Tetris - Basic Implementation Practice for Android

deepwaterooo

April 13, 2016

Contents

References
2.1 Activity.runOnUiThread()
2.2 3D design

1

3 3

2.1	Activity.runOnUiThread()
	3D design
2.3	GLSurfaceView
2.4	eventQueue vs SurfaceView threads

2.0	Burraceview	•	 •	•	٠	•	•	•	 •	•	•	•	 •	•	•	٠	•	•	 •	٠	•	•	٠	•	•	 •	٠	 	•	•	٠	•	•	•	•	•	 •	
2.7	gestures																											 									 	

Better version, pretty good

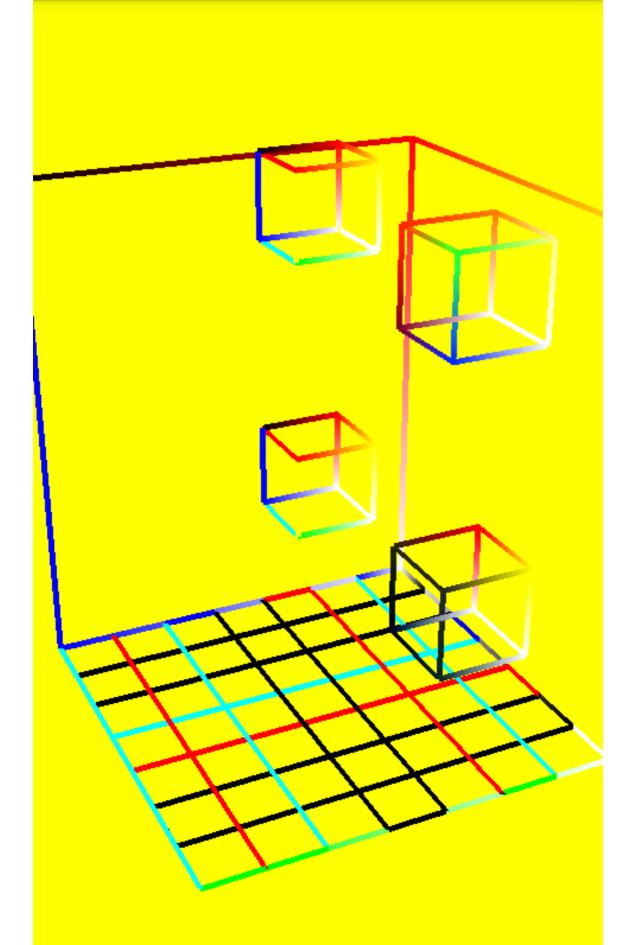
• OpenGL 3D version status:

1 Better version, pretty good

2.5 Canvas Path subclass . . .

- working slowing step-by-step to get app run without crashing down, getting familiar with app flow & different opengl modules, many bugs on the ways need to be fixed before onto those matrix.
 - but will get them done. I will.
 - Basic game flow debugging. just fixed one bug today.
- Will read and work on the existing code, make the app run without crashing down (need add a few buttons for first page, & I had that already), and try to get an initial 3d frames and a couple of blocks showing out.
- Will try to finish the Undertable repository today.
- Will work on this project during the day, go to class in the evening, and report status later in late evening.
- Still trying to adapt from the TetrisGlar app, and worked on the codes that are necessary for a real 3D instead of pseudo-3d.
- Understand the math part better, to remove unnessary background parts, mirror parts, beside making 2d = > 3d, rotation could be modified to be better.
- Will continue work on this one today after updated "Undertable Blackmail" repository.
- This project is still on and updating, please don't think I could give up this one. Even I made limited progress someday, but I will make this project work after working on it day by day.
- I believe about MVP, I am correct now, and I am using the same world center now.
- For translation, rotation, calculation transformation matrix, I still have to write these utilities in order for my Cubes/Blocks to move.
- And I should NOT have been blocked by this drawing for so long, but at least now I know I am correct.
- Will work on Cube==>Block==>Model game flow on Monday, and will update on Monday latest in

- game layout structure:



- most challenge part for tonight, matrix translations & rotations \cdots will continue work on it tonight
 - a video for this Tetris game can be directly watched at https://www.youtube.com/watch?v=Ht4N0rEUtFk
- A video for the previous DrawingFun Android App can be watched at https://www.youtube.com/watch?v=YV78Tk5--5M, or by searching deepwaterooo Wang.

2 References

- 2.1 Activity.runOnUiThread()
 http://stackvoid.com/introduction-to-Message-Handler-in-Android/
- http://m.oschina.net/blog/97619
- •

• c++ version: https://github.com/matachi/tetris-cpp

2.2 3D design

- 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

• https://books.google.com/books?id=u6EHM_OzaFQC&pg=PA1987&lpg=PA1987&dq=opengl%E9%80%89%E6%8A9%E4%B8%8E%E5%8F%8D%E9%A6%88&source=bl&ots=L9Y66QSEhu&sig=f1h_RadXRDFsa9L5IY430HGTG34&hl=esa=X&ved=OahUKEwjA6vTRo_jLAhVH3mMKHQIXBxYQ6AEIPDAE#v=onepage&q=opengl%E9%80%89%E6%8B%A9%E4%B8%E6%BB%A9%E4%BB%BA9%E6%BB%A9%BB%A9%

- 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/
- 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.linuwide.com/Linuw/2011-00/42207n2 htm
- 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

```
• 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
     GLSurfaceView
2.3

    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
```

• one example: http://www.apkbus.com/blog-99192-39498.html

http://tangzm.com/blog/?p=20

• ex2 for shader matrix: http://www.voidcn.com/blog/peanut__love/article/p-2891341.html

• 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 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 2.5Canvas Path subclass • how to define drawLine to be drawShapes?

onDrawFrame intro: http://www.jayway.com/2009/12/03/opengl-es-tutorial-for-android-part-i/

- 2.6SurfaceView
- Surface runnable http://android.okhelp.cz/surfaceview-implements-runnable-android-code/
 - Example: http://technicalsearch.iteye.com/blog/1967616

http://www.apkbus.com/blog-99192-39584.html

- 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

2.7gestures 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

96%AF%E6%96%B9%E5%9D%97

AF%E6%96%B9%E5%9D%97/313319

- 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%
- 例子: http://bbs.chinaunix.net/thread-3634477-1-1.html

- left right: http://www.jb51.net/article/77028.htm
- AI: http://www.cnblogs.com/youngshall/archive/2009/03/24/1420682.html

• iTetris: http://searchapp.soft4fun.net/article/information/iTetris%20%E4%BF%84%E7%BD%97%E6%96

- 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 (ZSJLI)
- https://www.youtube.com/watch?v=zW6Gp_7j19I
- 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-POA 2.5D
- 祖码游戏的设计与实现