Tetris - Basic Implementation Practice for Android

deepwaterooo

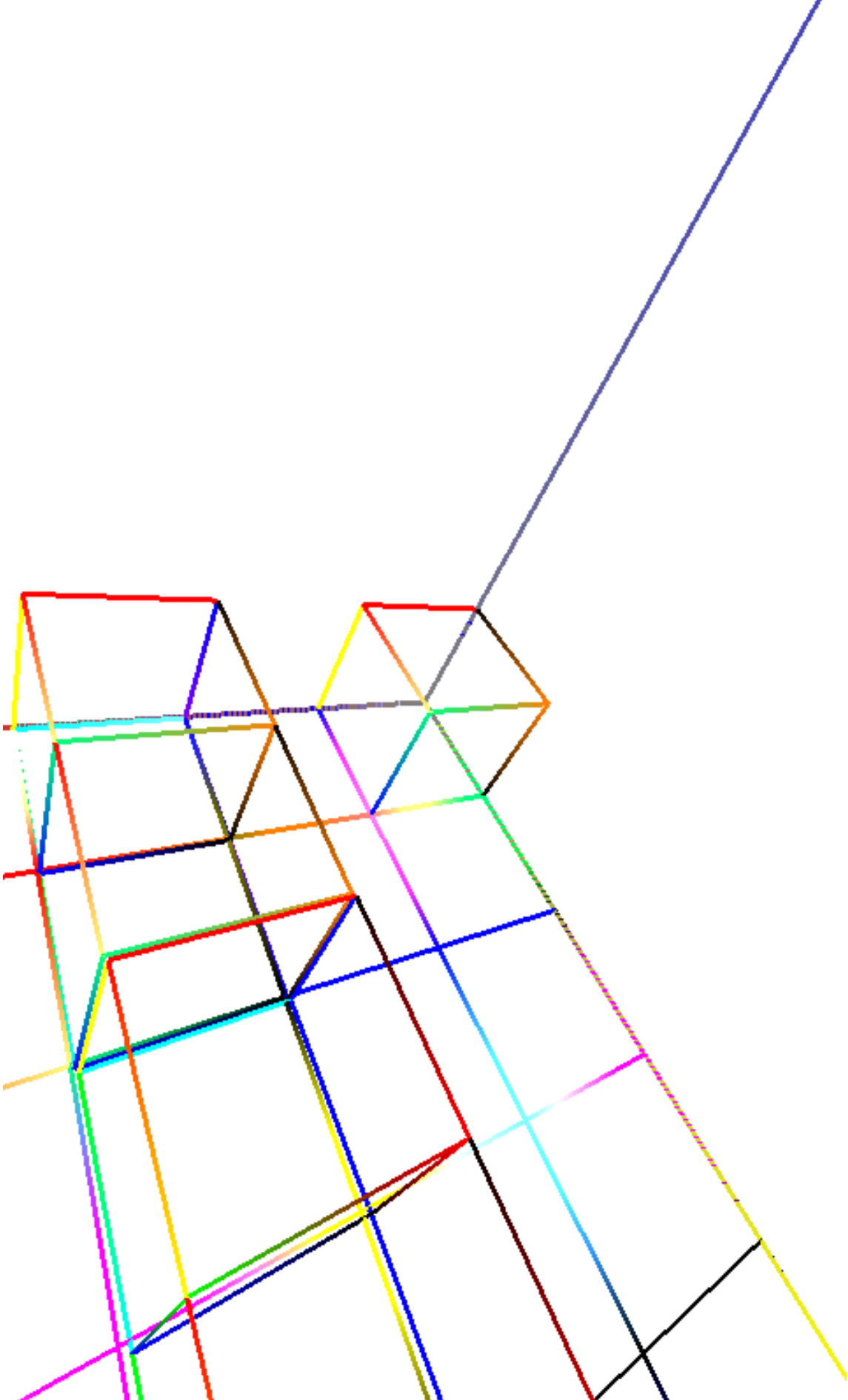
May 11, 2016

Contents

1 Upgrading versions, pretty good

1.1 3d tetris status

- think about block center.
- need to set eye position better so that the (Frame + Grid) layout can be at the position that I want for the 3d game.
- I want yellow grids, together with white background, red-x yellow-y, but I fail get such effect. Currently using black grid, but I will change it to be better looking.
- Better organized files for OOP Practice.
- Will update either 12:17pm, 6:17pm or 12:17am daily or both or three times (or hours earlier or later), depends on progress made within time slice.
- Emacs is such a powerful tool for me for coding considering and accepting the facts that occasional it would produce some minor troubles for me so that I would have to google for solutions. This morning the parenthesis don't autopair for () [] {} for java-mode, after having googled for few minutes, I have used and trust autopair for so long and realized actually sometimes he gets tired, and once I close and restart it, he works perfectly. I am looking forward to the day that my beloved cousin would be able to help and guide me with emacs debugging.
- I had NOT have any design experience nor confidence for game/larger project design, but since tetris 2d which was based on an incomplete design of a undergraduate student thesis when I successful redesign and implemented it, I think now I am in the process of thinking and building my own design (as well as confidence if I could succeed this time) now. Step by step, I could make this simple 3d completely out of my own ideas.
- 3d tetris layout structure:



- a video for this Tetris game can be directly watched at https://www.youtube.com/watch?v=Ht4NOrEUtFk
- A video for the previous DrawingFun Android App can be watched at https://www.youtube.com/watch?v=YV78Tk , or by searching deepwaterooo Wang.

1.2 folders

- lame2d: the very first version of the game.
- 2d: SurfaceView redering 2d Implementation.
- 3d: will work on a simple opengl 3d version first. Currently working on this one, will spend a few of following days on this one as well.
- glar3d: upgraded opengl 3d version adapted from tetrisglar app with textures and music, and real 3d instead of any pseudo one, will implement this one when simple 3d version is done. (After having understood texture and lights better, tried to debug this one for a while, but still complicated design and layout still make this one to some extend difficult for me for now.)

2 References

2.1 youtube designs

- shader: http://blog.csdn.net/tom_221x/article/details/38458021
- 旋转三角形 http://www.hanshuliang.com/?post=6
- fancy effect: http://m.oschina.net/blog/147033

2.2 Activity.runOnUiThread()

- http://stackvoid.com/introduction-to-Message-Handler-in-Android/
- http://m.oschina.net/blog/97619
- AssetManager: http://m.jb51.net/article/57341.htm
- A 3d reference: https://github.com/kdomic/android-3d-tetris

2.3 3D design

- c++ version: https://github.com/matachi/tetris-cpp
- refer 6 http://www.oschina.net/question/614942_62370
- http://www.oschina.net/question/565065_67280
- triangle: http://stackoverflow.com/questions/9945321/triangle-opengl-in-android
- https://gist.github.com/SebastianJay/3316001
- 射线拾取：http://itdocument.com/479827008/
- 旋转及手势：http://vaero.blog.51cto.com/4350852/790620
- 2 http://vaero.blog.51cto.com/4350852/790637
- http://www.lai18.com/content/951343.html
- opengl 选择与反馈：http://zhidao.baidu.com/question/496046750245095004.html
- http://wenku.baidu.com/view/58190d1efad6195f312ba6f7.html
- c++ http://blog.csdn.net/u010223072/article/details/45369075
- http://codercdy.com/2015/06/17/openglxue-xi-bi-ji-xuan-ze-he-fan-kui/

- https://books.google.com/books?id=u6EHM_OzaFQC&pg=PA1987&lpg=PA1987&dq=opengl%E9%80%89%E6%8
A9%E4%B8%8E%E5%8F%8D%E9%A6%88&source=bl&ots=L9Y66QSEhu&sig=f1h_RadXRDFsa9L5IY430HGTG34&hl=e
sa=X&ved=0ahUKEwjA6vTRo_jLAhVH3mMKHQIXBxYQ6AEIPDAE#v=onepage&q=opengl%E9%80%89%E6%8B%A9%E4%
B8%8E%E5%8F%8D%E9%A6%88&f=false
- c++ codes: http://dev.gameres.com/program/Visual/3D/Selection.htm
- 画线：c++ http://www.programgo.com/article/43724048060/
- draw line: http://www.linuxidc.com/Linux/2011-09/42307p3.htm
- http://stackoverflow.com/questions/9217702/open-gl-es-2-0-drawing-a-simple-line
- 距阵变换：http://www.cnblogs.com/caster99/p/4780984.html
- http://www.flakor.cn/2014-05-15-384.html
- shader util: http://blog.csdn.net/shulianghan/article/details/17020359
- 详解距阵变换：http://www.cnblogs.com/kesalin/archive/2012/12/06/3D_math.html
- http://mail.cfanz.cn/index.php?c=article&a=read&id=270244
- one example: http://www.apkbus.com/blog-99192-39498.html
- ex2 for shader matrix: http://www.voidcn.com/blog/peanut__love/article/p-2891341.html
- 西蒙 iPhone-OpenGL ES 中文教程专题: http://www.cocoachina.com/special/2010/0126/404.html
- 运动：http://www.cocoachina.com/bbs/read.php?tid-7601-fpage-10.html
- 距阵：http://blog.csdn.net/wangdingqiaoit/article/details/39010077
- http://blog.csdn.net/popy007/article/details/5120158 UNV
- http://www.tqcto.com/article/mobile/23873.html eye
- http://blog.csdn.net/wangdingqiaoit/article/details/39937019
- https://developer.apple.com/library/ios/documentation/3DDrawing/Conceptual/OpenGLES_Program
Introduction/Introduction.html
- http://blog.csdn.net/shulianghan/article/details/46680803
- rotation: http://stackoverflow.com/questions/13480043/opengl-es-android-matrix-transformation
- glsl example: http://cse.csusb.edu/tongyu/courses/cs520/notes/android-es2.php
- shader parser: http://stackoverflow.com/questions/19452240/opengl-glsl-void-parse-error-on-ver
- separate file: http://stackoverflow.com/questions/30345816/splitting-a-text-file-into-multiple-

2.4 GLSurfaceView

- opengl: http://androidblog.reindustries.com/a-real-open-gl-es-2-0-2d-tutorial-part-1/
- Graphics architecture: https://source.android.com/devices/graphics/architecture.html
- http://stackoverflow.com/questions/5169338/android-deciding-between-surfaceview-and-opengl
- 引路蜂 better: http://blog.csdn.net/mapdigit/article/details/7526556
- 真正的 3D 图形：http://www.imobilebbs.com/wordpress/archives/1554
- a Cube: http://www.oschina.net/question/4873_28325
- modification: https://github.com/googleglass/gdk-apidemo-sample/blob/master/app/src/main/java/
com/google/android/glass/sample/apidemo/opengl/Cube.java
- Android OpenGL ES 简明开发教程小结: http://www.imobilebbs.com/wordpress/archives/1583

- http://hellosure.github.io/android/2015/06/01/android-glsurfaceview/
- http://ju.outofmemory.cn/entry/172850
- 画图: http://www.mobile-open.com/2015/81568.html
- http://tangzm.com/blog/?p=20
- http://www.apkbus.com/blog-99192-39584.html
- onDrawFrame intro: http://www.jayway.com/2009/12/03/opengl-es-tutorial-for-android-part-i/
- failed: http://stackoverflow.com/questions/28711850/android-opengl-how-to-draw-a-rectangle
- onTouchEvent: http://blog.csdn.net/niu_gao/article/details/8673662
- volatile http://www.voidcn.com/blog/fanfanxiaozu/article/p-3668133.html
- http://mobile.51cto.com/aengine-437172.htm
- OpenGLES related: http://stackoverflow.com/questions/9945321/triangle-opengl-in-android
- OpenGL ES 2.0 Sample Code: http://androidbook.com/item/4254
- intros: 详解 http://blog.csdn.net/niu_gao/article/details/7566297
- 画线: http://www.cnblogs.com/lhxin/archive/2012/06/01/2530828.html
- http://bbs.9ria.com/thread-201740-1-1.html
- http://imgtec.eetrend.com/blog/5078
- draw a ball http://shikezhi.com/html/2015/android_1022/561912.html
- for Board c++: http://www.jiancool.com/article/24471349949/
- possible? http://code1.okbase.net/codefile/CCFormatter.java_2015072733469_393.htm
- http://www.mobile-open.com/2015/80379.html

2.5 eventQueue vs SurfaceView threads

- Deeper summary, android graphics architecture: http://hukai.me/android-deeper-graphics-architecture/
- 2 threads, load, read, http://blog.csdn.net/hellogv/article/details/5986835

2.6 SurfaceView

- Surface runnable http://android.okhelp.cz/surfaceview-implements-runnable-android-code/
- Example: http://technicalsearch.iteye.com/blog/1967616
- http://www.jcodecraeer.com/a/anzhuokaifa/androidkaifa/2012/1201/656.html
- Event Queue: http://www.leestorm.com/post/17.html
- lockCanvas(Rect /小区) http://blog.csdn.net/alexander_xfl/article/details/13000347
- example: http://fanli7.net/a/JAVAbiancheng/ANT/20120424/160203.html
- MotionEvent: http://android.jobbole.com/82072/
- surfaceview 双缓冲: http://blog.csdn.net/cnbloger/article/details/7404485
- sth worth try: http://www.lxway.com/969295592.htm
- Dont Understand: http://blog.sina.com.cn/s/blog_5a6f39cf01012rtv.html
- tried: http://bbs.csdn.net/topics/370074255 drawBitmap 2 canvas
- slightly complicated: http://www.lxway.com/148606691.htm
- slightly complicated: http://www.lxway.com/186948856.htm

2.7 gestures

- http://www.cnblogs.com/akira90/archive/2013/03/10/2952886.html
- Android 触摸手势基础官方文档概览: http://www.lxway.com/445554926.htm
- 手势: http://wiki.jikexueyuan.com/project/material-design/patterns/gestures.html
- http://www.lxway.com/601620614.htm
- http://www.lxway.com/282219004.htm
- http://www.lxway.com/906451412.htm
- http://www.lxway.com/146619692.htm
- http://www.lxway.com/4420294641.htm
- http://www.lxway.com/155059816.htm
- http://www.lxway.com/4019928952.htm
- 例子: http://bbs.chinaunix.net/thread-3634477-1-1.html
- 例子: http://www.bestappsmarket.com/p/app?appId=1192877&title=tetris-%E4%BF%84%E7%BD%97%E6%96%AF%E6%96%B9%E5%9D%97
- 例子: http://bbs.chinaunix.net/thread-3634477-1-1.html
- iTetris: http://searchapp.soft4fun.net/article/information/iTetris%20%E4%BF%84%E7%BD%97%E6%96%AF%E6%96%B9%E5%9D%97/313319
- left right: http://www.jb51.net/article/77028.htm
- AI: http://www.cnblogs.com/youngshall/archive/2009/03/24/1420682.html
- 3/11/2016 Friday
- https://github.com/Almeros/android-gesture-detectors mac
- http://www.jcodecraeer.com/a/anzhuokaifa/androidkaifa/2015/0211/2467.html
- http://www.hejun.biz/81.html
- http://www.jb51.net/article/38166.htm
- http://www.jb51.net/article/37717.htm
- http://mobile.51cto.com/aprogram-394841.htm
- TetrisBattle 特殊轉入教學 (Z S J L I)
  - https://www.youtube.com/watch?v=zW6Gp_7jl9I
- 推箱子: 第 11 章 Android 游戏开发视频教程益智游戏——推箱子
  - https://www.youtube.com/watch?v=glzxII1-P0A 2.5D
- 祖码游戏的设计与实现