North America

Southern Alaska

USER GUIDE SEPTEMBER 2016

Contents

Thank you!

Orbx would like to thank you for purchasing FTX NA BLUE USA/CAN Southern Alaska (SAK). FTX SAK has taken many months to produce and builds on the techniques and success of our North American series of regions: PNW, PFJ, NRM, and CRM. We hope you will enjoy exploring its vast and diverse landscapes and some 270 airports and airstrips.

Southern Alaska (and more...)

First off, the need for a short product title means that us calling this fifth region in our North American series "Southern Alaska" is somewhat misleading. In fact, almost half of its coverage area lies within Canada. The correct title should be something like "South-central Alaska, southwestern Yukon Territory, and northwestern British Columbia", or "SAKSYTNBC" but that just doesn't roll off the tongue very easily. In any case, this product includes much, much more than "just" the famous cruise ship destinations of coastal Alaska.

Our SAK region covers about 200,000 square miles (or half a million sq km) with its southeastern boundary adjoining our Pacific Fjords (PFJ) region as well as Holger Sandmann's and Bill Womack's previous release, Tongass Fjords (published by FSAddon). SAK spans ~800 miles from Watson Lake (BC) in the east to the Tordrillo Mountains west of Anchorage, and up to 340 miles from it's southern to its northern boundary. Major settlements in the coverage region are Anchorage, Palmer, Kenai, Valdez, Juneau, Skagway, and Whitehorse. All of the 253 registered airports and seaplane bases, as well as about 20 unlisted airstrips, have been enhanced by Chris Clack and Neil Hill with terrain edits and placement of custom and generic objects to closely match their real-world counterparts.

Alex Goff provided 12 local photoreal areas to further enhance some of the key urban and natural landmarks in the SAK area, with full autogen coverage and seasonal variations. Those areas include Anchorage and Juneau business districts, the Chilkat River estuary, and all or significant parts of the towns of Skagway, Hoonah, Haider, Homer, Seward, and Valdez. Some of these locations have custom objects added, like landmark buildings in Anchorage and Juneau.

The town, harbor, and airport of Skagway, as well as the White Pass & Yukon Railroad corridor to Carcross have been modeled in great detail by Jon Patch, including stations and other structures at Glacier, Fraser, Bennett, and Carcross.

Tim Harris crafted the six unique Alaskan lighthouses within SAK, in several cases complete with the small rocky islands they reside on. Tim also mastered the massive task of creating photoreal coverage of every single one of the hundreds of large glaciers within SAK.

Geography

Southern Alaska's topography is primarily shaped by the slow but relentless collision of the Pacific tectonic plate with the North American plate. Huge mountain ranges cover much of the area and even smaller islands have high mountains and steep slopes. Moisture-laden winds and long winters combine forces to cover most ranges in massive ice fields with long glacial tongues extending in all directions. Topography like this provides lots of opportunities for exciting mountain flying along the southern coastal areas and central interior of SAK. For example, Mount St. Elias, the second highest peak in Alaska (18,009ft/5489m), lies only 12 miles from the ocean and right next to the largest Piedmont glacier in the world, Malaspina Glacier. Another

typical feature of these areas are the "braided" rivers with countless side channels, like the Copper River estuary east of Cordova, as well as the deep fjords, including Lynn Canal between Juneau and Skagway and the Kenai Fjords National Park south of Seward.

In sharp contrast, the western half of the Kenai Peninsula and the floodplains of the Sustina River northwest of Anchorage, are almost flat and are covered in countless lakes and muskeg swamps, offering a very different experience for pilots though also more opportunities for flat landing spots, including a cluster of about 100 airports in the Palmer/Wasilla area.

Anchorage is an imposing urban area but also offers a large number of airports and airstrips to choose from, not to mention Lake Hood seaplane base (LHD), apparently the busiest in the world. Almost 600 miles farther east, Alaska's capital city, Juneau, is located in a much more confined space and its international airport PAJN requires interesting curved approaches, which our AI expert, Graham Eccleston, implemented for us.

The Canadian areas within SAK, while without ocean shorelines, still offer a similar diversity in landscapes. There's some very rugged terrain along the inland flanks of the coastal mountains, including Kluane National Park and the Cassiar Mountains; there are large and beautiful mountain lakes, like Atlin Lake, Bennett Lake, and Teslin Lake; there are long meandering rivers; there are the seemingly endless, forested hills of southwestern Yukon Territory; and, last but not least, SAK includes the major hub and gateway to the north: Whitehorse.

Climate

The high northern latitude of this region means long winters and short summers pretty much throughout the entire area, especially in the interior areas away from the milder oceanic airflows. Thus, expect snow on the ground -- and frozen rivers and lakes -- between November and March or longer.

Since FSX allows us to set local seasonal variations on a monthly basis, and for each square kilometer of ground, we can model our region's climate in much more detail and accuracy than the season selector in the FSX "Time and Seasons" menu suggests. Moreover, FSX actually knows two different winter seasons: "mild", with little snow on the ground and "hard" with deep snow cover. In short, instead of using the FSX season selector please use the table below as a reference for your area of interest and then select a specific month to fly in a specific season. Please note though that any weather situation that includes active snowfall will automatically switch the FSX ground textures to "hard winter" for the duration of your flight.

Zone 1 0ft - 2000ft ASL				Zone 2 2000ft - 4500ft				Zone 3 4500ft - max			
	West of W140, and Interior		SE Alaska		West of W140, and Interior		SE Alaska		West of W140, and Interior		SE Alaska
Jan	HW		HW	Jan	HW		HW	Jan	HW		HW
Feb	HW		HW	Feb	HW		HW	Feb	HW		HW
Mar	HW		WI	Mar	HW		HW	Mar	HW		HW
Apr	WI		SP	Apr	WI		WI	Apr	HW		HW
May	SP		SP	May	SP		SP	May	WI		WI
Jun	SU		SU	Jun	SP		SP	Jun	SP		SP
Jul	SU		SU	Jul	SU		SU	Jul	SP		SP
Aug	SU		SU	Aug	SU		SU	Aug	SU		SU
Sep	FA		FA	Sep	FA		FA	Sep	FA		FA
Oct	WI		FA	Oct	WI		WI	Oct	HW		HW
Nov	HW		WI	Nov	HW		HW	Nov	HW		HW
Dec	HW		HW	Dec	HW		HW	Dec	HW		HW

Product requirements

This scenery addon is designed to work in the following simulators: **Microsoft Flight Simulator X**, **Lockheed Martin Prepar3D v1, Lockheed Martin Prepar3D v2** and **Lockheed Martin Prepar3D v3.**

Compatibility notes

Please visit http://orbxsystems.com/forums/index.php?board=118.0 for the latest compatibility information between FTX SAK and third party addons.

"Return to Misty Moorings" (RTMM) freeware add-on scenery

"Return to Misty Moorings" is a very active community of virtual bush pilots and freeware developers focusing on the area covered by Pacific Fjords, Tongass Fjords (see below), and Southern Alaska. In addition to a large selection of scenery and AI add-ons their site is also packed with information about many different aspects of this corner of the world. Moreover, they have already begun to create add-ons for SAK so make sure to visit their website and forums at http://return.mistymoorings.com/.

FLIGHT1 - Ultimate Alaska X (UAX) and Ultimate Terrain X Canada (UTX CAN)

Ultimate Alaska X (UAX) and Ultimate Terrain X Canada (UTX CAN) are payware add-ons for FSX developed by Scenery Solutions (Allen Kriesman) and distributed by Flight1. They replace the default water bodies, road/railroad networks, and other landscape components with more detailed versions based on very accurate commercial spatial data.

Our SAK region overlaps parts of UTX CAN and UAX making the UAX and UTX components redundant. However, SAK is coded so that local exclude files will suppress the display of UTX features within the coverage area while leaving UTX undisturbed outside the FTX coverage areas.

Unfortunately, UTX CAN and UAX contain two components that cannot be excluded with FSX SDK excludes: their 3D night lights as well airport elevation corrections for several airfields within SAK.

Deactivating the night lights in the Flight1 control panels would deactivate them everywhere while leaving them active would make them clash with the FTX 3D night lights and also lead to frame rate impacts and autogen dropouts. Thus, the best option is to deactivate only the specific UTX/UAX night light files within the SAK overlap area. Since the files in question may change with UTX/UAX service packs we will post the current list in our compatibility forum with the link given above.

Similarly, the airport elevation corrections require specific UTX/UAX files to be deactivated to prevent floating or sunken runways and other airport elevation issues within SAK. Again, the list of files to be deactivated will be posted in our compatibility forum.

Note that these file manipulations only need to be done once and are unaffected by the use of FTX Central.

FSADDON - Tongass Fjords X

Tongass Fjords X is an earlier landscape add-on created by the lead developer for SAK, Holger Sandmann, and is distributed by FSAddon. The southeastern boundary of SAK is specifically designed to seamlessly align with the northern boundary of Tongass Fjords. The only step required to achieve full compatibility is to ensure that the two Tongass Fjords entries are below the block of ORBX entries in the FSX scenery library menu, meaning at lower display priority. Tip: use the Scenery Library Insertion Point option included with our FTX Central control panel (described in this manual) to make this step easy and permanent.

AEROSOFT - PANC Ted Stevens International Airport (by Sim-wings)

Aerosoft's PANC includes a detailed rendition of PANC as well as the adjacent Lake Hood seaplane base and its airstrip Z41. We've matched our local landscape features to theirs, which ensures terrain compatibility.

However, some mesh and landclass files in the PANC package are not compatible with SAK since their add-on needs to be placed at higher display priority than SAK and thus interferes with important SAK components.

The easiest method to achieve compatibility is to uncheck Aerosoft's "Anchorage-Terrain" entry in the FSX scenery library menu. This deactivates all incompatible files though also its extended photoreal coverage area. Should you prefer to keep that photoreal coverage then you'll need to manually deactivate a number of files in the {FSX}\Aerosoft\Anchorage-Terrain\scenery folder. For a list of these files please consult the dedicated thread in our compatibility forum: http://www.orbxsystems.com/forum/forum/80-ftx-compatibility-forum/

Third Party Terrain Mesh

FTX NA SAK comes with a complete set of high-resolution terrain mesh files compiled at 20m grid spacing. Third-party add-on terrain mesh files are compatible as long as they do not provide a higher grid resolution and their scenery library position is of lower display priority than SAK.

FLIGHT1 - Ground Environment X (GEX)

GEX is a default FSX/P3D texture replacement product and their textures will not appear inside the SAK area since we use custom landclass textures which are called from within the SAK folders only. This means you will see GEX textures outside the SAK boundaries and our textures as soon as you cross over into SAK. There is nothing to do when flying inside FTX NA regions. However, you may want to use FTX Central to switch to 'Default FSX' when flying outside our regions with GEX in different parts of the world.

Real Environment X (REX)

FTX NA SAK is 100% compatible with REX and you do not need to do anything special to use REX whilst flying over SAK. In fact, most of the Orbx developers and beta testers use REX, and it is an Orbx recommended add- on

Quick Installation Guide

Installing Orbx FTX SAK is all managed by our FTX Central application. This app is responsible for many aspects in maintaining your Orbx installation. Please visit the support forums to learn more.

Once you have purchased SAK it will be added to your account and you can have FTX Central download and install it for you. The appropriate scenery library entries will also be managed by FTX Central.
You may also manually download SAK and then have FTX Central manage the installation for you once downloaded.

**An internet connection is required for FTX Central to validate your license.**

Please note that the above all refers to FTX Central 3. Earlier versions of FTX Central are no longer supported but will still function as before. The integration of FTX Central with your OrbxDirect account is only available with FTX Central version 3 and above.

Scenery Coverage Area

The screenshot from Google Earth below shows the FTX SAK region scenery coverage area. It also shows how SAK adjoins both FTX Pacific Fjords (PFJ) and FSAddon's Tongass Fjords in its southeastern corner.
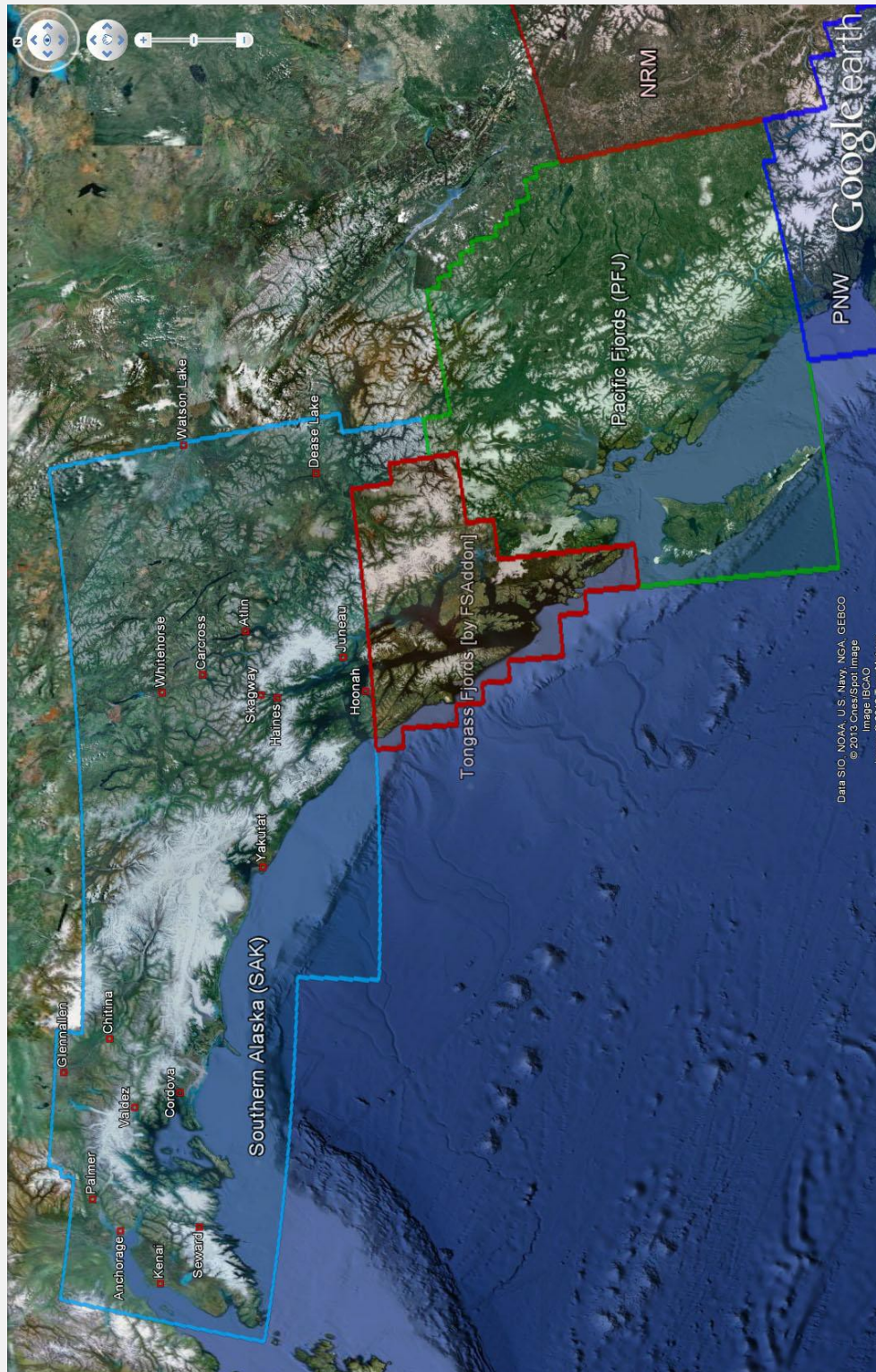
You can view the coverage and features map shown on the previous page interactively in Google Earth by loading the FTX SAK Coverage and Features Map.kmz which you'll find in your ORBX\User Documents folder in your FSX root folder.

Once loaded into Google Earth, you can select all or some of the features included in the scenery, and the corresponding icons will appear inside the map boundary. You can click on each item on the map for a popup balloon which provides details for that airport or POI.

This is a useful tool to begin to explore the features and points of interest included in FTX SAK.
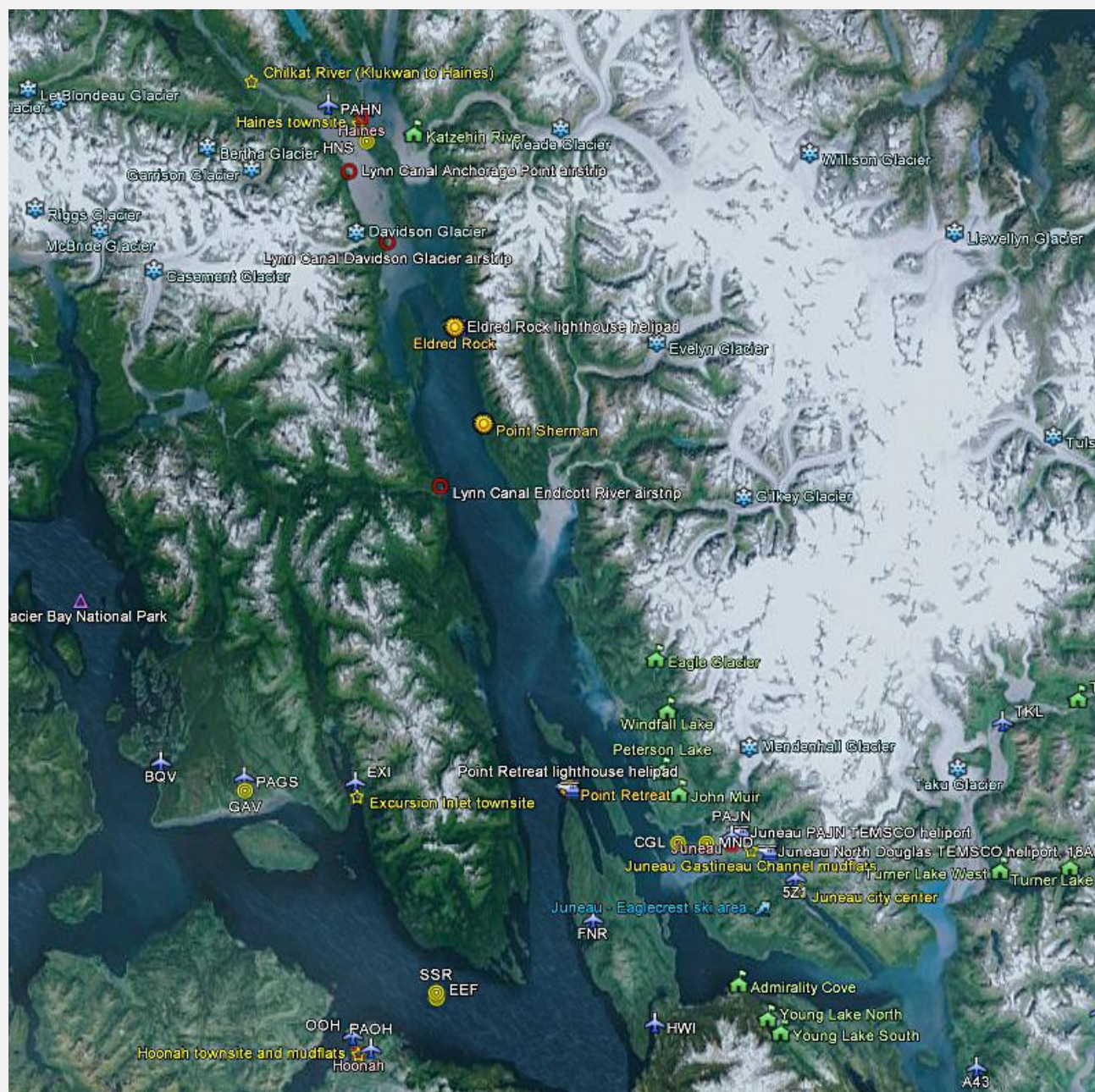
What is Custom Landclass?

Landclass are special files which reside in the scenery layer ‚pie', and their role is to tell FSX/P3D what type of ground texture to place in any given square kilometre cell. In other words, landclass files tell the simulator to place a field here, a township there, forest here, and a railway yard there, and so on.

As far as we are aware, FTX is the first flight simulation product to feature totally hand-crafted landclass on such a large scale. Many global or country-specific add-on landclass products for FSX/P3D are created using various data sources and compiled using automated scripts and then manually rectified for obvious errors.

This is not so with FTX. The image below gives you an idea of the custom landclass which was shipped with FTX NA SAK . It represents about 130,000 landclass tiles (highlighted in green) hand placed by our team, using a combination of many sources, including satellite imagery, aerial photos, and topographic maps. Note that this image covers only the western half of the full SAK region meaning the total number of manually placed tiles approaches 300,000!

We further augment these landclass tiles with landclass polygons, which depict areas with well-defined boundaries, like river gravelbars, wetlands, open pit mines, ski areas, or powerline and highway corridors.
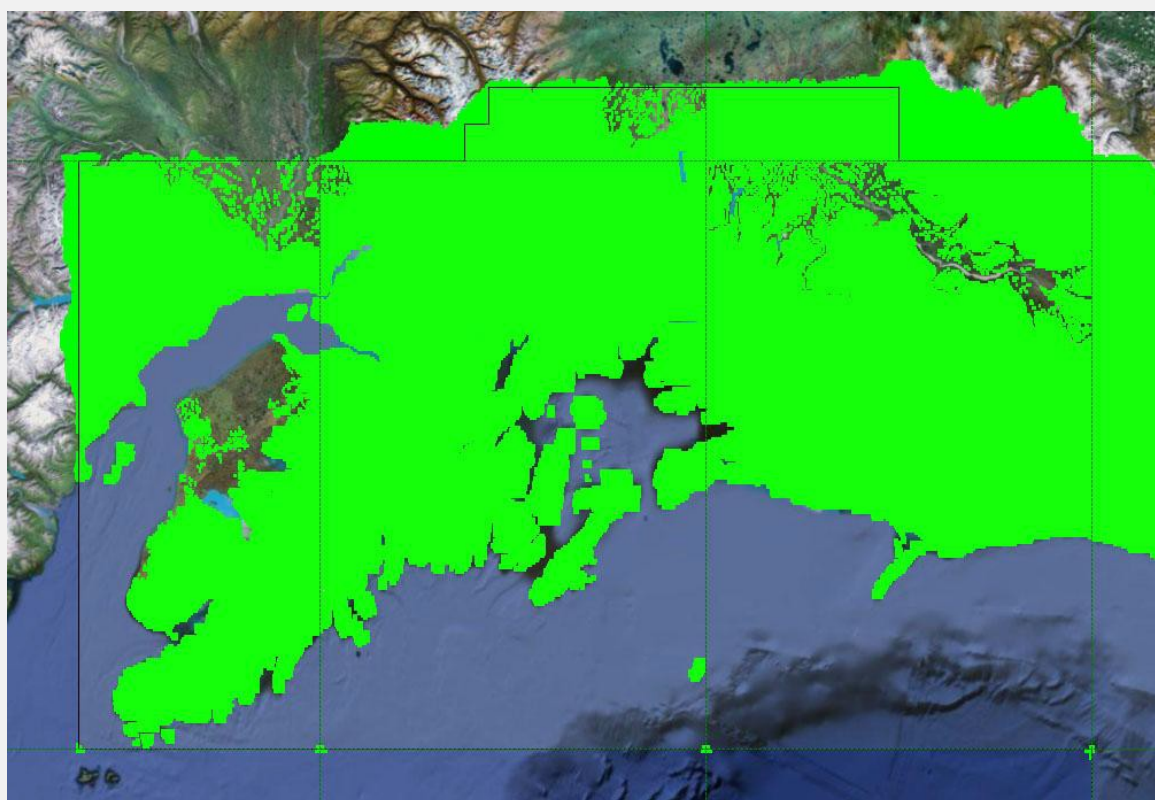
The result is nothing like you have ever experienced before, with an almost photoreal feel to all areas which have been edited, but with the added benefit of faster loading times, full five seasons' support and hand- placed custom autogen and library objects in every single kilometer

Quick Reference Simulator Settings

The table below lists in a handy reference the minimum recommended settings required in your simulator to enjoy SAK the way Orbx designed it. These settings will run well on most PCs and take particular advantage of the custom mesh and photoreal imagery used in the scenery area.

If you use the settings below you will be guaranteed the highest fidelity experience and the best balanced performance.

Setting	Value	Why?
Level of detail radius	Large	Reduces blurring of textures.
Global texture resolution	Max	Displays photoreal textures best.
Mesh complexity	100	Better terrain definition.
Mesh resolution	5m	5 m is required for SAK
Texture resolution	7 cm	Sharpest roads and freeways.
Scenery complexity	Extremely Dense	How Orbx designed FTX SAK.
Autogen density	Normal	Best FPS vs detail.
GA AI traffic	16-50%	Recommended for this scenery.
Road vehicle traffic	16%	No need to set higher for FTX.

Product Technical Support

Orbx has a very simple support policy: no question unanswered. That means, should you have any questions about SAK or its use, please feel free to register on the forums at orbxdirect.com and then log a support question in the FTX Payware Support Forum section. Orbx FTX experts will be available to review your support questions and you will usually get a reply on the forums within 12 hours, often much sooner than that.
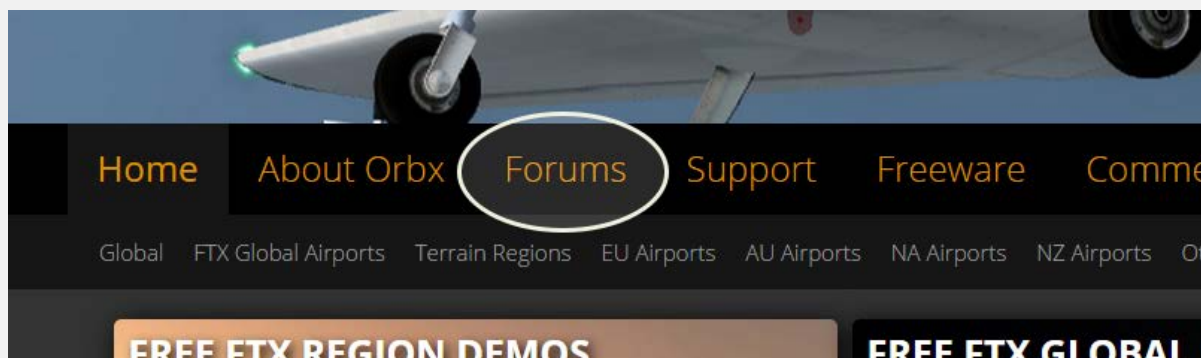
To visit our support forums, click on the "Forums" button shown on the homepage of orbxdirect.com.

Please do NOT email support requests

Orbx provides world-class support on our forums, and it's the only way in which you can receive support for SAK. Provided you adhere to the forum terms of use and have a legitimate copy of SAK, you will always be offered our support at no cost as we work toward a resolution to your problem each time.

Use the forum search function

Before you post a question, please try searching for the answer first, using the forum's built in search function located on the forum menu bar.

What to include in your support requests

If at all possible, this is what we'd like to see provided for each request you log:

- A separate post on the FTX support forums for each issue (don't tag new issue reports onto existing threads).
- Include your ORDER NUMBER from your SAK purchase in your post or forum signature section.
- A screenshot to highlight what you are talking about.
- A descriptive post title which clearly states what the issue is.
- Detailed comments in your post about what you are reporting on.

The Orbx support team is always on standby to assist you with any problems you may have, or will comment on your issue reports. Please remember, our priority is fixing any urgent issues first, and addressing bug reports second. Clearly though, any "show stopper" bugs will be given top priority though.

FTX Community Forums

FTX already has quite a thriving and active user community on the forums, with over 63,000 members as of September 2016. To visit the forums, just point your web browser to orbxdirect.com and from the front page click the "Forums" menu item.

You don't need a user account to view other people's posts and information posted by Orbx staff, but if you'd like to join in on the discussion there, simply create an account. It's instant and no validation email is required. We like to keep things simple☺.

We hope to see you there soon!

Thanks for reading!

You've stuck with us through all these pages of information, and we appreciate you taking the time to read the user guide. We hope it gave you some tips and insights. See you on the forums!

The FTX SAK Team

Lead Developers

- **Holger Sandmann (Project Manager)**: Geospatial data processing, including vector roads, rivers, and coastlines; photoreal areas selection and preparation; custom seasons file; landclass grid and polygon files; terrain elevation mesh; vertical obstructions placement; moving road traffic; extrusion bridges; unlisted airstrips; manual; team management
- **Tim Harris**: Photoreal glacier processing, including blend- and watermasks; lighthouse modelling and placement; airport components in .kmz file
- **Alex Goff**: Photoreal landmark areas processing, including seasonal variations, night lights, and autogen placement; custom models for those areas
- **Jon Patch :** Custom Skagway airport and harbor, plus White Pass & Yukon Railroad stock and structures between Skagway and Carcross
- **Neil Hill**: Initial enhancements of registered airports, airfields, and seaplane bases and placement of scenery objects
- **Chris Clack:** Further refinements of all airports, airfields, and seaplane bases, including scenery objects and AI ground movement
- **Graham Eccleston:** Curved approach data implementation for PAJN
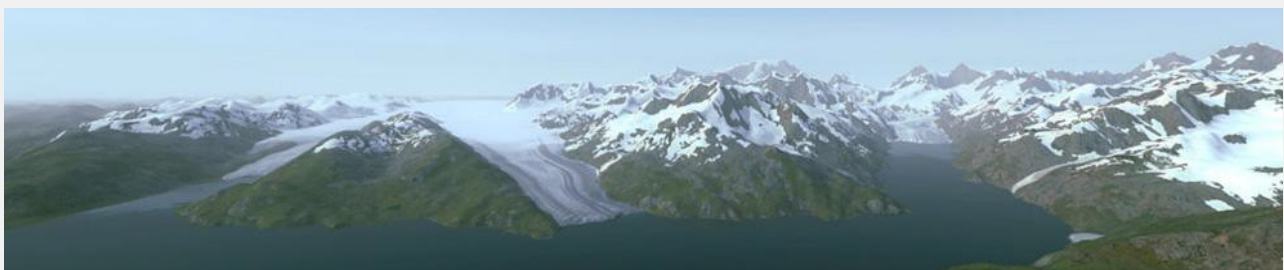
Additional Orbx Developers

- **Orbx Team**: Orbxlibs objects

Specialist Roles

- **John Venema**: Business management
- **Ed Correia**: Production Management
- **Ben McClintock**: FTX Central and website

Beta Testing Team

Eberhard Haberkorn, John Lovell, Patrick Scharnowski, Wolter van der Spoel, Craig Henley, Friedi Gulder, Fred Solli, Phil Manhart, Tom Brooks.

End User License Agreement (EULA)

For the most recent version of the EULA, see orbxdirect.com/eula.

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