Tetris - Basic Implementation Practice for Android

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Contents

1 Debugging, Better version

- a video can be directly viewed at https://youtu.be/Ht4NOrEUtFk

  - I am NOT ready to record them yet, but any way take a look so that you know what I have been working on.

  - Better version will be recorded and uploaded later.

- Projection is basically smooth now, this is pretty much all the features that I have ever thought and wanted to implement, except the queueEvent GLSurfaceView vs threads left to be the big challenge (or if after all details having been done, if the game IS REALLY smooth, I may not need implement either of those then).

- I may need to think how to organize the different objects. For projection related methods, there maybe better way to code then what I have right now, but this is the trial implementation, and I need to think about them.

- After game in shape for projection, will rethink about motionevents, or GLSurfaceView for queueEvent.

- will try to rewirte motion event a little bit (slightly change touch motionevent definitions according to previous DrawingFun app), if doesn't work as expected, then try GLSurfaceView queueEvent.

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- apply MotionEvent queue, use either SurfaceView with multiple threads (if possible) or GLSurfaceView.

- apply sound effects to make the game more fun.

- The above 2, either one goes first.

- One more "Hold" choice besides the Next Rect for peek, lower priority.

- Noticed more bugs, but I am currently focusing on make the game super.

- Fixed minor mindless codes when I coded with headache.

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- Fixed all the noticed carelessly-produced flying bugsss···.. A basic game is in good shape now, will work on "polish" for viewing, sounds, efficiency during following days when I have time.

- Has good chance/potential to make it a great game with Event Queue for motion events.

- Recently sick, and last night got very bad sleep for about 4 hours (6am - 10am), not in very good condition now.

- Because used SurfaceView threading, the game is much more smoother than the previous version, ideas are pretty straight forward, but still debugging…

- Android threading is something that I have barely tried before, but I will work on this one this time, hopefully will make this TTetris a fully functional game for major functionality.

- Debugging, and production is on the way.

2 其它类似游戏参考

2.1 iTetris 俄罗斯方块

这是一款针对手机触屏的经典俄罗斯方块，可以选择传统及酷炫模式，用户可根据各自喜好自定义游戏背景。
人性化的操作体验，让您重温儿时经典。该款游戏特征:

1. 尽量大的利用屏幕空间显示游戏，加大了游戏的可玩性

2. 支持触屏手势，同时支持虚拟按键

3. 虚拟方向按键盘初始化在右上角，用户可长按按键盘中心提起按键盘，拖动到自己任意觉得顺手的地方

4. 长按游戏空间任何地方可以隐藏、显示方向按键盘

5. 长按虚拟键盘中左中下键将发送连续按键信息，达到加速效果

6. 触摸游戏规则：点击屏幕改变方块形状；左右滑动改变方块左右位置，位置改变幅度与手指滑动速度与幅度有关，例如幅度较小滑动，方块将运行一格的位置，稍大滑动将运行两格位置，等等。向下加速也是这样。

7. 支持自定义游戏背景，如果有好的背景图片，用户可自行进入"菜单 -游戏背景"里选择图片进行设置

3 References

3.1 GLSurfaceView

- 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

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3.2 eventQueue vs SurfaceView threads

- Deeper summary, android graphics architecture: http://hukai.me/android-deeper-graphics-architectu

- 2 threads, load, read, http://blog.csdn.net/hellogv/article/details/5986835

3.3 Canvas Path subclass

- how to define drawLine to be drawShapes?

3.4 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

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- slightly complicated: http://www.lxway.com/148606691.htm

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3.5 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

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- 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

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- AI: http://www.cnblogs.com/youngshall/archive/2009/03/24/1420682.html

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- 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