete below” to 0.

You will have to update the runway data to reflect your own local scenery library.

- click on the small globe on top of the LLTX main window
- this will open the Scenery Scanner dialog of LLTX
- Click on “Scan scenery library”
- The dialog closes automatically



Please note that on many computers LLTX will have to be run “As Administrator” for the scenery scanner to be successful. Otherwise the default scenery data of the simulator may be inaccessible for the Scanner.

6. Disclaimer

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- the software or the software content will be free of bugs, errors, viruses or other defects;
- any results, output, or data provided through or generated by the software will be accurate, up-to-date, complete or reliable;
- the software will be compatible with third party software;
- any errors in the software will be corrected or that any further development will take place
- the software will not cause errors or damage to the computer system it is installed on.

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