AI Boat Traffic for Dummies (Like Me!) by Doug Linn/RTMM

Nothing can make FSX come more alive more quickly than having moving objects scurrying around on the ground below you. When you are doing boating in FSX (as we do at RTMM), those objects are not "down there" … they are all around you, frankly ready to run over you if you aren't careful. Part of the experience of boating in FSX is this immersion into the 2 dimensional world where trees are taller than you are and a ferry boat doesn't look like a speck down on a lake's surface, but more like a monster coming at you at high speed ready to swallow you up!

When putting the Owikeno Lake Area together, I started to rely on our resident expert in this area, Dex Thomas, then decided … shouldn't I learn how to do this myself and give Dex a break? So I asked him what I needed, he told me, and it was time to do some studying and some practicing.

What you need:

1. Google Earth http://www.google.com/earth/download/ge/agree.html
2. AIBTC.exe   http://lc0277.gratisim.fr/boat/

Getting Set Up:

1. **Create a PROJECT FOLDER** - Make a folder with your scenery project's name on it and place it on your desktop, this is what we will call the AI Boat **Project Folder** (mine is OWI-AI-Boats)
2. **CREATE A BOAT FOLDER** - Inside the project folder, create a folder for each of your boats. Mine are named "ow-ferry and owi.fishing" using a convention like this will help you "find" those files in your Scenery/World/Scenery folder if you need to make changes. These I am calling "**Boat Folders**"
3. **ADD AIBTC.EXE** to the Project Folder - Put a copy of the aibtc.exe program into the Project Folder …. this will help you keep everything in one folder.

So now we go to work on the first boat, the "ferry".

You are going to create TWO (notepad) files for each one of the boat folders.

For open NOTEPAD and write this:

AC#1,25,"wash_ferry_sm"

Then save it as: **BoatsOwiFerry.txt**

- AC#1 is your indicator for this boat, name it what you want, I'd stick with AC#1
- 25 is the speed of the boat in knots … in this case 25 knots
- "wash_ferry_sm" is the TITLE name you will find for the boat you want to use. Go to FSX/SimObjects/Boats/[boat you want]. Look at the sim.cfg file and you will see "Title=..." Copy that and put it in this area.

Open a new NOTEPAD document and write this:

AC#1,Ferry,10%,1Hr,01:18:19,00:03:45,1003,normal,ferry,01:18:19,00:03:45,1003,reverse,ferry

Then save it as: **PlansOwiFerry.txt**

AC#1 is your identifier
"Ferry" is the name YOU give the boat
10% means the user's computer must have at least 10% boat traffic turned on to see this happen
1 HR means you are working on a one hour interval for the plan
00:00:00 … the first one is when you intend to start the journey hour:min:sec
00:00:00 … the second one, just put it in as zeros, the program calculates this when you compile
          this is the "supposed" trip time**
1003 …. this is the route number you got from Google Earth's Path you created
Normal … this means it starts at where you started your path
"ferry" means it backs out

Then this is all repeated for the return journey.

** Note, don't trust this time. In actual use, when the boat makes a turn, it slows to almost zero kph. This adds to the time. The more turns you have the more is added to this time. So when making your path in Google Earth, try to make them as STRAIGHT as you can without a lot of turns.

So now you have two text files in your "boat folder".
BoatsOwiFerry.txt
PlansOwiFerry.txt

You have now selected the boat you want (boat text) and its schedule (plan text). Now we need to give it a route or a "path."

Google Earth – Making the Boat's Path

Now the fun begins.   If you already know the basics of making paths in Google Earth, then this will be easy for you. But if you have not done this, then it will seem difficult, let me go through it with you.

You are going to use Google Earth to make a "path" for your boat to follow. Keep in mind from the beginning that Google Earth and FSX scenery don't always match up, so there is "guesswork" involved in making an exact path in Google Earth that will work perfectly in FSX. Often you just have to try it over and over until you get it right.

1. Open Google Earth
2. Search for the area where you want to put your boats (Owikeno Lake)
3. The "earth" turns and zooms in on Owikeno Lake.
4. At this stage, you can zoom in and out using the mouse wheel and holding down the left mouse key and dragging moves the map around on your screen.
5. Figure out where you want your boat to start and get the map set (zoom-wise) to handle your whole proposed route.
6. Look up at the tool bar on Google Earth, and the 4th little box from the left has three small squares in it. If you mouse-over, it will say "Add Path".
7. Click on the Add Path button.
8. Give your project a NUMBER … not a NAME! Start with "1000" for the first boat.
9. NOTAM: You will be tempted to hit the OK … don't do it … you must leave this window OPEN while you perform the next steps. Hitting OK compiles the path when you are finished.
10. WHILE OPEN … go to the map. You will see a "target square" come up. Put that square where you want your route to begin and click the mouse. (Nothing will happen, you only placed an invisible dot... no route yet.) Now move the target square to where you want to boat to go next and click again, now a line appears that is your boat's route. You can do it again and again to make the boat take turns, etc.
    NOTAM: Make as FEW turns as possible, these slow the boat and add drastically to the trip time. Keep you path as straight as you can.
11. When finished with your route, go to the open window and now click OK.
12. In the Google Earth "Places" table to the left, you will now see "1000". Right click on it and "Save Place As" (Put it on your desktop) … you have a choice of "kmz" or "kml" as types of Google Earth files, choose the "kml" extension, it is more stable.
13. Now copy this file and place it in your AI Boat Folder … rename the file as RoutesOwiFerry.kml (or whatever name you want for your boat but the word Routes MUST be the first part of the name.

You know have an AI Boat Folder in your Project Folder that has the following: (or similar with your names)

Name	Date modified	Type
BoatsOwiFerry.txt	4/4/2012 6:24 PM	Text Document
PlansOwiFerry.txt	4/7/2012 10:28 PM	Text Document
RoutesOwiFerry.kml	4/7/2012 10:27 PM	KML File

Note: If the names (OwiFerry) do not match or you do not use "Boats, Plans and Routes" as the first part of each name, the bgl will not compile.

Now run the aibtc.exe program in your project folder. When it comes up, click on FILES and select the source folder (that will be your AI Boats folder you just made above containing the three files).

Next, select the destination file … make that your Project Folder (that holds the boats folders, the aibtc.exe program and eventually where your traffic bgl files will show up.

Now "Compile" (click on the compile button in the middle). Now look at your Project folder, a new bgl should have appeared with the name traffic_OwiFerry.bgl (or your name).

Your project folder should look something like this when you have multiple routes:

Burn	New folder		
Name		Date modified	Type
Owi_ferry		4/7/2012 10:28 PM	File folder
Owi_Fishing		4/8/2012 12:13 PM	File folder
Owi_Mega_North		4/7/2012 10:14 PM	File folder
Owi_Mega_South		4/9/2012 5:22 PM	File folder
Owi_Sailboat_North		4/11/2012 9:26 AM	File folder
aibtc.exe		4/3/2012 12:15 PM	Application
trafficOwiFerry.bgl		4/7/2012 10:28 PM	BGL File
trafficOwiFish.bgl		4/8/2012 12:13 PM	BGL File
trafficOwiMegaNorth.bgl		4/6/2012 5:18 PM	BGL File
trafficOwiMegaSouth.bgl		4/9/2012 5:22 PM	BGL File
trafficOwiSailboatNorth.bgl		4/11/2012 9:26 AM	BGL File

The traffic_xxx.bgl file can be placed in FSX/Scenery/World/Scenery … and when you restart FSX, you will find your AI boat ready and working.

Fine Tuning:

Fine Tuning is the time consuming part of this process. Allow yourself time to be amazed at the magic, watching your new AI boat make its first run. Then you will probably want to start refining it. It may come to close to shore somewhere, or you may want it to go somewhere else during the cruise. You go back to Google Earth and make a NEW path … I would give it the same number. But down in the description area, I'd put the time. Later, when you've got about 10 of these as you are refining, that time will let you know which one is the latest and which one you want to work with. You make the new kml file, change the name and overwrite it in your AI Boats folder. Then Select source and destination folders and compile. The new compilation will OVERWRITE what is there in your projects folder, so that will be the NEW route. Copy and paste it into FSX/Scenery/World/Scenery overwriting what you have there and restart FSX. Your new route should be ready.

One frustrating thing about this is you will find FSX and Google Earth don't necessarily "match up". So if you want to make a "dock" for your boat (which is darned time-consuming) you will have to make new paths over and over …. moving the boat closer and closer to the shore, making sure the route to that shore gives the boat the correct docking angle, etc. Once you have the boat where you want it, then use your scenery program to build a docking pier for it, then connect the pier to the land, then add scenery around it. You must get the boat to "be there" first or you will be wasting your time building the docking scenery.

If you want a dock on BOTH ends of your route, then put on a large cup of coffee and order some more midnight oil for your late work lamp. MUCH trial and error will happen. When you make the new route for the second dock, you LOSE the old route and docking. Here's how to begin to handle that problem.

Lets say your old route is "1000-description 10:15 pm" … if that route is "checked" it will show on the Google Earth as a path. (Uncheck them to get rid of them). So make sure that latest one that gave you the first dock is checked. Now make a NEW path. Name it "1000" and give it a time description. (10:20 pm"). Now when you are starting to make your path, zoom in as close as you can get to where the correct dock was located. Google earth will take you to a "ground level" view. Just keep moving in on that starting point … once you are as close as you can get, click to make that the first point. Now make your route to the other end. Of course you will miss the other end many times before you have a good docking position.

When this process is complete and you have a "pretty close" docking situation on each end, then go to your scenery package and "move" the dock slightly to match the boat, adjusting your scenery on both ends. Don't do any of this adjustment until you have the boat positioned where you want it on both

ends of the run … it is just a waste of time as in the end you'll have to re-align it anyway.

There is some science involved in this process … but it is mostly "art" and "patience" that will make your endeavor a success. You may develop your own methods … and they will probably be better than the ones I've described for you above … but the intent of this document is to get you started … I can only show you how to start … I can't teach you … you will have to LEARN. And it can be time-consuming.

The final product of these endeavors, however, are absolutely amazing. If you have RTMM's Owikeno Lake Area (You need ORBX PNW and ORBX PFJ) you can watch the fishing trawler dock perfectly on two ends, the ferry boat has a dock on both ends and the MegaYacht also has a little dock near the casino and near the east Ferry dock … complete with parking lots. All the scenery around these were built AFTER the routes were in place. But watching the boats come and go and dock perfectly is a lot of fun as you sit there and whistle "Sittin' on the Dock of the Bay."

Enjoy

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