

Computer Graphics on Mobile Devices

VL SS2010 3.0 ECTS

Peter Rautek



- Google Code (Advanced)
- GestureDetector/TouchListener
- Zwischengespräch
- Q&A
- Gruppenvorstellung
- CodingSession



- Project Feeds
- Wiki
- Issue Tracker
- Search for Android OpenGL
 - ◆ We are on page 4 (#33)
 - ◆ Related Projects
 - E.g., Replica Island



Statistics - I'm watching you ;)

Author	Author Id	Changes	Lines of Code	Lines per Change
tuhochi	tuhochi	162 (6.8%)	6934 (12.1%)	42.8
peter.rautek	peter.rautek	512 (21.4%)	5709 (10.0%)	11.1
matthiasmaschek	matthiasmaschek	119 (5.0%)	5373 (9.4%)	45.1
pontomedon	pontomedon	368 (15.4%)	5080 (8.9%)	13.8
th.perl	th.perl	31 (1.3%)	4364 (7.6%)	140.7
alex3.dr@gmail.com	alex3.dr@gmail.com	124 (5.2%)	3072 (5.4%)	24.7
johannes.scharl.at@gmail.com	johannes.scharl.at@gmail.com	41 (1.7%)	2768 (4.8%)	67.5
matthias.tretter@gmail.com	matthias.tretter@gmail.com	198 (8.3%)	2331 (4.1%)	11.7
grange.tuwien	grange.tuwien	67 (2.8%)	2231 (3.9%)	33.2
infamoustt@gmail.com	infamoustt@gmail.com	85 (3.6%)	2150 (3.8%)	25.2
wolfgang.knecht@gmail.com	wolfgang.knecht@gmail.com	107 (4.5%)	2022 (3.5%)	18.8
arthur.oberhauser@gmail.com	arthur.oberhauser@gmail.com	37 (1.5%)	1997 (3.5%)	53.9
sebastian.sippl	sebastian.sippl	65 (2.7%)	1931 (3.4%)	29.7
dreimalbla@gmail.com	dreimalbla@gmail.com	85 (3.6%)	1684 (2.9%)	19.8
ingo.radax@gmx.net	ingo.radax@gmx.net	61 (2.6%)	1516 (2.7%)	24.8
gerald.sollboeck	gerald.sollboeck	65 (2.7%)	1302 (2.3%)	20.0
0625267	0625267	10 (0.4%)	942 (1.6%)	94.2
email@reini.org	email@reini.org	16 (0.7%)	857 (1.5%)	53.5
asperger.michael	asperger.michael	26 (1.1%)	787 (1.4%)	30.2
wci.cqmd@gmail.com	wci.cqmd@gmail.com	21 (0.9%)	754 (1.3%)	35.9
linusine	linusine	40 (1.7%)	650 (1.1%)	16.2
georg.molzer	georg.molzer	28 (1.2%)	604 (1.1%)	21.5
knecht.martin@gmail.com	knecht.martin@gmail.com	5 (0.2%)	275 (0.5%)	55.0
mike.vasiljevs@gmail.com	mike.vasiljevs@gmail.com	11 (0.5%)	253 (0.4%)	23.0
felix.fleisz	felix.fleisz	17 (0.7%)	224 (0.4%)	13.1
manuel.keglevic@gmail.com	manuel.keglevic@gmail.com	4 (0.2%)	170 (0.3%)	42.5
tiaref26@gmail.com	tiaref26@gmail.com	9 (0.4%)	144 (0.3%)	16.0
robert.hausmair@gmail.com	robert.hausmair@gmail.com	8 (0.3%)	135 (0.2%)	16.8
felix.fleisz@gmail.com	felix.fleisz@gmail.com	4 (0.2%)	123 (0.2%)	30.7
m.lipp81@gmail.com	m.lipp81@gmail.com	5 (0.2%)	114 (0.2%)	22.8
azim00.cook@gmail.com	azim00.cook@gmail.com	5 (0.2%)	95 (0.2%)	19.0
gkatze82@gmail.com	gkatze82@gmail.com	7 (0.3%)	90 (0.2%)	12.8
pilzinho@gmx.at	pilzinho@gmx.at	6 (0.3%)	69 (0.1%)	11.5
benjamin.source	benjamin.source	8 (0.3%)	68 (0.1%)	8.5
jenelesaispas	jenelesaispas	6 (0.3%)	59 (0.1%)	9.8
LeSulix@gmail.com	LeSulix@gmail.com	7 (0.3%)	59 (0.1%)	8.4
michael.benda@gmail.com	michael.benda@gmail.com	5 (0.2%)	52 (0.1%)	10.4
dominic.dwi.windisch@gmail.com	dominic.dwi.windisch@gmail.com	4 (0.2%)	50 (0.1%)	12.5
johannessorger@gmail.com	johannessorger@gmail.com	6 (0.3%)	44 (0.1%)	7.3
toepmark	toepmark	1 (0.0%)	9 (0.0%)	9.0
mhanzl	mhanzl	2 (0.1%)	2 (0.0%)	1.0
Totals		2388 (100.0%)	57093 (100.0%)	23.9

- Statistics (13.4.2010 14:00): <http://www.cg.tuwien.ac.at/courses/CGMD/stats/2010/FAQ01/>
- Level review: <http://www.youtube.com/watch?v=gGLMgoTJ9a4>



```
private OnTouchListener touchListener = new OnTouchListener()
{
    public boolean onTouch(View v, MotionEvent e)
    {
        //pass on the touch event to the GestureDetector
        boolean b = cGestureDetector.onTouchEvent(e);
        try {
            //this hack prevents the frame rate from dropping dramatically during interaction.
            //described at:
            //http://groups.google.com/group/android-developers/browse_frm/thread/39eea4d7f6e6dfca
            Thread.sleep(35);
        } catch (InterruptedException e1) {
            e1.printStackTrace();
        }
        return b;
    }
};

private OnGestureListener gestureListener = new OnGestureListener() {
    //TODO implement OnGestureListener here
};

GestureDetector cGestureDetector = null;
//init the activity
void initialization(){
    myGlSurfaceView.setOnTouchListener(touchListener);
    cGestureDetector = new GestureDetector(gestureListener);
}
```



- Full functional (playable) level!
- Other requirements
 - ◆ Screen resolution
 - ◆ Localization
 - ◆ Android versions
 - ◆ Hardware
 - ◆ JavaDoc
- VisLab
- Everybody should know the time slot!?



- ???
- ???
- ???



- Google Code (Advanced)
- GestureDetector/TouchListener
- Zwischengespräch
- Q&A
- **Gruppenvorstellung**
- CodingSession





- Distribute treasure among people
- Drop treasure
- People start fighting when too close
 - ◆ Prevent that!





- Banks overcame the financial crisis
 - ◆ Bonuses for the bunny
- Stop the men with the money bags
 - ◆ Install spring guns





- Depressions due to his richness
 - ◆ Bunny goes on a bender
- Drink as much beer as possible 😊
- Beer in a labyrinth
- Keep away from wife, prostitute, police
- More beer => boozed





- Base jumping
 - ◆ Too near to buildings
 - ◆ Birds killed
- Game finished
 - ◆ Crashed into building
 - ◆ All money spent





■ N/A





- Spam mails
- Mails get closer to the user
 - ◆ Terms in L33t speak
 - ◆ Type while the mail is visible
- Get rich-mails
 - ◆ Type in L33t speak
- Get viagra-mails
 - ◆ Translate to English
 - ◆ Lose money





- Go for a ride in a hot-air balloon
- More gold burned => faster balloon
 - ◆ Rabbit virgins are waiting 😊
- Cover long distance in as little time as possible
- Dodge the obstacles





- Lose money
 - ◆ Buy and sell company shares
- Graphs (stock prices) fly towards you (3D)
- Buy when price is high
- Sell when price is low





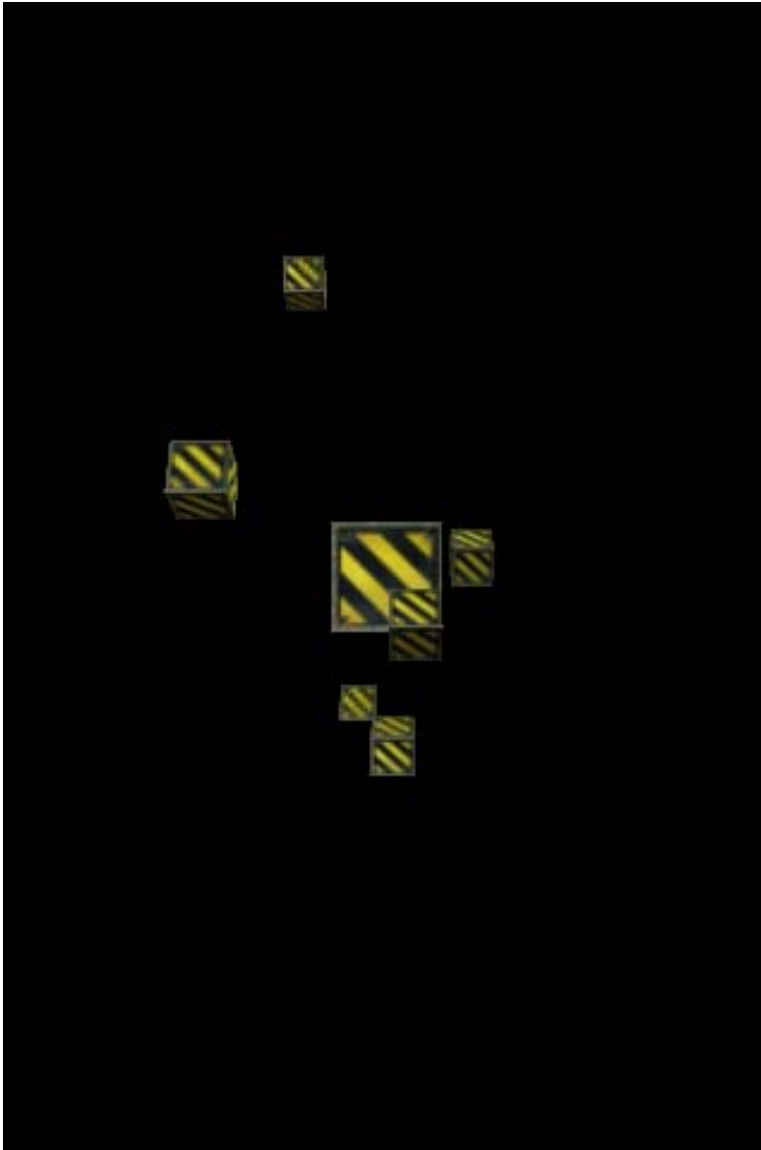
- Escape with a treasure in a labyrinth
- Drop gold at adequate places
- Certain objects
 - ◆ Treasure
 - ◆ Treasure map
 - ◆ Stone
 - ◆ Cask
 - ◆ Fountain





- Compulsive gambling
- Maximal 10 lottery scratch tickets
- Ticket costs money
- Negative winnings





- Signanzeffect
 - ◆ Small objects in orbits around the treasure
- Destroy the gold planet
- Throw satellites from their orbits on the treasure
- Use directed forces to affect the orbits
- Satellites have to be hit on correct position with correct force => maximal damage





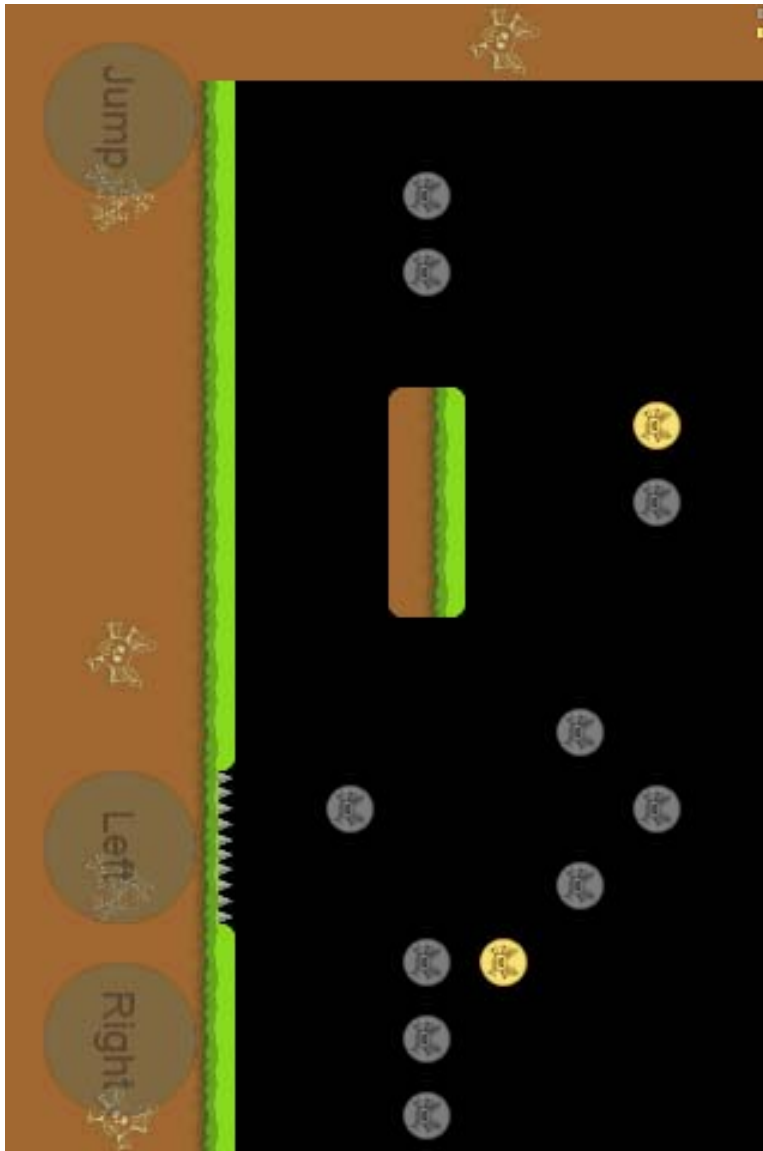
- Rabbit learned to fly from a shaman
 - ◆ Costs money
 - ◆ Rabbit got too much change
- Shaman tries to kill the rabbit with a gun
- After short time
 - ◆ Rabbit wants to give the money back
 - ◆ Tries to get hit as much as possible
 - Money lost





- Intro video
 - ◆ Remember the coins
- Put coins at the correct places (video!)
- Get stuck => ways and means to get ahead or back





- Jump 'n' Run Level
- Fill the empty level with coins
- Be as fast as possible



- Find crime weapons
- Destroy everything
- Try to get as much penalties as possible



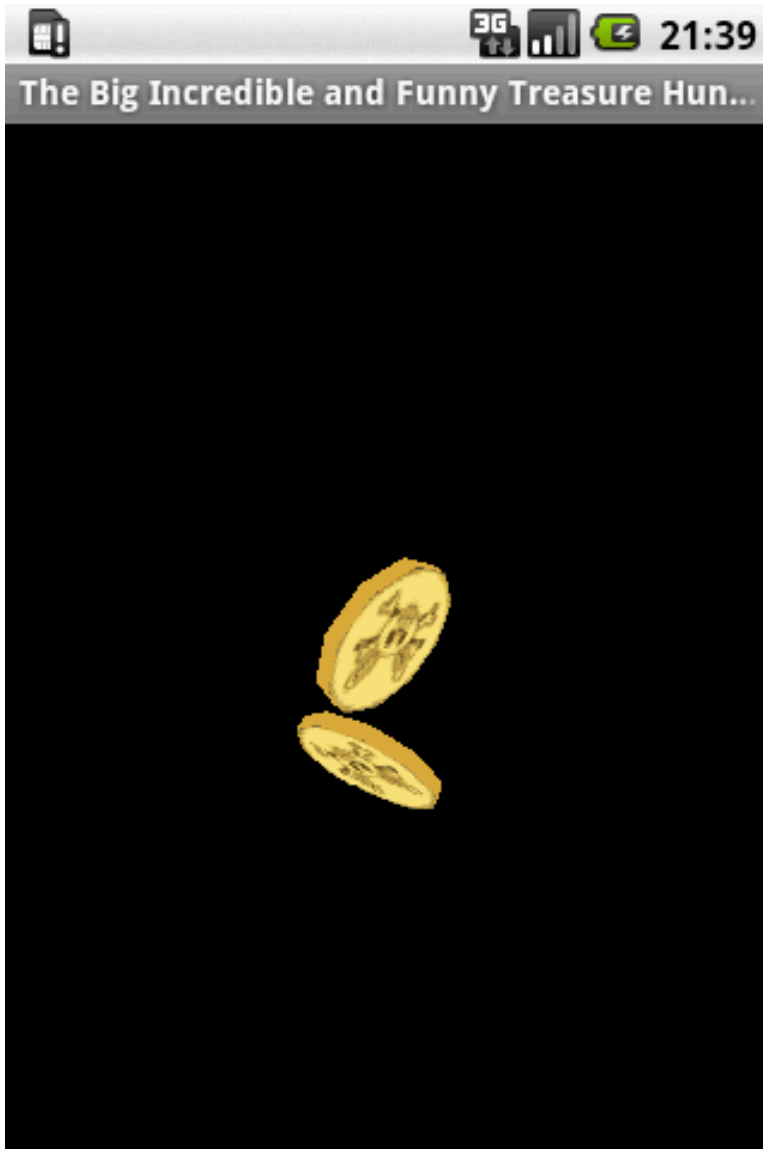
■ N/A





- Money is at a Swiss bank account
 - ◆ High-interest
- Transport money with a train
 - ◆ Get rid of waggons by disconnecting
 - ◆ Employee trains try to save the waggons
 - ◆ Control employee trains by shunting switches





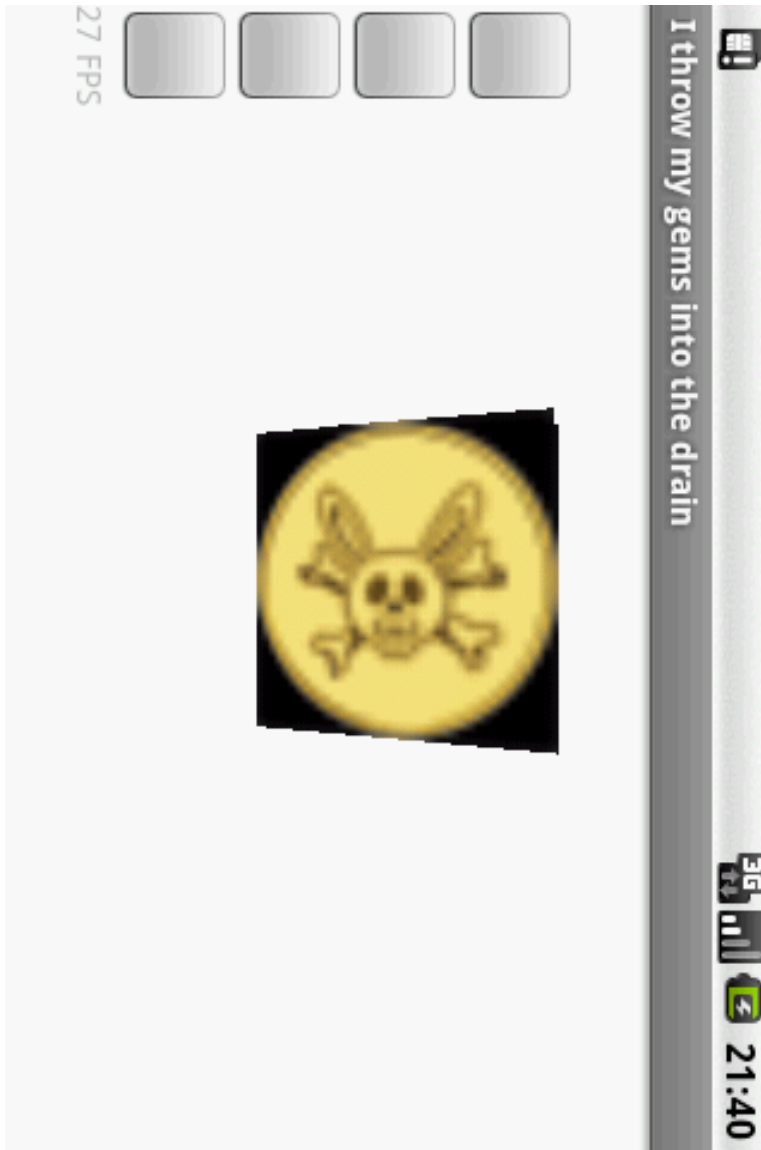
- Drag valuable blocks
 - ◆ Gold lost for recreation
- 3 blocks in a row cancel each other out
- Try to cancel as many blocks as possible
- Items above fall down
 - ◆ Possible bonus points





- Fight for bunny happiness by being a super ingenious gaming machine
- Lenny played by bunny
- Kill Lenny by deadly items
- Lenny dies => Bunny inserts more coins





- Walk along a street
- Throw gems into the drain
 - ◆ Different drain sizes
 - ◆ Align the gems





- Bunny = bank robber
- Hide as much gold as possible
 - ◆ Different sizes of hide-outs
 - ◆ Hide-out large => more difficult to reach
- Police catch you => Game over
- Different game events
 - ◆ Garage
 - ◆ Road blocks
 - ◆ ...



- Try to keep the gold powder as long as you can!



- Google Code (Advanced)
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- Goals:
 - ◆ Identify problems
 - ◆ Summarize problems
 - ◆ Find someone to help you
- No problems? We can make some!
 - ◆ Try it on NexusOne (Android 2.1)
 - Orientation changes
 - ◆ Try it on G1 (Android 1.6)
 - Flip out keyboard
 - ◆ Try
 - Internationalization
 - Screen resolution
 - Life cycle
 - ◆ Press phone (green) button
 - ◆ Press back button
 - ◆ Check if your level still runs
 - ◆ Press home button
 - ◆ Long press home button and select bifth
 - ◆ Check if your level still runs

