IF YOU ARE NEW TO GEX, OR, THIS IS YOUR FIRST EXPERIENCE USING THE NEW GEX INTERFACE PRODUCT DESIGN, PLEASE READ THIS DOCUMENT _BEFORE_ LAUNCHING THE NEW GEX INTERFACE.

This document defines installation and use of the following GEX regional product versions (or higher):

GEX Europe v2.30
GEX North America v1.096
GEX Asia and South America v1.00
GEX Australia and Antarctica v1.00
GEX Africa and the Middle East v1.20
GEX Atlantic and Pacific Tropics v1.10

Welcome to the Next Generation of

Ground Environment X

Ground Environment X (GEX) is a general texture and 'autogen layout' replacement package for Flight Simulator X. GEX replaces the default Flight Simulator X urban, rural, desert, tundra, and mountain terrain textures with greatly improved and detailed 1024x1024 resolution texture sets which include a complete set of matching night lighting maps.

GEX products provide high impact day and night textures with seasonal variations along with upgrades for autogen textures which increase autogen night lighting impact, and, exclusively offers Ultimate Terrain X USA, Canada, Alaska and Tropics users the option to install GEX upgraded texture sets for UTX features such as industrials, parking lots, glaciers, 2D night road lighting map and much more.

The GEX interface introduced with this release is designed to run all GEX region products though a single user graphic interface which has been preprogrammed to monitor user input and correct for any installation order errors instantly. There are no GEX regional product installation orders to follow. The interface will self-correct as a user enables or disables GEX regions in FSX.

Ground Environment X is very simple to install and use. Please review the information provided below as it will answer typically asked questions and ensures you are ready to fly with confidence your installation is correct and complete.

PLEASE NOTE: GEX installs a set of enhanced FSX autogen textures to upgrade the quality of default FSX. If you use 3rd party airport building, ground, taxiway or other textures, _simply reinstall them_ after enabling all your GEX regions.

CURRENT GEX USERS: OLDER GEX PRODUCTS AND DEFAULT FSX BACKUP FILES.

NOTE: If you have already completed this process, or, do not currently use GEX products you may skip this section.

DVD USERS: Currently all new GEX region products are download only**. See the "DVD Users" section in the GEX forum to obtain a download key for your DVD products:** http://www.simforums.com/forums/topic42890_post252249.html#252249

In order to maintain original FSX file backups from older GEX products, before launching the new GEX interface system for the first time, the original GEX product backups _must be restored_ to Flight Simulator and the older GEX region products uninstalled.

DO NOT USE ANY older GEX region interfaces to install GEX files into FSX once you begin this process!

1. Obtain the wrappers (or DVDs of the new GEX region products as they may come available in the future) for the GEX products you currently own or wish to obtain.

Suggestion for downloading: To make this easy, create separate single folder directories on your hard drive for each new GEX region product and name those folders based on the GEX product name. Use these folders as the target locations for each of your region wrapper and data file downloads to keep them separate and in order.

2. Once you have obtained the replacement versions for your currently installed GEX products, open each original GEX region interface you own (one by one, not all at once) and select the BACKUP button.

3. Click "Restore Original Backup Files", and then if Ultimate Terrain products are installed, in the "Backup Actions For" box move the bullet to the UTX option(s) and click "Restore Original Backup Files". Once complete, close the interface.

4. Repeat STEP 3 with each original GEX region interface product currently installed until you have restored **ALL the original GEX region backups to FSX**. Once complete, move to STEP 5

5. Uninstall ALL of the old GEX product regions from 'Programs and Features' in Windows7 / Vista or 'Add or Remove Programs' in WindowsXP.

6. Run the first GEX region wrapper. It does not matter which one is installed first. Use your key and password to decompress. Run the actual GEX region installer as ADMINISTRATOR and install the new GEX region with interface to the location of your choice. Once complete, close the installer.

7. Run the next wrapper. Use your key and password to decompress. Run the actual GEX region installer as ADMINISTRATOR. It does not matter where you install any of the GEX regions as the interface will locate them all automatically.

8. Repeat STEP 7 until the GEX regions you own or wish to obtain are decompressed and installed as outlined.

STEP 1:

INITIAL INSTALLATION –

GEX (all versions) is a database of textures and autogen files. GEX does not install any files into Flight Simulator X until the user runs the interface and instructs the interface to enable selected region options.

You can install **any** GEX region on your system to any location you wish and they do not require installation to the FSX directory where it takes up space for no reason. The default installation path for all GEX regions is:

32bit Operating Systems:
Program Files\GEX <REGION NAME>

64bit Operating Systems:
Program Files (x86)\GEX<REGION NAME>

Should you wish to change the default install path for one or more GEX regions you may do so. There is NO install path requirement *for any new GEX region product*! You can elect to use the default path, or, browse any of the region installers to the location of your choice.. You can elect to install one region in one location and another in a different location. The interface will automatically locate all the region directories and if they can not be found the interface will inform you and allow the user to browse to the new location on the system.

You will need 15GB of free space to install the *FIRST* GEX region product with a backup. Each subsequent GEX region install requires an additional 4GB of disk space. You will need 30GB of free space to install the entire GEX WORLD in which is 6 GEX regions plus the backup. If you do not use all of the available GEX regional products the required amount of disk space is lower so please make sure you have enough disk space to handle the GEX regional products as they are added. If you need additional space you can browse any GEX region installer to another location and the interface will automatically locate it.

STEP 2:

BEFORE THE FIRST RUN OF THE INTERFACE -

GEX uses the FSX default texture/autogen database to replace the ground environment. In doing so it ensures that any scenery or airport package that works with the default FSX layout and respects the FSX SDK for design will work with GEX automatically. FSX textures are shared between areas and *some of the textures from each GEX region will always appear in more than one region location in FSX.* Once enabled, the files will act just as the FSX default files with no other user input required. If you have more than one GEX region to install, you can install them all into Windows as outlined in STEP 1.

Ground Environment X

We have taken into account different user situations. Please follow the directions below based on the statement(s) presented. Read A through D and proceed as directed;

A. GEX IS THE ONLY TEXTURE PRODUCT I USE AND I USE THE DEFAULT FSX GROUND TEXTURES

Please verify **C and D** first, then proceed to **STEP 3**.

B. I HAVE INSTALLED OTHER GROUND TEXTURES (freeware or payware) THAT ARE NOT GEX

Photo scenery is not textures so this does not apply to photo scenery addons or any addons that make entries in the FSX scenery library, only generic texture addons such as **FScene or freeware textures that replace FSX default**. Before running the GEX interface for the first time please decide if you wish GEX to keep a backup of the textures you currently have installed, or, prefer a backup of the default FSX ground textures. If you prefer GEX maintain a backup of the default FSX textures please restore the default FSX ground textures and autogen files from other products such as FScene before proceeding. *If you still wish to use other products such as FScene, please make sure all GEX regions are enabled in FSX <u>after</u> any other texture package such as Fscene is installed or your GEX regions will be corrupted!*

C. I HAVE OTHER ADDONS INSTALLED THAT USE A MODE (CENTRAL) SWITCH SUCH AS ORBX FTX

GEX is completely safe to use with such addons however please set the mode or central interface switch for the FTX product to "Default FSX" *before enabling the GEX region from the interface in FSX*. The GEX interface will automatically remind you of that step. After GEX textures are installed you may turn the mode switch back ON and use other addons of that nature in their regional locations without any issues from GEX . *It is suggested to set the FTX CENTRAL switch to "FSX DEFAULT" when flying outside of the Orbx region to ensure no interference from Orbx products with GEX.* Should you forget or make the mistake of enabling a GEX region in FSX with FTX Central 'enabled' for Orbx, simply set the FTX Central switch to FSX DEFAULT, then disable any *one* GEX region and then re-enable it in FSX from the GEX interface. That will correct any issues and you can proceed.

D. I ALREADY HAVE (OR I INTEND TO INSTALL) OTHER GEX REGIONS IN THE FUTURE

With the new interface system it does not matter which GEX product is installed into Windows or FSX first. When you initially install a GEX region into Windows no textures are replaced in FSX and when the backup is run the interface will skip FSX default textures previously backed up from another GEX product, however, to make the process quicker and easier we do suggest installing all of the GEX region products you own into Windows before first launch of the interface. This *<u>is not</u>* a requirement as the interface will automatically detect new regions as they are added at a later date and will back them up too, it simply shortens the process of installation into Windows and backup of the default files.

STEP 3:

FIRST RUN AND USING THE INTERFACE

NOTE: *If you use Windows with UAC (User Access Control) enabled, use very aggressive malware or virus scanners, or, do not use a Windows Administrator account, you must right click the GEX interface icon and select "Run As Administrator". Failure to do so under the above listed conditions can result in failure of the interface run or to properly backup and overwrite the files in FSX. If your security software is too aggressive it can interfere with the function of this product. If you still have issues after selecting "Run As Administrator" try disabling Windows UAC, AV and malware scanners. We also suggest Windows UAC and Windows Defender be disabled when running FSX for best performance.*

You can now launch the new GEX interface. Be aware the GEX interface may PAUSE briefly during interface launch, backup, enable/disable operations in order to scan for GEX regions and shared GEX region files.

With this release of GEX the product has changed. In the past there was one interface for each product, however with this release we are happy to offer a far more "smart" and convenient single interface system which automatically monitors user inputs and does not allow errors in enabling or disabling the GEX regions in FSX. There is one interface for all GEX products. The new GEX interface is very simple to use and provides 5 services to the user.

- Backup and Restore
- Inform users of available upgrades
- Selection, Enable and Disable of options
- Monitors and corrects GEX installation in FSX
- Support documentation and direct support links

The first time the interface is run it will check for installed GEX regions. When you install a GEX region the wrapper installs a generated license file specific to your hardware. If a license check fails the interface will inform you of that failure and direct you in checking for solutions with a popup message.

Configuration

With the new interface there is no configuration required! The interface automatically locates the Flight Simulator X install through the registry, however, if for some reason it can not find that path the interface will automatically request a user browse to the FSX install directory where FSX.exe is located and will then verify the FSX installation.

NOTE: The GEX interface will not allow selection of or enable of GEX region files to any location other than a legitimate Flight Simulator X install directory. If you attempt to browse the interface to any other location the interface will not allow activation of GEX to a FSX location that is not correct. DO NOT ATTEMPT any manual copy any files from GEX.

If the interface can not locate your FSX installation automatically, and browsing it to the correct location of FSX.exe does not work, please make sure the FSX install directory does not have a "hidden' attribute associated with it. Right click the FSX install directory, select 'Properties' on the 'General' tab at the bottom if the attribute for "Hidden" is checked or enabled, disable it and then apply the changes to the folder and all subfolders and files. If the interface still fails to locate the FSX install directory, contact GEX or Flight1 support for assistance.

Backing Up Your Existing FSX Ground Textures

There is only ONE backup directory for ALL GEX regions. Before allowing user access to the Ground Environment X interface options the interface will automatically run a backup of the files in Flight Simulator that each installed Ground Environment X region product will replace. When the interface is run for the very first time it will ask if you wish to move the backup directory to a location other than default. The default backup location is C:\GEX_REGIONS_BACKUP. The name of the directory can NOT be changed. If you select to move the backup a browse box will appear and after browsing the backup to a new location the interface will automatically create the GEX_REGIONS_BACKUP folder and place all future backups in that location. IMPORTANT: Once you select the target location and the interface begins moving files, DO NOT CANCEL A MOVE BACKUP OPERATION and allow the operation to complete. If you cancel the backup move while in progress the backup will be damaged.

Once complete, and if you have UTX USA, Canada, Alaska or Tropics products installed, the interface will automatically detect those products and launch the UTX backup tool to safely backup those files as well. Subsequent launches of the interface will auto-detect any newly installed GEX/UTX regions and will re-run the backup system placing the files in the same backup folder.

Remember, GEX will NEVER overwrite any files in the backup directory and only add files to it. Uninstall of a GEX region from Windows will NOT remove the backup. You will always have a safe backup of all your files.

You will need around of 5 Gigabytes of free disk space for a complete and entire "GEX WORLD" backup, however, if you own only one or two GEX regions the space requirement is somewhat less. Each region you add to your GEX interface adds more to your backup. There is no option to cancel the backup process, however you are given the option to DELETE the backup or MOVE the entire backup to another location from within the interface at any time. If you move the backup using the interface MOVE BACKUP function, the interface will automatically detect the disk space and not allow a backup be moved if the available disk space in the target location is too low.

Enable the Ground Environment X Region Files in FSX – You can only select one available GEX region at a time.

1. In the list of the available regions place a bullet in the GEX region you wish to enable in FSX.

2. Click the "ENABLE" button. This will enable the selected GEX region files in your FSX install. A progress bar will appear and inform you when the process is complete and successful. Once complete, repeat this process for each available GEX region.

ENABLE GEX-UTX (ULTIMATE TERRAIN X) REGIONAL UPGRADES -

After a GEX region has been successfully enabled in FSX, if the interface has detected that a UTX region product associated with the 'Enabled in FSX' GEX regions is installed, the interface will allow access to the UTX options under the GEX region product. To enable the GEX upgrades for any UTX products, simply select the UTX feature with a bullet and click the ENABLE button. A progress bar will appear and inform you when the process is complete and successful. Repeat this process for each available UTX option listed under each "Enabled in FSX" GEX region.

That's it! You are finished enabling all of your new GEX regions in FSX!

If you move a GEX region directory after installing it into Windows the interface will automatically read this condition and provide a popup message and browse box so you may manually restore the correct path/location of a region quickly. Once the new location is confirmed the interface will use that new location automatically. No reinstall is required. HOWEVER: If you manually move a region directory and use the interface to correct the path location the GEX region Windows uninstaller will no longer function. It will require manually deletion of the region directory to uninstall the product from Windows.

INTERFACE READOUT

Unlike the original GEX interface, if you close and reopen the new GEX interface it will maintain and monitor the status of your GEX/UTX regions in FSX in real time. An explanation of the terms in use is listed below:

PRODUCT STATUS -

The 'Product Status' list in the interface will display in real time the exact state of each selection each time the interface is run.

NOT ACTIVE GEX/UTX region is not installed, not licensed or not detected in Windows - selections are unavailable to the user

DISABLED IN FSX GEX/UTX region is installed and licensed in Windows and is detected - selections are available to the user

ENABLED IN FSX GEX/UTX region is active in FSX

INSTALLED VERSION -

The 'Installed Version' list will display in real time the GEX region product revision. When a update to a GEX region is successfully installed in Windows and detected, the installed version number will change and display the GEX region product version automatically.

INTERFACE BUTTONS -

MOVE BACKUP - You need 10GB of free space to move the GEX backup. When selected the interface launches a browse window. Browse and select a new location then click OK. The interface will move the GEX_REGIONS_BACKUP directory and all the sub directory and files to the selected location automatically then mark the system to use the new location for any additional backup or restore operations. Do not rename the backup directory in Windows for any reason! If you do the interface will not know the location of the backup. Do not manually move the backup folder however if you make this mistake the interface will inform you when launched it cannot locate the backup and allow you to browse to the new location. IMPORTANT: Once you select the target location and the interface begins moving files, <u>DO NOT CANCEL A MOVE BACKUP OPERATION and allow the operation to complete.</u> If you cancel the backup while in progress the backup will be damaged.

DELETE BACKUP - **Users must be very cautious using this feature.** When the button is clicked a box with a message appears warning the user before the backup is deleted and offers a CANCEL function. You can delete the backup and mark the system to never backup any files in the future. Some users elect to not keep backups once GEX is installed, however, if for any reason you completely uninstall/deactivate a GEX region from Windows in the future you can not revert back to the default FSX files and FSX will have to be completely reinstalled. ***Only use this feature if you are sure you will not return any GEX region for refund which completely uninstalls a GEX region from FSX and Windows.***

The buttons at the bottom of the GEX interface perform the following tasks:

SUPPORT - Opens a browser session to the Simforums Support area where the GEX support forums are located. If you do not have an account and wish to request assistance directly from the GEX staff you can create a new account by clicking the REGISTER link at the top side of the forum list and once registered enter the <u>Ground Environment X Series</u> forum and post a support question. We will make every effort to get back to you as soon as possible. In the event you would like direct support from Flight1 for the product installers you can use the Flight1 Ticket system directly here: http://www.flight1.com/ticket.asp

HELP - Launches this document when ever you may wish to review the contents.

CHECK FOR UPDATES - YOUR INSTALLED GEX REGIONS MUST BE SET TO "**ENABLED in FSX**" IN ORDER TO OBTAIN UPDATES. This button launches the web update system from Flight1. The interface will automatically connect to the Flight1 update server, read your currently "Enabled in FSX" GEX region product revisions and inform you if a update is available. If one or more updates is available the update system will provide a link to the Member Gateway system.

Click on the link provided for the region update. Using your order or registration number enter the registration data to gain access for each GEX region product. Your registration code for a specific region will automatically direct you to each specific region product update. Once inside the Member Area, links to the update for the GEX region product associated with your Flight1 order number or code will be displayed. Do not close the browser window while downloading and **be sure to *SAVE* the patch to the hard drive**, **never *RUN* a patch file directly from the Windows download box or it can fail!**

When you have obtained a update patch for a GEX region product, log out and log back in using the next GEX region order number or code. Repeat the process till you have obtained all the available updates for each region product. If there are any special installation instructions they will be included in the installer for the update. You can also check the GEX support forums for announcements to updates and review any special instructions required.

More often than not, there are no special install instructions for GEX updates, simply close the GEX interface and run the installers which will automatically locate your GEX interface install directory from the Windows registry (no reason to browse!) and upgrade your GEX products. If any special instructions are required they will be provided with the installer of the patch in a box that will appear during the install process.

After installing updates always open the GEX interface and allow the interface to run through any new backup process, then proceed to re-enable in FSX each updated GEX/UTX region in the interface.

EXIT - Closes the GEX interface. Once you have made your selections and changes in the GEX interface it can be closed and does not need to be reopened unless you wish to make a change to your installation or check for upgrades. The interface ***does not*** need to be open for the GEX/UTX regions to remain enabled in FSX.

AUTOGEN FOREST PERFORMANCE FIX - By default all GEX region selections install a autogen forest tile performance fix. We provided this fix for users who see performance drops around large forests and trees. Most users will see such performance drops even with top-shelf computer hardware.

You can elect to 'Disable' (or re-enable) this feature by selecting the Autogen Forest Performance Fix checkbox. A popup will appear explaining the fix and request confirmation. Once you have made your selection the change will take place instantly to the files however if FSX is running, FSX must be closed and reopened in order for the change to take place. Once the feature is disabled the sim will revert back to the default autogen forest system.

This feature is "Enabled" by default and will automatically re-enable itself when ever a GEX region is enabled in FSX. If you should elect to 'Disable' the Autogen Forest Performance Fix feature and at some point in the future add a GEX region and/or disable/enable a GEX region in FSX, then re-select to disable the Autogen Forest Performance Fix (clear the checkbox) after adding/reinstalling a GEX region.

- PLEASE NOTE -

This fix under certain conditions can expose a glitch in the FSX autogen exclusion code. The same autogen error can display with or without GEX installed. It can be seen in various places around the world in FSX with no GEX region in use.

The visual glitch problem does not appear everywhere in FSX and only in spot locations. Some 3rd party scenery that do not use specific autogen exclusion code can invoke the glitch to appear with the GEX autogen performance fix enabled..

How does the Autogen Forest Performance Fix work? Simple!

Instead of the default FSX system where forest tree tiles have no autogen notation on them and the FSX render engine is coded to fill those tiles with 4000-6000 trees/bushes (depending on the species), we annotated the tiles and limited the number of trees and bushes to a max of 2800-3000 at 100% autogen slider. The result is a reduction in autogen load flying over forests, and, as you reduce the autogen slider the number of trees will reduce by 20% for each tick in slider reduction. This means people who can not afford top shelf hardware and/or who do not overclock their computers suffer far less frame loss and major stutters flying over large forests, or, tree tiles in and around large cities as one will see with default FSX.

If you are seeing trees on runways or other places they should not appear and question if that is due to the autogen forest fix we provide, with FSX <u>closed</u> open the GEX interface, clear the Autogen Forest Performance Fix checkbox select to DISABLE it, the interface will confirm the default FSX autogen for forest tiles is restored, then start FSX and check the location.

IF - the trees are gone: and the location is critical for your sim use the fix may not work for you. You will need to decide if the massive autogen tree numbers being rendered in forests is less important that the trees that may appear in spots here and there.

IF - the trees are still present: then what you are seeing <u>has nothing to do with the fix</u> in the files we annotated. You can re-enable the fix as the issue you are seeing is not being invoked by any GEX installed files.

ADDITIONAL INTERFACE FUNCTIONS -

In the past the older GEX product interfaces required the user to make manual changes if they performed certain operations such as uninstalling or reinstalling regions in order to restore correct 'shared region' files. The new GEX interface performs behind the scenes automated checks and executes repair operations as you add, remove, enable or disable GEX regions. In example, if you have more than one GEX region enabled in FSX and decide to disable one, the interface will automatically detect the remaining GEX region products and after a region is disabled reinstall the shared files for the remaining active regions. The automated functions eliminate user interaction and mistakes.

The GEX interface will automatically detect if the GEX North America region is enabled or added in after other GEX regions. In the past if that happened with the older interface system the user was required to manually reinstall remaining GEX regions after North America. With the new interface that has been eliminated. The interface will detect GEX North America being enabled or disabled in FSX then automatically perform all restore functions for active GEX regions so they are all correctly displayed past North America in FSX.

There is no user interaction or install orders required. The interface will perform all of those tasks automatically as you make changes and selections.

ULTIMATE TERRAIN X OPTIONS

GEX products offer updated/upgraded texture enhancements for Ultimate Terrain regional products. These files are specifically designed to work with GEX in UTX covered regions. The interface will automatically detect UTX regions, back up the UTX files GEX replaces and then enables the UTX options in the interface. There are two types of UTX files, the primary UTX regions and 'UTX sync patches". When a primary UTX region is selected and enabled in FSX the associated sync patches for GEX Africa and the Middle East, Atlantic and Pacific Tropics and/or Asia and South America automatically become available. When a user installs GEX AFME, ATP or ASA their GEX North America product is automatically upgraded and the UTX sync patches provide further enhancements that match those upgrades. Sync patches may be enabled or disabled as users see fit however if a primary UTX region is disabled in North America the sync patches will no longer be available to the user in the interface.

UPDATING GEX NORTH AMERICA FROM v1.096 TO v1.099 -

Our latest releases; GEX Africa and the Middle East, GEX Atlantic and Pacific Tropics, and, GEX Asia and South America each come with the most comprehensive GEX North America update we have provided since GEX North America v1.090 was released. GEX North America users who install *any* *one* of those 3 mentioned regions will enjoy significantly upgraded color and tone in all seasons plus the addition of many ***all new texture sets*** that will display in North America derived from new source data.

If you would like to upgrade GEX North America to v1.099 simply obtain, install and enable in FSX any -one- of the mentioned three GEX regions and your North America version will be upgrade from 1.096 to v1.099 automatically. It only requires ***one*** of the three regions to upgrade North America, not all three. If the interface does not detect one of the three or they are disabled after installing them initially, GEX North America will automatically revert back to v1.096.

REMOVING ANY (or all) GEX REGION(s) FROM FSX -

To disable a single GEX region in FSX open the interface, select the region with a bullet and click the DISABLE button. This operation will remove all the GEX files installed with that region, automatically restore the files from the backup associated with that region and last if there are other GEX regions still enabled, restore the shared files so the remaining GEX regions still function correctly. If you wish to remove ALL GEX regions and use the default or the textures stored in the backup directory, repeat the same DISABLE operation *for all* enabled GEX regions in the interface one by one. The interface will completely remove all GEX files and restore the files from the backup into FSX.

TIPS FOR USING GEX (any version)

GEX is simplistic in design since all it does is replace the default FSX textures and autogen files for the region it covers however there are a few small items users should know to be sure they are getting the most out of their flight experience and without any issues.

FTX USERS: Make sure the FTX CENTRAL switch is set to FSX DEFAULT when flying a GEX area outside of a Orbx covered region.

UTX USERS: (Ultimate Terrain X, any version)

If you install UTX or install any update patches to Ultimate Terrain at a later date you will need to run the GEX-UTX options associated with the UTX product installed from the GEX interface. Past that, you are welcome to use any UTX feature you like enabled or disabled. If you UPDATE UTX after enabling a UTX option, the interface can not detect this, therefore, after a UTX update simply 'Disable' and then 'Enable" the UTX options which will restore the GEX-UTX files a UTX update may overwrite.

LANDCLASS:

GEX is *does not provide landclass*. Landclass is a file that tells the sim what type of terrain is under the aircraft be it farm, swamp, forest, dirt, grass, suburb, city etc. For North America, Europe and Tropical Caribbean as well as Central America we suggest UTX products for the industrials and urban area landclass as well as the roads, shores, rivers, and other elements UTX adds but 3rd party landclasses for the rural areas can also be used with or without UTX.

You can read up in detail about landclass and how it effects what you see AND how to install and use it with UTX here: in the GEX forum. We highly suggest the use of SceneryTech products in many locations. Xclass makes landclass as well and in some locations Xclass offering can work better than SceneryTech. None the less we encourage users to *obtain all the landclass products available* for the areas they intend to fly and enable/disable them as needed. GEX is made to work with SceneryTech, UTX and Xclass landclass products as well as any other landclass that is correctly made for FSX.

NOTE: You can only enable ONE landclass per area at a time in the FSX Scenery Library and you can change landclass in-sim on-the-fly by entering the Scenery Library from the FSX menu in-game, disable one landclass and enable the other, click the OK button and the scenery database will rebuild with the selected landclass in operation. The GEX texture use and layout will change automatically based on the landclass running. And last, If you use UT Alaska be sure to DISABLE any 3rd party landclass such as SceneryTech North America or Xclass Canada as those products will interfere with UT Alaska!

NIGHT FLYING:

Be aware that FSX is poorly coded for night lighting with LCD monitors. The night environment is far too bright by default. Although the GEX night textures are far darker than the defaults the ambient light in FSX needs some assistance to obtain a proper 'dark level' set so you can enjoy night flying and get the most out of what we designed into the night lighting environment.

For those who wish both a dark and far more robust nigh light environment there is a very simplistic way to obtain that goal. Enter the graphics driver control panel settings and adjust the brightness and contrast at the driver level. With Nvidia video cards, that setting is found by starting the Nvidia Control Panel and select: **Adjust Desktop Color Settings**

Reduce the BRIGHTNESS to somewhere between 45% to 40% (default is 50%) and increase the CONTRAST somewhere between 55 to 60% (default is 50%). The higher the *contrast* the more intense light and color is applied the light map textures and the lower the *brightness* the darker the environment around the lights. You will need to find the values that work best for your system and monitor since all monitors are not created equal and the values will vary. Don't forget to restore the default setting for your driver in daytime use! There is a bug in Flight Simulator X whereby the cockpit lights of any aircraft brighten the exterior textures at night. You may need to adjust the brightness and contrast settings to compensate for that bug.

MAINTENANCE

It is important to understand you have just finished installing a very large amount of data into FSX. Although GEX overwrites the FSX default files and not add to them, the process can significantly fragment a mechanical hard drive. We highly recommend a DISK DEFRAGMENT be run on the hard drive where FSX is installed using a good professional 3rd party disk defragmenter program. The Windows defrag tool can be used but does not do as complete a job as professional defrag solutions to clean up those fragments and allow much faster/smoother disk access. Doing so helps with stutters, blurry textures and scenery loading.

NOTE: Do not defragment a SSD (Solid State) hard drive. Only mechanical hard drives need this maintenance!

You can review this thread at the Ground Environment forums about installing and setting up Flight Simulator X. The information provided can help with performance and provides information about installing and setting up UTX as well as provide links to information about Windows system tuning.

Periodically Check for Updates

All users should periodically check for updates using the GEX interface. We will also make announcements in the GEX support forum when patches/updates become available. To check for, obtain and apply updates see the section above: **OTHER INTERFACE BUTTONS - 'Check For Updates'** section.

Uninstalling Ground Environment X From Windows (any single region or all) **–**

NOTE: If you reinstall Flight Simulator X you do not need to uninstall GEX from Windows. GEX is only a database of files that can be reinstalled from the interface at any time. The GEX interface will not be able to detect a FSX 'reinstall' so the regions will continue to display "Enabled in FSX". Before reinstalling FSX you can reset your GEX interface by selecting to 'Disable' each region from the interface one by one until they are all 'Disabled", once complete reinstall Flight Simulator and then re-enable the regions from the GEX interface.

If you forget to disable the GEX regions before reinstalling Flight Simulator simply rerun the GEX interface after reinstalling FSX and select each enabled GEX region (one at a time) and DISABLE them, then re-enable them to restore your GEX/UTX regions to the new FSX install.

If you wish to uninstall one or more Ground Environment X regions from Windows and your interface, launch the Ground Environment X interface and select the GEX regions (one by one) you wish to uninstall by placing a bullet in the region selection and then click the DISABLE button. Repeat this process for any additional GEX regions you wish to uninstall from Windows. Once complete, close the GEX interface. In Windows go to Control Panel - Programs and Features in Windows7 / Vista, or, Add and Remove Programs in WindowsXP – Find the matching Ground Environment X region(s) you wish to uninstall in the list, then click to uninstall from Windows.

SUPPORT

Please note the following Internet sites for support and other program information.

For support, go to the Ground Environment X forums at http://www.simforums.com

For Ground Environment X specific information, go to http://gex.flight1.net

To reach Flight One Software, please visit http://www.flight1.com

Credits

Developers: Anthony Vos, Nick Needham   Interface design by Nick Needham and Flight1 Software