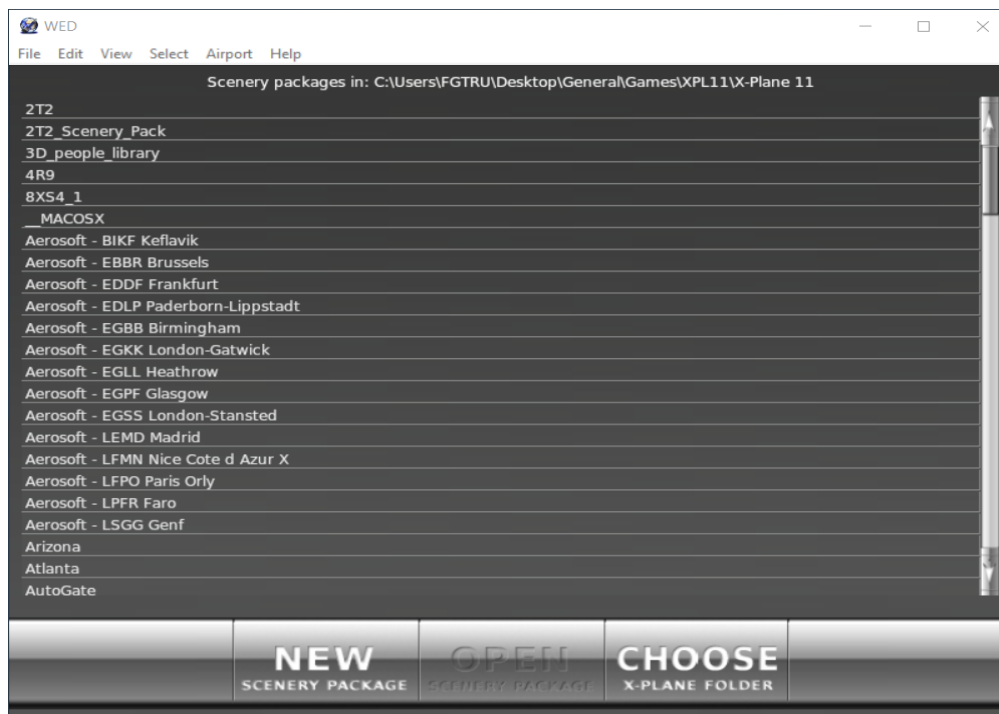




SAR Training for Flight Simulator Enthusiasts

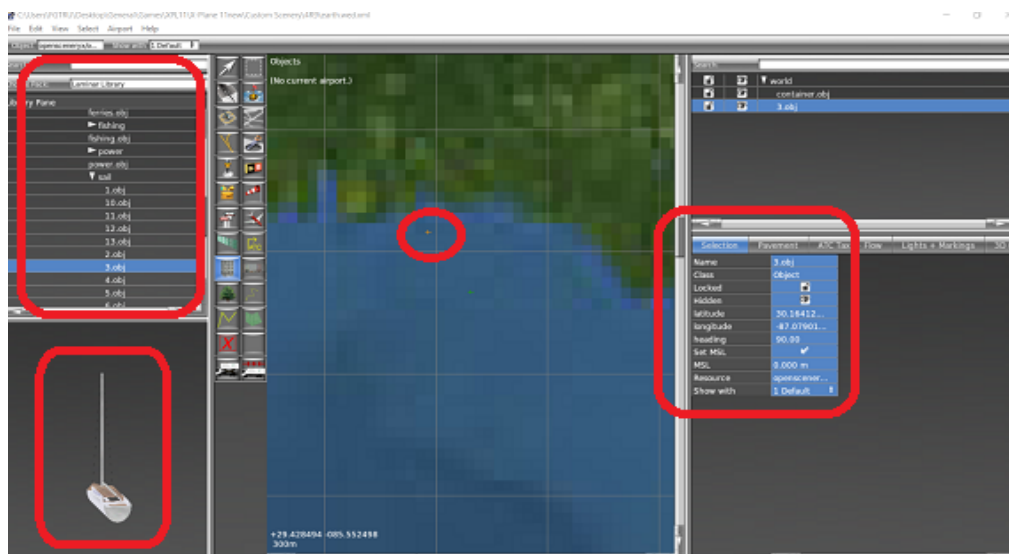
Step 1 - Download and install the World Editor (WED) Developer package. Run it and it will look similar to the below image...



a. The first time you run the WED program, you will need to select you XP11 installation directory using the CHOOSE button. This will populate any installed libraries as shown above.

b. Open the opensceneryx library, and add object 3.0bj from the library to the map south of 4R9. Then, from your spreadsheet copy the lat/long coordinates to the corresponding entries for the object.

c. Do a FILE_SAVE and also EXPORT SCENERY PACK and you're done, congratulations! You now have a stricken vessel to search for.



Step 2 - Develop an XP11 FMS search plan.

a. Download and install the latest version of Plan-G Flight Planner.

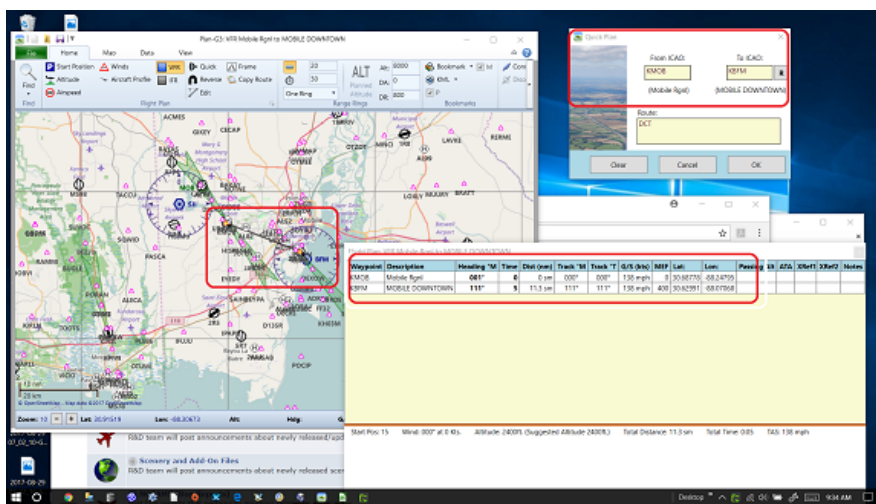
b. For this example, we will use a simple Parallel Sweep search pattern, with an entry point to the NW of the last Known Position (LKP). To get the starting point just look at the WED map before closing it, picking a desired point with the cursor and making note of the lat/long coords displayed on the bottom portion of the map. Enter the coords of the of the starting point on the spreadsheet for future reference.

c. For this example, use the freeware Plan-G flight planner, but note that there are other planners available that allow you to employ user defined waypoints.

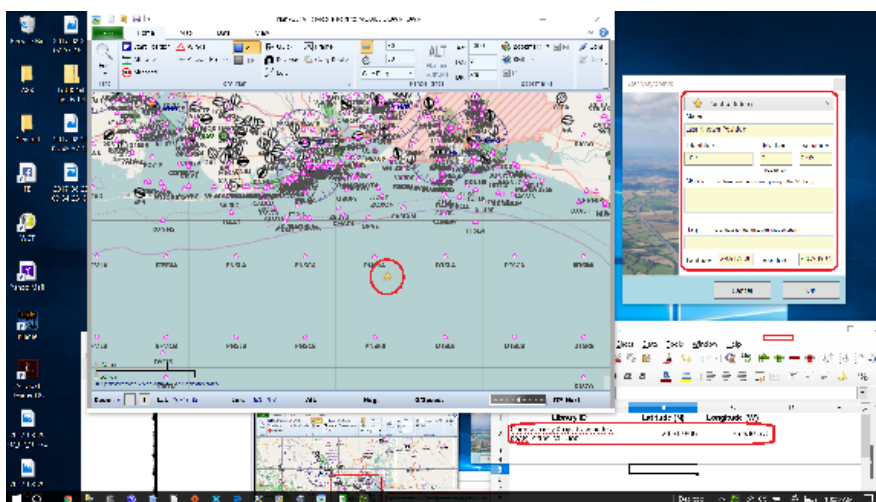
d. There are detailed functional descriptions in a couple of links on the Home Page, but here, I will employ a rough, and somewhat imprecise method, just to give you the gist of how to go about setting up your search pattern on Plan-G.

e. There is a major real world USCG air training facility located at Mobile Regional (KMOB), and I usually start my SAR flights from there. This article won't make references to ATC functions -- but anyone can employ VATSIM or other ATC service in conjunction with SAR missions.

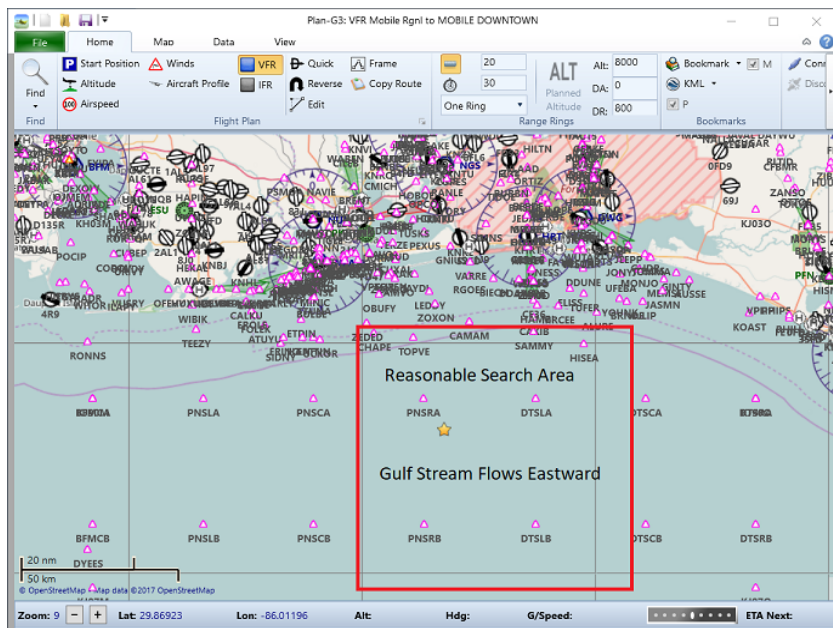
f. So, open up Plan-G and do a QUICK plan setup with your departure and arrival ICAO's. Depart from KMOB and after the search, proceed to KBFM (Mobile), where patient(s) can be offloaded and transported to the hospital. An image is provided below, which portrays this portion of the planning. Important aspects are highlighted in red. You can view the details of your plan by clicking on the VIEW tab, and selecting the PLAN PANEL icon.



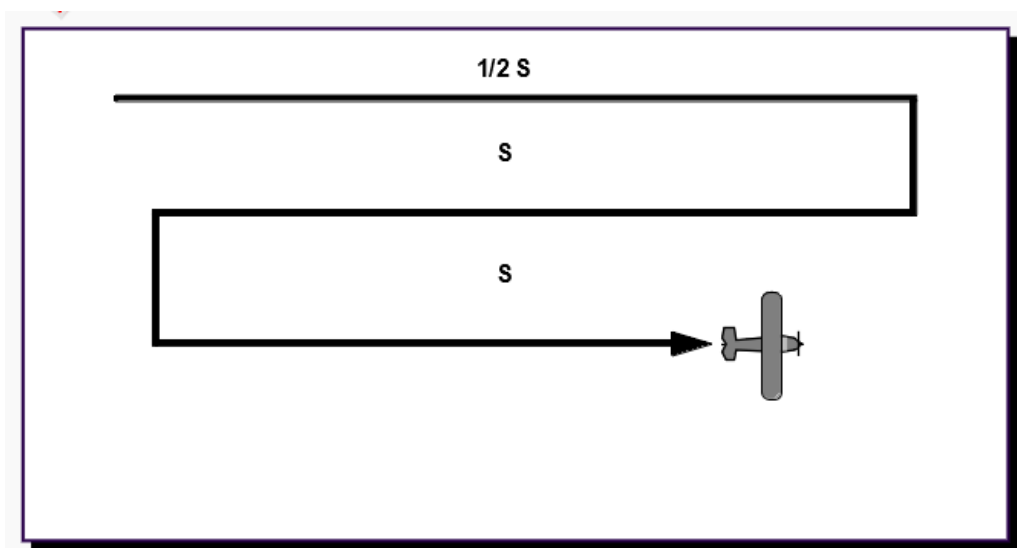
g. Next, place a marker on the Plan-G map to portray the Last Known Position (LKP). The next image shows this.



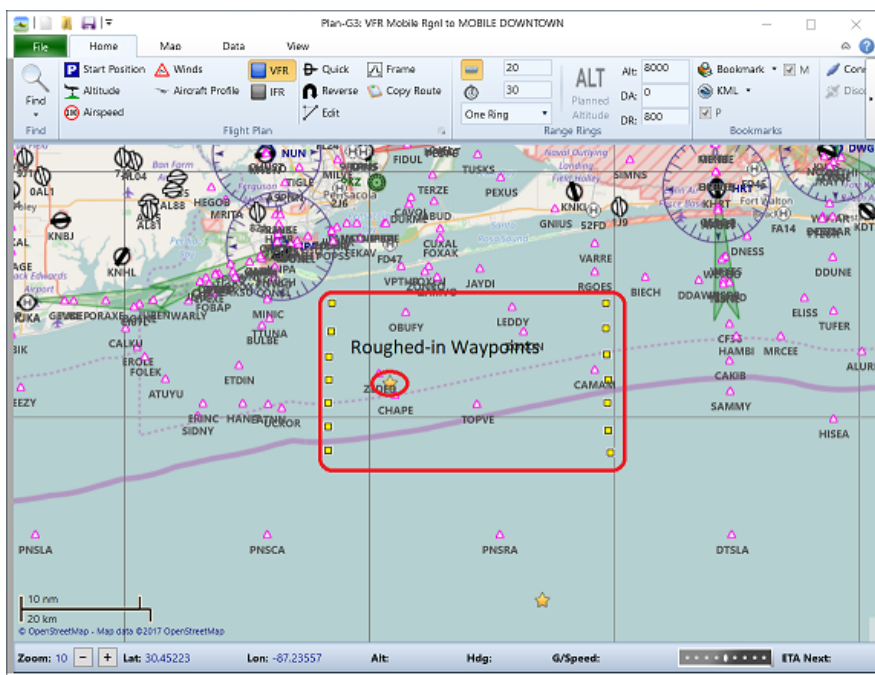
h. Now, the mission developer is in a position to identify the starting point of entry into the search pattern. We know that the LKP is in or near the Gulf Stream, which flows eastward in this area, so a reasonable search area might be similar to the one in the image, below.



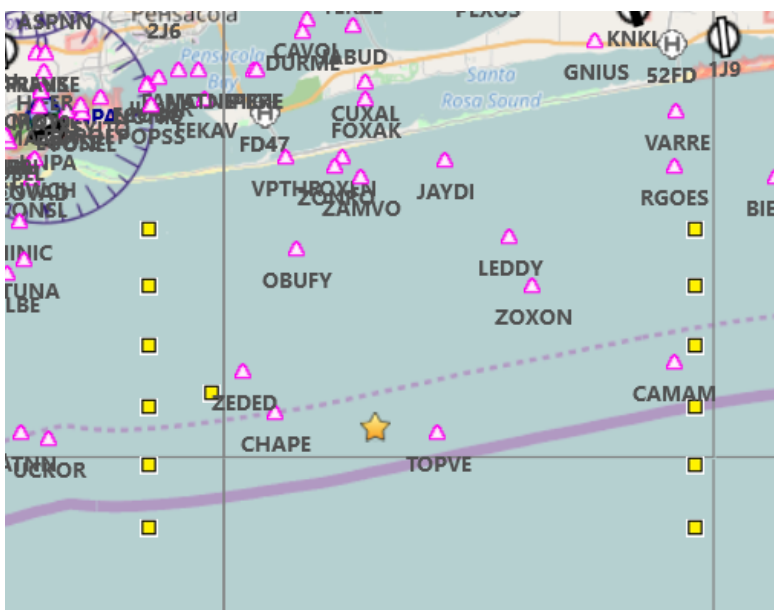
i. The general pattern for a Parallel Sweep search pattern is depicted in the image below (Source: CAP-ES Mission Aircrew Course Chapter 11 Visual Search Patterns and Procedures, slide 12, May 2006).



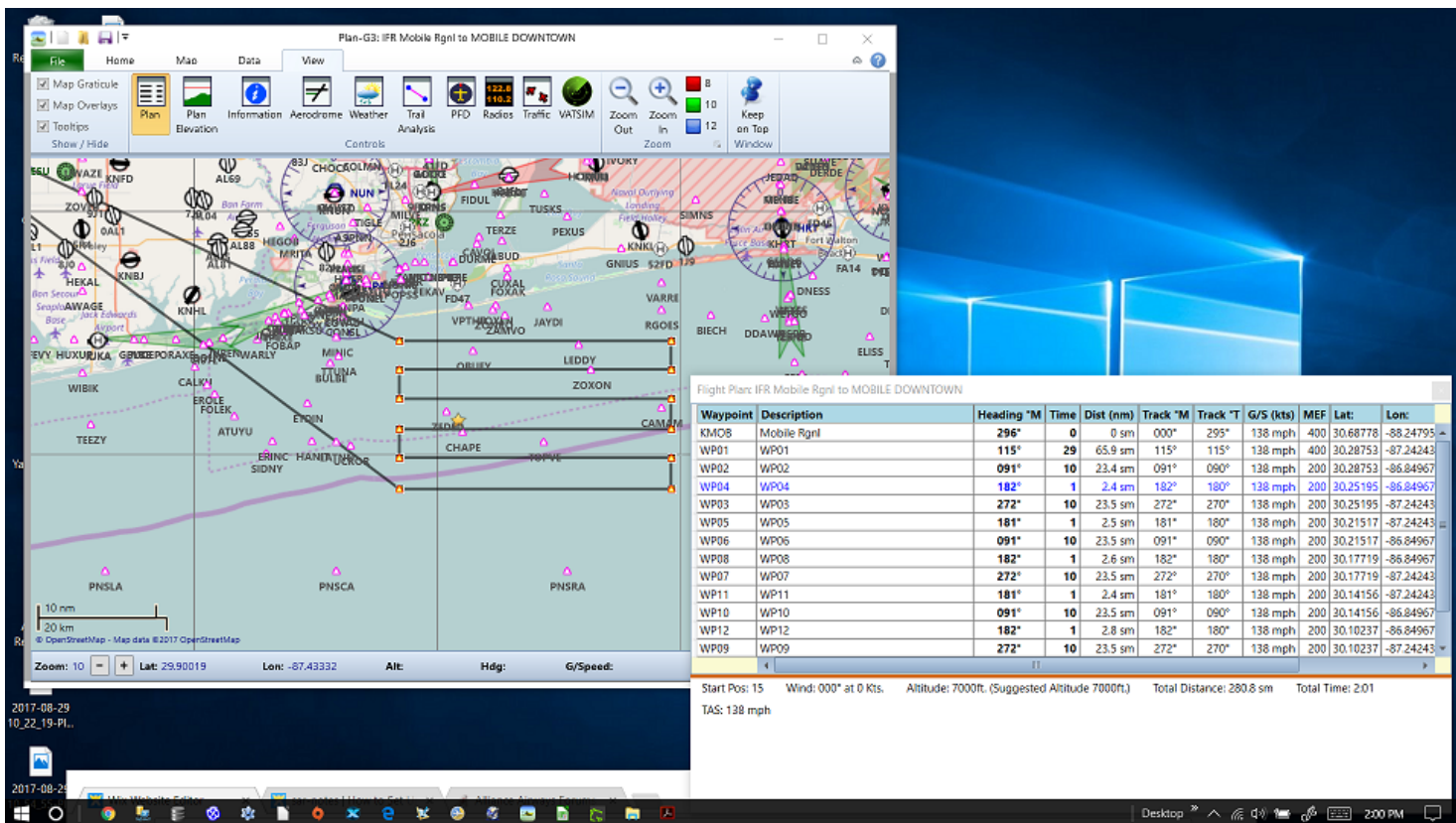
j. Applying the above concept to our Plan-G search route, we can "rough-in" some user-defined waypoints to cover the search area. To create a user waypoints, just RIGHT CLICK on the map and select CREATE USER WAYPOINT on the popup menu.



k. Then, we edit the user waypoints for symmetry. Once added to the plan, the waypoints can be dragged into a better symmetry. However, I normally just align all waypoints longitudinally to the starting (upper left and upper right) waypoints, by simply copying the coord data down and across the lines (right-click and use the Edit WAYPOINT dialog boxes). The result will be a symmetrical search pattern, as shown below.



l. Next, the waypoints need to be added to the route plan as shown below. Just right click on a waypoint to bring up a menu that will list your options.



Conratulations! You now have now completed Step 2, and have a complete parallel track search pattern. This file is compatible with XP10. To achieve compatibility with XP11, the FMS file requires a couple of modifications.

Step 3 - Export and Modify The FLIGHT Plan-G FMS File.

a. Export the finished flight plan by clicking on the menu sequence FILE - EXPORT- X-PLANE 9/10 FMS FLIGHTPLAN - EXPORT; ensure that the plan is exported to the correct FMS Flight Plans dirctory.

For example here is mine for XP11...

C:\Users\FGTRU\Desktop\General\Games\XPL11\X-Plane 11new\Output\FMS plans

b. Again, If you are flying XP11, the FMS plan just saved must be modified for file format compatibility.

c. Locate and load the FMS file you exported into Notepad, the file content will appear similar as shown below.

```

I
3 VERSION
1
13
1 KMOB 0.000000 30.687778 -88.247952
28 WP01 7000 30.287532 -87.242432
28 WP02 7000 30.287532 -86.849670
28 WP04 7000 30.251950 -86.849670
28 WP03 7000 30.251950 -87.242432
28 WP05 7000 30.215168 -87.242432
28 WP06 7000 30.215168 -86.849670
28 WP08 7000 30.177186 -86.849670
28 WP07 7000 30.177186 -87.242432
28 WP11 7000 30.141564 -87.242432
28 WP10 7000 30.141564 -86.849670
28 WP12 7000 30.102366 -86.849670
28 WP09 7000 30.102366 -87.242432
1 KBFM 7000 30.629910 -88.070676

```

d. The following image prtrays the required changes in yellow highlights. Of critical importance is that lines three and four now must be an integer value that reflects the number of lines in the route, including the departure and arrival lines. Also, a decimal followed by six zeroes should be appended to each altitude value,

```

I
3 VERSION
14
14
1 KMOB 0.000000 30.687778 -88.247952
28 WP01 1000.000000 30.287532 -87.242432
28 WP02 1000.000000 30.287532 -86.849670
28 WP04 1000.000000 30.251950 -86.849670
28 WP03 1000.000000 30.251950 -87.242432
28 WP05 1000.000000 30.215168 -87.242432
28 WP06 1000.000000 30.215168 -86.849670
28 WP08 1000.000000 30.177186 -86.849670
28 WP07 1000.000000 30.177186 -87.242432
28 WP11 1000.000000 30.141564 -87.242432
28 WP10 1000.000000 30.141564 -86.849670
28 WP12 1000.000000 30.102366 -86.849670
28 WP09 1000.000000 30.102366 -87.242432
1 KBFM 0.000000 30.629910 -88.070676

```

e. So just save the text file back to the xpl11 fms dir and proceed to fly the new SAR mission in XP11.