

## Stellarium Testing

**Notebook:** alan richardson's notebook

**Created:** 08/12/2014 18:04

**Updated:** 15/12/2014 20:14

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### Summary:

General impressions. Robust app, can use a lot of CPU on low powered machines. Very configurable. Requires domain knowledge. Minor issues found.

### Summary Notes:

- Install sometimes offered me a 'Install for old hardware' option and sometimes didn't. I think this cause me issues on some early VMs I tried because I didn't see the option (or it wasn't presented)
- Initially loading setting location showed me the sun out when it was clearly midnight. Have not been able to recreate.
- Confused about the different calendars: gregorian, julian etc. I guess by showing all the app covers all bases.
- Time stops at -99999 /1/3 5:16:13 -99999/1/3 13:16:13 and 99999/1/28 21:11:17  
When adjusting downwards at this point, the editing is off, so I assume we have hit a representation boundary in the system at these points.
- Cosmetic issue that I guess I would get used to. Dialog system. No way to cycle around, so either close overlapping windows or toggle off, then on again.
- Took me some time to get the proxy settings changed because the config.ini in the user directory did not have a proxy setting by default
- HTTP handling doesn't report all errors gracefully, when it doesn't report it gracefully e.g. Authorisation Denied (403) response, shows the url of the call, but truncated start and end so just looks like an error on the dialog.
- No error reported when it cannot write to the screenshot directory, so no indication that screenshots are not taken.
- Exiting app did not save my screenshot directory change or prompt me to save config
- Confused about location changing after loading the app, but not immediately, only after taking a few screenshots (suspect this is just a timing issue, and not a screenshot issue since the app often uses multiple threads)
  - I think from the log, that the switch to paris is a result of the freegeoip.net/csv Gateway timeout error , so it switches to default. (this is actually a 503 service unavailable rather than a gateway timeout)
- Quite like the log being available to view in the app on the about screen - good for testability. Also there is a debug version which does report errors like (screenshot directory not available etc.)

### Reflection:

- The ability to control time - fast forward etc.
- Information overload - miss stuff
- How to observe - proxy, logs
- The app suggested what to do - dialog overlap, interconnected dialog fields, config suggested tests
- playing didn't 'reveal' anything to me because the app is rendering overload (where do I look for problems?)
- I had to go slow, and focus on what was presented

prior to the 8th,  
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I found it hard to install on old hardware, but I think I missed the option during install to choose for older hardware.

I eventually installed it into IE8 XP on vmware fusion on mac and the install worked fine after choosing the drop down for old hardware.

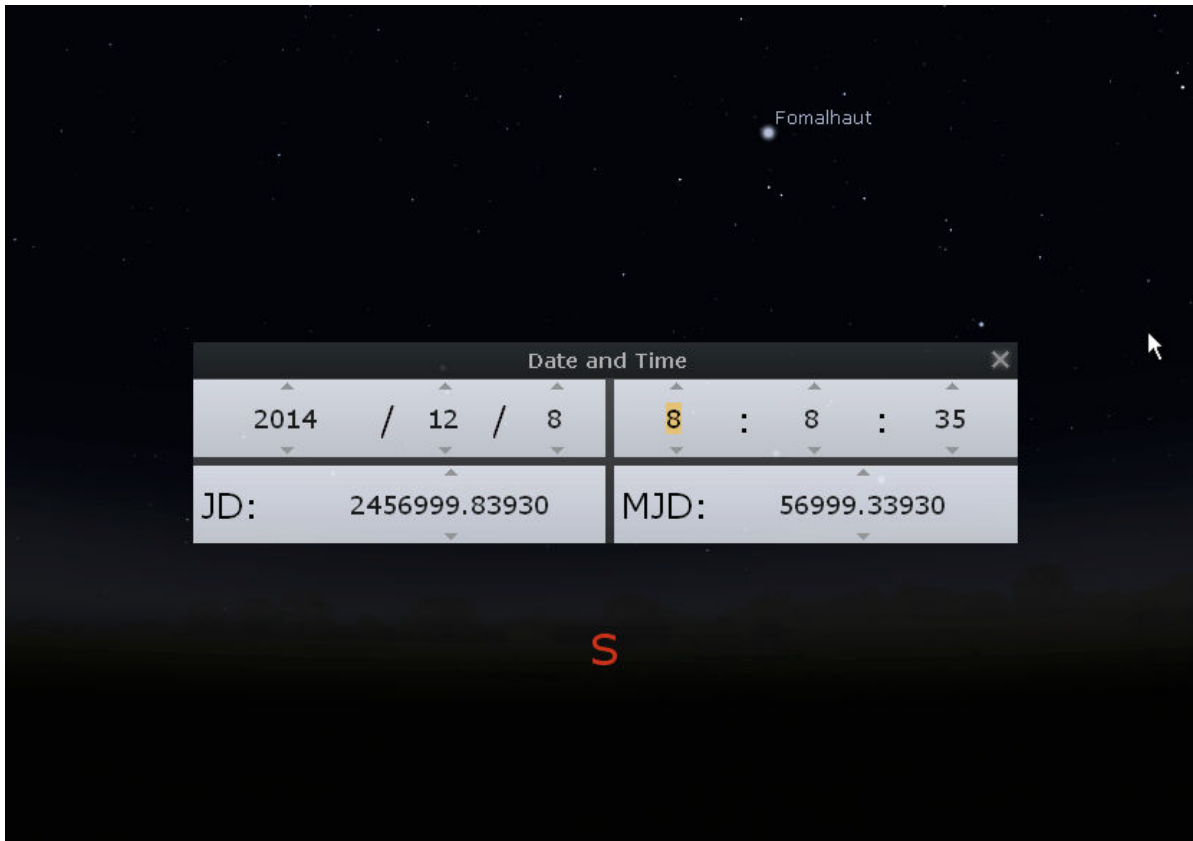
I also have it installed on IE11 Windows 7 vmware fusion on windows, using a modern.ie build of the VM.

8/12/2014 19:00 - 20:00

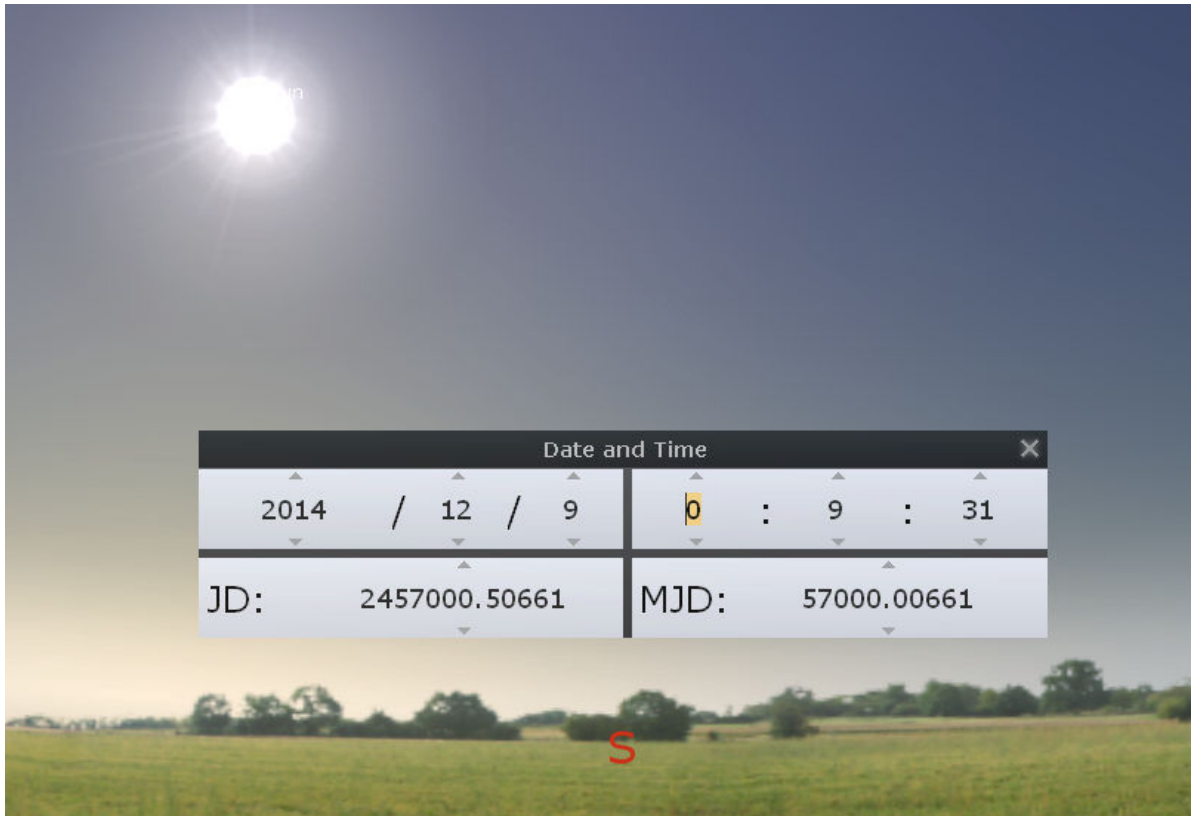
Installed into IE8 XP from modern.ie on VmWare Fusion

Choose bethlehem from location

Not sure how `time works because 8 o'clock in the morning is dark



But Midnight is light



I tried to find some webcams for Bethlehem to replicate this phenomenon, but couldn't find any

This shows the western wall

<http://www.aish.com/w/>

At 9pm it was quite light. which corroborates the tellurium



This webcam at telaviv - is quite dark

<http://84.94.101.179/cgi-bin/guestimage.html>



As was <http://www.sheratonammanhotelview.com/>

found links via

<http://www.the-webcam-network.com/West-Bank/Bethlehem/2831382.html>

TODO: explore the location setting dialog as it has a lot of moving parts and dependencies

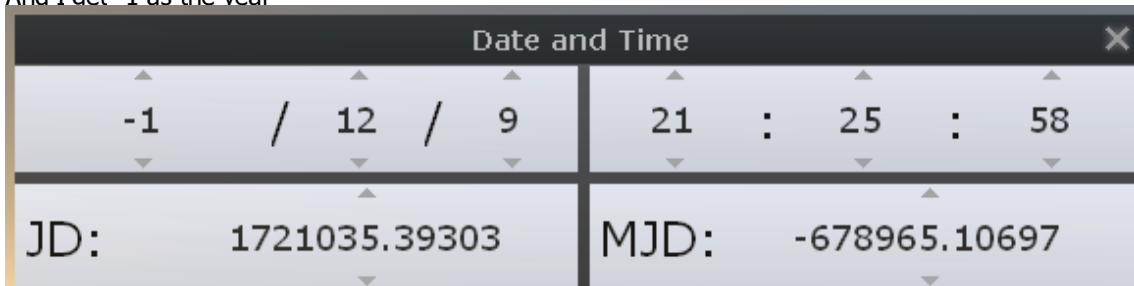
Going to switch to year 0

Dates restrict editing

so it is hard to enter 0, I have to enter 10, then delete the one

by entering 10, then delete 1, in the year, I can get 0 for the year  
then for the month I can do the same

And I get -1 as the year



You can enter - by using the up down arrows and the arrow keys anyway

I don't know what the -ve years mean so I don't know how to evaluate that for a problem

I don't know how to read the JD and MJD

TODO: find an oracle or info about this

The dates seem to self regulate so decrementing through the days, decrements the months and the last day in the month is maintained

<http://www.timeanddate.com/calendar/months/>

1. [January](#) - 31 days
2. [February](#) - 28 days; 29 days in [Leap Years](#)
3. [March](#) - 31 days
4. [April](#) - 30 days
5. [May](#) - 31 days
6. [June](#) - 30 days
7. [July](#) - 31 days
8. [August](#) - 31 days
9. [September](#) - 30 days
10. [October](#) - 31 days
11. [November](#) - 30 days
12. [December](#) - 31 days

year 0 is a leap year

(Aside: I wonder if everything else thinks year 0 is a leap year?)

<https://www.google.co.uk/webhp?q=leap%20year%20calculator#q=leap+year+calculator>

<http://www.onlineconversion.com/leapyear.htm>

year must be greater than 1581 - gregorian calendar was created in 1582

<http://www.dataip.co.uk/Reference/LeapYear.php> - not a problem

)

How far back can we go?

**-99999 / 1/3 5:16:13**

**(15/12/2014 perhaps I made a not of this wrong, when I recreate today I can only set to -99999/1/3 13:16:13 (and time stops))**

**~~Fun Features - could be classed as bugs I guess~~**

**Time stops at this point.**

If we start decrementing the seconds at this point, the minutes start incrementing in 10s, then the seconds and minutes are messed up with their incrementing

It is possible to delete the minutes and seconds, but they jump back to values when you lose focus on the field

[STOP FOR THE DAY]

15/12/2014

11:00

reactivate VM "slmgr /ato" from admin priv console

James supplied a link to documentation [http://www.stellarium.org/wiki/index.php/Advanced\\_Use](http://www.stellarium.org/wiki/index.php/Advanced_Use)  
- nice to see some subgeni references

It is a massive processor hog. Never gets below 50%, even when 'paused'

11:30

Installing on local machine

Didn't see the 'choose for lower spec machines' option - perhaps that was why I had difficulties before?  
Maybe some checking in the setup only offers it on what it thinks are lower spec machines, but sometimes doesn't find the check?

Had difficulty connecting it to a proxy.

[http://www.stellarium.org/wiki/index.php/Configuration\\_file](http://www.stellarium.org/wiki/index.php/Configuration_file)

I was editing the config file in the install directory because it had a config section, but I needed to amend the config.ini in the user directory and add a proxy section to the file

```
[proxy]
host_name          = localhost
port              = 8888
```

Now I can see the traffic send to simbad

I always get a Simbad Lookup: Not found error

```
GET http://simbad.u-strasbg.fr/simbad/sim-script?
script=format%20object%20%22%25COO(d;A%20D)%5Cn%25IDLIST(1)%22%0Aset%20epoch%20J2000%
0Aset%20limit%203%0A%20query%20id%20p HTTP/1.1
Cookie: JSESSIONID=DD6D796027A4AF775FF294402198D0FE
Connection: Keep-Alive
Accept-Encoding: gzip, deflate
Accept-Language: en-GB,*
User-Agent: Mozilla/5.0
Host: simbad.u-strasbg.fr
```

Even though "Pluto" exists,

```
::script:.....
```

```
format object "%COO(d;A D)n%IDLIST(1)"
set epoch J2000
set limit 3
query id p
```

```
::console:.....
```

```
C.D.S. - SIMBAD4 rel 1.223 - 2014.12.15CET12:48:18
total execution time: 0.001 secs
simbatch done
```

```
::error:.....
```

## [4] java.text.ParseException: Unrecogniezd identifier: p

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Lookup for "PI" succeeds

```
GET http://simbad.u-strasbg.fr/simbad/sim-script?
script=format%20object%20%22%25C00(d;A%20D)%5Cn%25IDLIST(1)%22%0Aset%20epoch%20J2000%
0Aset%20limit%203%0A%20query%20id%20pl HTTP/1.1
Cookie: JSESSIONID=DD6D796027A4AF775FF294402198D0FE
Connection: Keep-Alive
Accept-Encoding: gzip, deflate
Accept-Language: en-GB,*
User-Agent: Mozilla/5.0
Host: simbad.u-strasbg.fr
```

### And returns 3 objects

```
HTTP/1.1 200 OK
Date: Mon, 15 Dec 2014 11:52:46 GMT
Server: Apache/2.2.22 (Ubuntu) mod_jk/1.2.32
Access-Control-Allow-Origin: *
Keep-Alive: timeout=15, max=1000
Connection: Keep-Alive
Content-Type: text/plain
Content-Length: 569
```

::script:::

```
format object "%C00(d;A D)\n%IDLIST(1)"
set epoch J2000
set limit 3
query id pl
```

::console:::

```
C.D.S. - SIMBAD4 rel 1.223 - 2014.12.15CET12:52:46
[4] result truncated to 3 objects
total execution time: 0.016 secs
simbatch done
```

::data:::

```
237.82842 -56.35606
NAME PL 1547.3-5612
238.1571 -03.6739
NAME P1 111C
237.7237 -03.4589
NAME P1 111C1
```

Oh, I see, the Simbad lookup gives you extra options, which are not in the internal search. So PL returned

PL 1547.3-5612

etc.

11:55

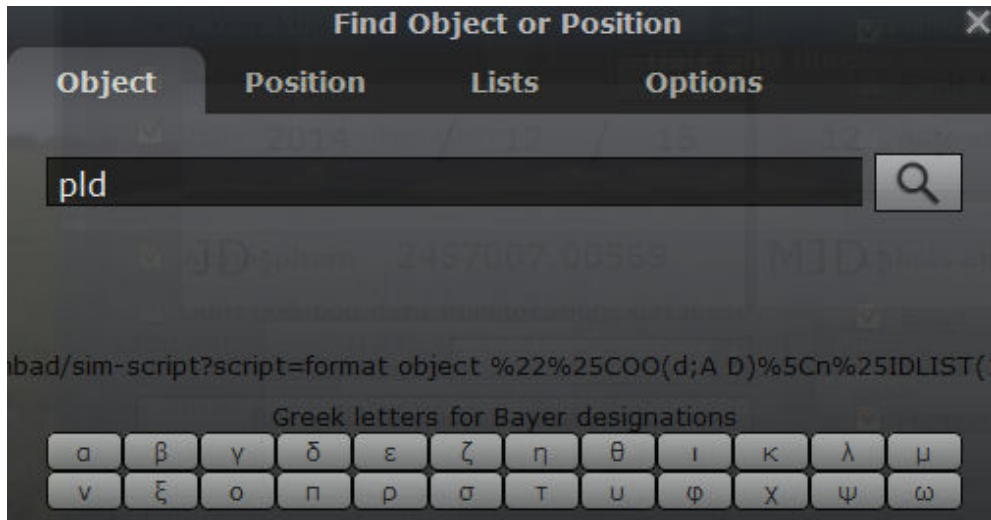
Window management seems odd. to me.

If I Have multiple windows open, you can't automatically switch to them (that I can find), so you have to either move the windows about, or close it, then reopen it. And to close it you have to use the Function keys or the toolbar menu items, if the window is obscured by another window.

12:06

found the option to change the Simbad server on the Options tab for the search

If the server returns a 404 then the search dialog does not represent this very clearly.



I think it is trying to show the GET request url

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It reports dropped connections well

It doesn't seem to have any issues on delayed requests that I could see (i.e. 10 secs, 20 secs, 60 secs)

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Some errors are reported well e.g. Authorisation required.

Others are not e.g. Authorisation denied.

When the request is not handled well, you see the GET request url as above.

No obvious issues when a file is returned as the response to the GET request.

---

End autoresponder testing -

12:17

TODO: where else does the application connect to the server?

Downloading catalogues:

- 404? reports error with file path and reason
- 401 Auth basic? reports auth required
- 403 Auth denied? reports denied with file path and reason



- 60 second delay? The file asked for actually redirected so the redirect message took 60 secs to come in, then the redirect was followed (which was another 60 second delay). And it downloaded fine.
- wrong file? Does not report an error, just skips the file

OK, anywhere else?

12:25

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Tools has a screenshot directory - see what happens around screenshots?

Use Ctrl+S to take a screenshot

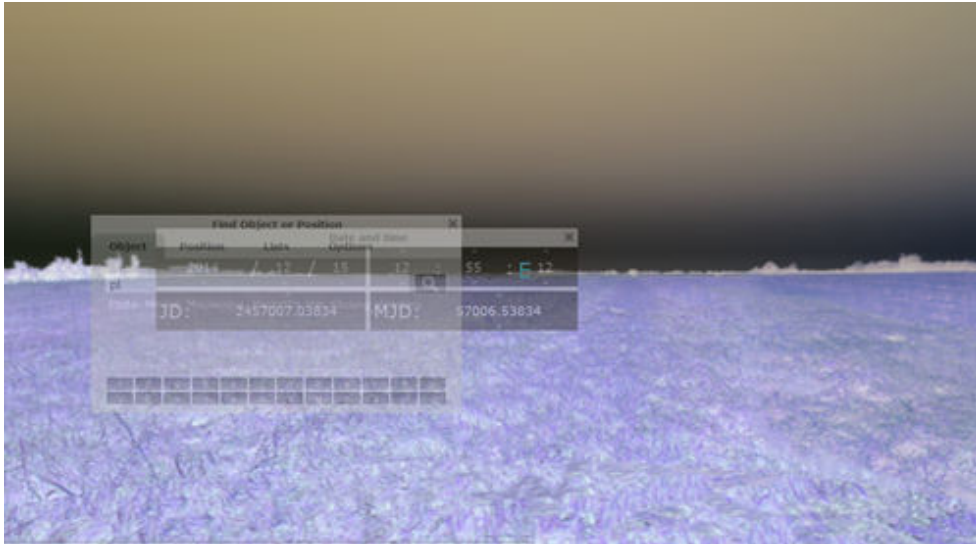
Directory does not exist?

- rename folder but don't change config in app.
  - Results in No error reported, no screenshot taken. (minor BUG - should report error)
- File locked? - can't create this issue as it renames file - would require an app to create files automatically while saving to try and hit name used by app at same time)
- File exists? - writes to next file (again would need an app to keep creating files while saving to hit this condition)

12:30 - pause

12:50 restart testing

- rename last filename stellarium-001.png to next file name stellarium-002.png
- Results in outputting as 001.png, then next is 003.png (so it fills in the gaps, didn't expect that)
- **I accidentally toggled the "Invert Colours" option, thought it was a bug and spent time investigating. And still didn't spot the checkbox as I was investigating!**



expected....



Ignore: Don't know if this was my fiddling, or a result of taking a few screenshots.

- restart app, try again

- **BUG: it did not save my screenshot dir change or prompt me to save config change**

- creating multiple shots one after the other did not change image.

**Possible Bug my location changed after two screenshots from 000000 to Paris (see -006 and -007, then paris in -008 and beyond)**

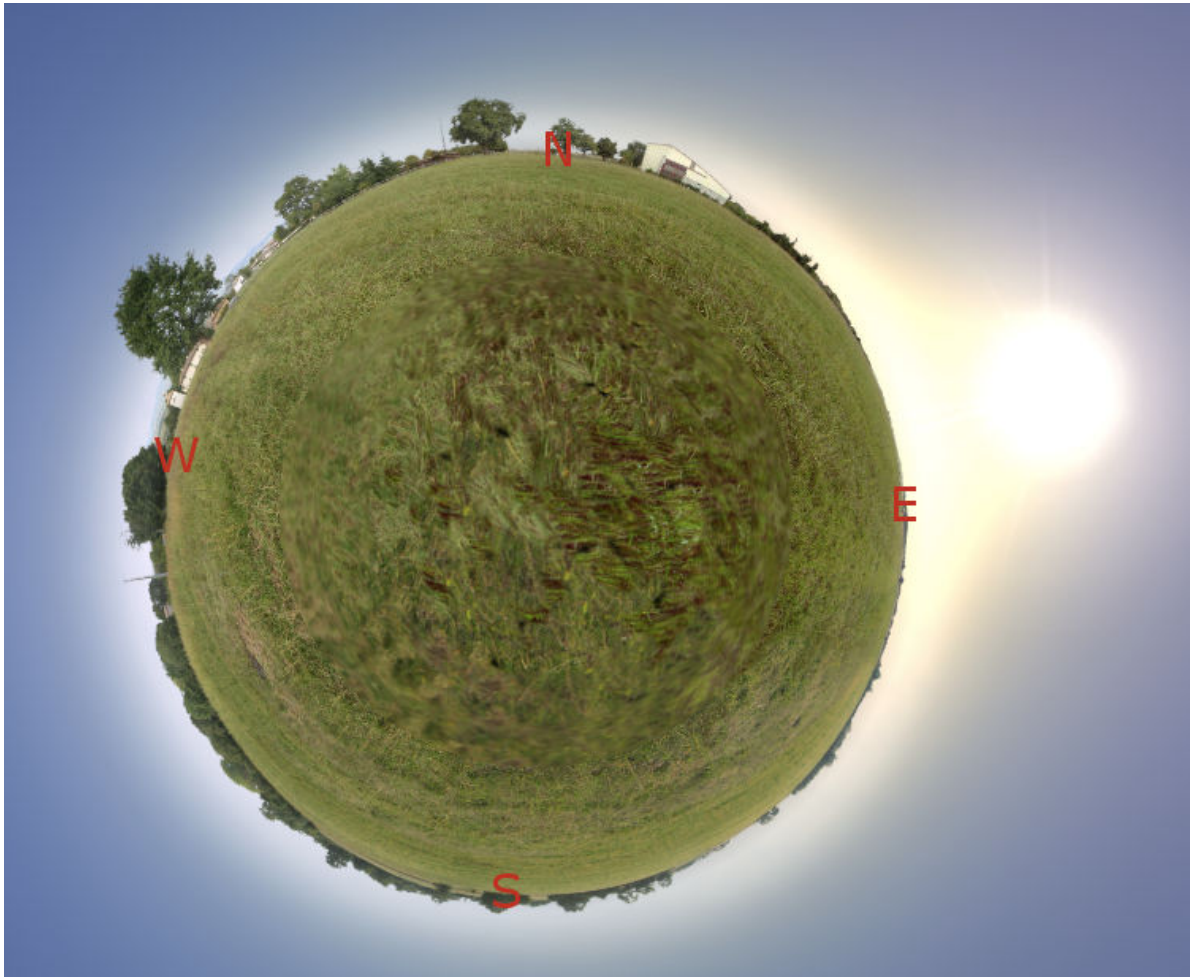
Ignore: delete image 008 (by rename) and see what happens... fills in gap. OK, then appends on end, OK, no inverting of colours.

13:10

Can I trigger anything with the GUI appear disappear?

Trying resize, moving, locking bars, etc.

Didn't achieve anything except cool mini world picture



Turn all graphics on.

Set speed to as fast as possible - when does time end?

99999/1/28 21:11:17

Can still adjust time at this point but it doesn't seem to make much difference

13:20 [stop]

15:03

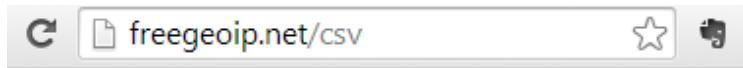
Just realised the invert colours is not a bug. It is a checkbox on the dialog that I must have accidentally toggled. Oops. Amending above report to remove mention of bug.

Summarise notes

Try Debug mode and check if screenshot (no dir) shown in log - it is.

Also saw the switch to paris as a result of <http://freegeoip.net/csv> having a 503

Reported in the log as a Gateway Timeout (which isn't quite accurate)



# 503 Service Temporarily Unavailable

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cloudflare-nginx

15:23 Done