

Ultimate Terrain FAQ (with Ultimate Terrain USA Notes):

We are extremely excited about our new Ultimate Terrain release for the USA. This product is the largest and most fully featured terrain product of its kind. It will provide you with an absolutely stunning flying environment in FS2004 over a huge area (the entire continental USA plus Hawaii).

We feel like this is going to be a very popular product, and a perfect companion to our Ultimate Terrain Canada/Alaska product. For those users that are on-the-fence about Ultimate Terrain, here are answers to some questions you might have.

What is Ultimate Terrain ?

Ultimate Terrain is a terrain replacement product for FS2004. It replaces the visual aspects of the FS2004 terrain. This includes the way water, roads and other features are drawn.

The FS2004 terrain is based on source data, which is most often of a fairly low-resolution. In most cases, the terrain appears to be based off 1:1,000,000 (1 to 1 million) scale data. When terrain is drawn using data of this scale, features can be off by as much as 1,000 meters (1km). As a result, water features in FS2004 are often mispositioned and sparse. The same is true for roads and railroads.

In contrast, Ultimate Terrain is based on commercial data licensed from companies like Navteq, TeleAtlas, and DMTI Spatial. These data sets allow us to draw the terrain at an accuracy that is roughly 10 to 20 times more precise than 1:1,000,000 scale data. The accurate and detailed data from these companies is most often used in GPS Navigation systems. In addition, our multi-licensing agreements with these companies allow us to choose the best available data for specific areas and features.

Ultimate Terrain will provide accurate feature representations in FS2004 for roads, railroads, water bodies (including streams where available), accurate coastlines, an improved landclass (the distribution of ground textures and associated autogen objects), and detailed ground polygons (for things like golf courses, cemeteries, parks, etc).

In addition, Ultimate Terrain provides a one-of-a-kind night lighting environment using actual 3D light points to represent night lights and automobile traffic (static lights, they do not move).

Does The Water In Ultimate Terrain Contain Coastlines ?

Yes, coastlines are drawn for all water features, except rivers and very small lakes/ponds. We have found that very small water bodies look better without them.

FS2004 wave effects are present in the oceans and very large lakes.

What Is The Difference Between Ultimate Terrain And Photographic Scenery ?

Ultimate Terrain uses vector graphics to draw it's features, just like FS2004 does. However, the Ultimate Terrain environment is much more accurate and detailed.

Photographic scenery uses actual aerial images (raster graphics) which are painted on the terrain.

Vector graphic data consists of objects composed of paths and shapes. Vector graphic data is not stored in an image form on your hard drive. Instead, it is stored in a compressed vector graphic format, until it is actually drawn in the Flight Simulator environment.

How does this affect your FS environment?

First of all, photographic scenery (raster images) can take up a huge amount of disk storage space. A scenery area of about 150x150 miles might take many gigabytes of disk storage, just for that one area.

With vector graphics, the storage space is much less for the same sized area. With Ultimate Terrain USA, about 2.5gb of disk storage is required. But, this provides coverage for the entire continental USA plus Hawaii.

Also, load times and scenery refresh rates are typically longer with photographic scenery. With Ultimate Terrain's vector graphics, you can also fine tune your environment by turning certain features on and off as you desire.

Both types of scenery packages (photographic and vector) will greatly improve your FS environment. It is really a matter of preference as to which to use. It is also possible to use them both side-by-side.

Does Ultimate Terrain Upgrade The Terrain Mesh ?

Ultimate Terrain does not contain an upgrade to the terrain mesh, although many of the water features have been "flattened" using 90m DEM data (also mentioned as 76m DEM mesh in many FS packages).

There are many fine mesh products for FS2004. Any mesh product will work well with Ultimate Terrain.

However, we are working together with FSGenesis to make our product lines even more compatible. So, we recommend FSGenesis mesh products for use with Ultimate Terrain.

Compatibility With MegaScenery

Megascenery will overlay the features in Ultimate Terrain, with the exception of the night lighting, which should work very well with Megascenery (in theory). Megascenery and Ultimate Terrain should blend nicely at the borders, due to the feature accuracy of both products.

Compatibility With 3rd Party Packages

There are thousands of 3rd party scenery upgrades available for Flight Simulator. Any 3rd party product that alters the USA road and/or water features of FS2004 will impact your Ultimate Terrain environment. If you see things like strange coastlines or water features, double roads, or roads over water, it is most likely some 3rd party scenery is conflicting with Ultimate Terrain.

We will do what we can to work on compatibility issues with the major 3rd party scenery packages for the USA. We also provide a public forum, so that our users can interact regarding 3rd party products and Ultimate Terrain.

The link to the 3rd party product forum is

http://www.simforums.com/forums/forum_topics.asp?FID=22&PN=1

Will Ultimate Terrain Work With FS2002 ?

You cannot install Ultimate Terrain to a system running FS2002 and have it work. Many, if not all, features in Ultimate Terrain could probably be made to work with FS2002. But, we do not support the use of Ultimate Terrain with FS2002.

The Night Lighting Is Awesome. Are There Any Drawbacks ?

The 3D night lighting in Ultimate Terrain is like no other night lighting environment you have seen. It will light up cities with thousands of light points visible at once.

This is an advanced feature, which in some ways push the limits of what FS2004 can currently support.

The night lighting environment, while active, will currently reduce the amount of building autogen in the cities at any time of the day. This occurs because FS2004 will not display an autogen object when another object occupies the same ground area (even if the object is not currently visible).

Using the Ultimate Terrain setup utility, you can easily turn the night lighting on and off if you want full autogen support. The setup utility also gives you the option of turning off night lighting for residential roads only. This will allow most of the autogen to return, and still provide much of the night lighting environment.

The Ultimate Terrain environment is highly configurable using the included setup utility.

What other things are special about UT

Ultimate Terrain was completely generated from in-house applications. As a result, these applications can be constantly improved, to provide a better environment in the future.

The in-house applications also allow us to fine tune the BGL files, to improve loading times and performance.

The Ultimate Terrain setup utility allows you to easily toggle the various features on and off as necessary. Here is a screenshot of the Ultimate Terrain interface.

All Ultimate Terrain scenery is released on LOD5 boundaries, which is the same geographic grid system that FS uses for its default landscape files. This means that you can fly from the Ultimate Terrain environment, to areas outside Ultimate Terrain, without a loss of scenery in the border areas. If you purchase UT USA, you will also get enough of the Canada border region to fill out the bordering LOD5 cells. However, these features will be reduced to only major water features and highways (this will provide a better environment than the default FS2004 environment, but much less than our full UT Canada/Alaska product).

Performance

Performance is great with Ultimate Terrain. The frame rate hit is very limited and can be controlled with the help of the UT setup utility. Load times will increase somewhat, but this depends on a lot of outside factors (hardware, disk optimization, number of FS addons, etc). As with most FS addon products, memory use will increase somewhat, especially when combined with other products.

Because Ultimate Terrain is customizable, you can turn off individual features that are not needed or undesirable.

Please be aware that there is a large number of factors that can affect performance in FS2004. With some performance tuning in FS2004, it is also possible to greatly increase your results.

How Does Ultimate Terrain Interact With Ground Objects in FS2004.

Because ground objects, like landmark buildings, radio towers, bridges, etc., are positioned according to the default FS2004 terrain, some of them will be misplaced when a more accurate terrain package is used like Ultimate Terrain. Instead.

We have excluded objects which would appear in the water in Ultimate Terrain. You can turn the exclusions on and off as you wish. You can also turn off misplaced bridges and other national landmarks if you wish.

We have plans in the future to more accurately reposition the FS2004 objects. However, this is a big project, which is beyond the scope of the current Ultimate Terrain release.

How Are The Airports In Ultimate Terrain ?

Ultimate Terrain does not make any changes to the location or elevation of the default airfields. Most airports work well with Ultimate Terrain. Occasionally, you will find a misplaced airport that will appear on the wrong side of a road, or even find part of it in the water.

Also, some airports may be "flattened" at an incorrect elevation, leading to runways on plateaus or in trenches. This issue will be more noticeable when using third-party add-on mesh. Similarly, if a water body runs near an airport that is flattened at a different elevation than Ultimate Terrain, you may see some water running up the sides of the airport. This again is a rare occurrence.

Moving an airport and/or its flatten in FS2004 is not an easy thing to do. We will try and maintain a list of airports that need correction in FS2004, and try to provide community support for improving the airport environments in general

Does The Ultimate Terrain USA Product Contain Any Part Of Canada ?

As mentioned elsewhere, Ultimate Terrain scenery packages are released on LOD 5 boundaries, which is the same geographic grid system that FS uses for its default landscape files. This means that we will completely fill a out an LOD 5 boundary with *SOME* scenery, so that you won't have breaks between our scenery and the default scenery at the border areas. This takes a lot of extra effort to achieve, and we are one of the few developers that do this.

Since the Canada and USA border runs right through many of the bordering LOD5 cells, we will make sure will fill out these LOD5 cells.

In our Ultimate Terrain Canada/Alaska product, we included some pretty fairly detailed and scenery for the USA portion of the Canada/USA border. This was done both for promotion purposes. And, to add some extra features to our Canada/Alaska product.

In Ultimate Terrain USA, we also include portions of Canada to fill out the border areas. However, these areas are stripped down to included only major water areas and highways. You can obtain the full coverage for these areas in Canada, plus a much wider area, by purchasing our Ultimate Terrain Canada/Alaska product.

What About The Mexico Border Areas

In Mexico, we also fill out the LOD5 cells. However, these areas are based on some freely available data and are not at all detailed (high quality source data is not yet available for Mexico).

The good news, is that with Ultimate Terrain, you will not see square blocks of landclass textures due to missing water features along the US/Mexico border.