Liquid Galaxy Installation Manual

Hello there! I assume there are a lot of people who are quite fascinated about Liquid Galaxy, but are not sure about its working. Don't worry, you've come to the right place! You are about to learn how to create a basic Liquid Galaxy setup. You just need to have 2 or more PCs, Google Earth on each of the PC and a wireless connection. So let's get started!

Connecting the laptops with each other:

Liquid Galaxy works on the concept of master-slave interaction between computers. In all cases there is one master PC and the rest are slaves. The master is placed in the centre and is wirelessly connected to the slaves.

1. Connect the PCs to a common wireless network.
2. In the master PC, open Command Prompt and type 'ping [I.P Address of the slave(s)]'.
   (To find out the I.P Address of the slave, open Command Prompt in the slave PC and type 'ipconfig')
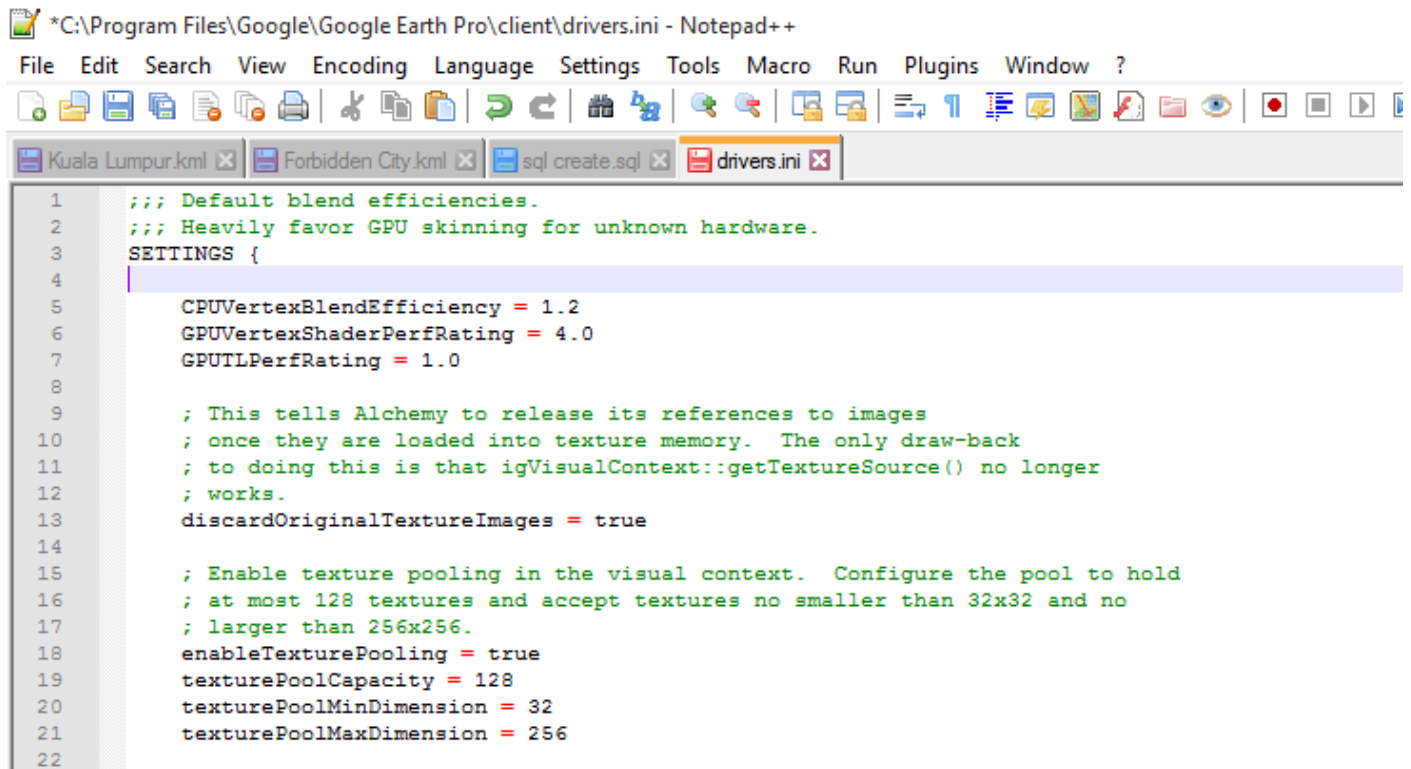   Once you type it out, you can see the master PC trying to connect with the slave. You can proceed when it shows (0% loss) in data transfer.

Modifying the drivers.ini file:

3. Google Earth files will be placed in Local Disk(C:)>Program Files>Google>Google Earth Pro>client.

In the master PC, locate the drivers.ini file and right click on it. Click on 'Edit with Notepad++'.

(If you don't have Notepad++ on your PCs, install them before you proceed.)

4. Now, copy the below given text and add it in the space where the cursor is located below SETTINGS { in the screenshot:

```
; ViewSync settings
ViewSync/send = true
ViewSync/receive = false

ViewSync/hostname = SLAVE_IP_GOES_HERE
ViewSync/port = 21567
ViewSync/pitchOffset = 0.0
ViewSync/rollOffset = 0.0
ViewSync/horizFov = 36.5
```

After pasting, the file looks like this:

(Don't forget to replace the 'SLAVE_IP_GOES_HERE' with your slave's I.P address. Mine is 192.18.3.1)

```
      *C:\Program Files\Google\Google Earth Pro\client\drivers.ini - Notepad++
      File   Edit   Search   View   Encoding   Language   Settings   Tools   Macro   Run   Plugins   Window   ?

      Kuala Lumpur.kml    Forbidden City.kml    sql create.sql    drivers.ini
       1      ;;; Default blend efficiencies.
       2      ;;; Heavily favor GPU skinning for unknown hardware.
       3      SETTINGS {
       4
       5      ; ViewSync settings
       6      ViewSync/send = true
       7      ViewSync/receive = false
       8
       9      ViewSync/hostname = 192.18.3.1
      10      ViewSync/port = 21567
      11      ViewSync/pitchOffset = 0.0
      12      ViewSync/rollOffset = 0.0
      13      ViewSync/horizFov = 36.5
      14
      15          CPUVertexBlendEfficiency = 1.2
      16          GPUVertexShaderPerfRating = 4.0
      17          GPUTLPerfRating = 1.0
      18
      19          ; This tells Alchemy to release its references to images
      20          ; once they are loaded into texture memory.  The only draw-back
```

5. Now, in the slave PC, copy the same text and put it in the same place. Also, change the ViewSync/send to 'false' and ViewSync/receive to 'true'.

6. Erase off the line ViewSync/hostname including whatever follows it. It must look something like this:


```
      *C:\Program Files\Google\Google Earth Pro\client\drivers.ini - Notepad++
      File   Edit   Search   View   Encoding   Language   Settings   Tools   Macro   Run   Plugins   Window   ?

      Kuala Lumpur.kml    Forbidden City.kml    sql create.sql    drivers.ini
       1      ;;; Default blend efficiencies.
       2      ;;; Heavily favor GPU skinning for unknown hardware.
       3      SETTINGS {
       4
       5      ; ViewSync settings
       6      ViewSync/send = false
       7      ViewSync/receive = true
       8
       9      ViewSync/port = 21567
      10      ViewSync/pitchOffset = 0.0
      11      ViewSync/rollOffset = 0.0
      12      ViewSync/horizFov = 36.5
      13
      14          CPUVertexBlendEfficiency = 1.2
      15          GPUVertexShaderPerfRating = 4.0
      16          GPUTLPerfRating = 1.0
      17
      18          ; This tells Alchemy to release its references to images
      19          ; once they are loaded into texture memory.  The only draw-back
      20          ; to doing this is that igVisualContext::getTextureSource() no longer
      21          ; works.
      22          discardOriginalTextureImages = true
      23
      24          ; Enable texture pooling in the visual context.  Configure the pool to hold
      25          ; at most 128 textures and accept textures no smaller than 32x32 and no
      26          ; larger than 256x256.
      27          enableTexturePooling = true
      28          texturePoolCapacity = 128
      29          texturePoolMinDimension = 32
      30          texturePoolMaxDimension = 256
```

Now, save it and launch Google Earth on both PCs simultaneously. Move around to a location on Google Earth and check if the slave mimics the movement of the master. If it does, Success!

You will have the same view on both laptops.

Is that the best it can do? NO!

We can actually view what is to the left and right of the master PC in the slave laptops.

View Synchronisation on Google Earth:

Now, set the ViewSync/pitchOffset to 36.5 in the slave PC that is to the left of the master. For a slave PC kept to the right of the master PC, set it as -36.5.

(If you are adding multiple PCs as slaves, in the master PC's drivers.ini file where you've added the slave I.P, copy 'ViewSync/hostname = ' and add the rest of the slaves' I.P address too, i.e same line for every slave PC)

While setting more number of PCs, the ViewSync/pitchoffset value needs to change. For example, the slave PC placed second of the master PC in the left will have a value of 72 and the same way, it will have a value of -72 in the right.

When this step is implemented, all of the screens act together as one interface and we can have an amazing and enlarged view of our earth!

Things to be careful about:

1. Connect all PCs to the same network and make sure they can ping with each other.
2. View Synchronisation works only after saving the file. However, you need to save the edited file and then replace it to ensure safety.

CHEERS!