

K'UMPA - Game Development Behind the Scenes

droidcamp 2009, Berlin



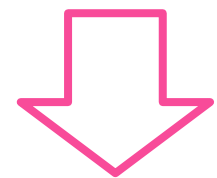
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Agenda

- Mobile gaming market
- Demo
- Development insights
- Questions

Mobile Market

- Q1 2008 to Q1 2009 (Gartner):



- 8,6 %

Mobile phone sales

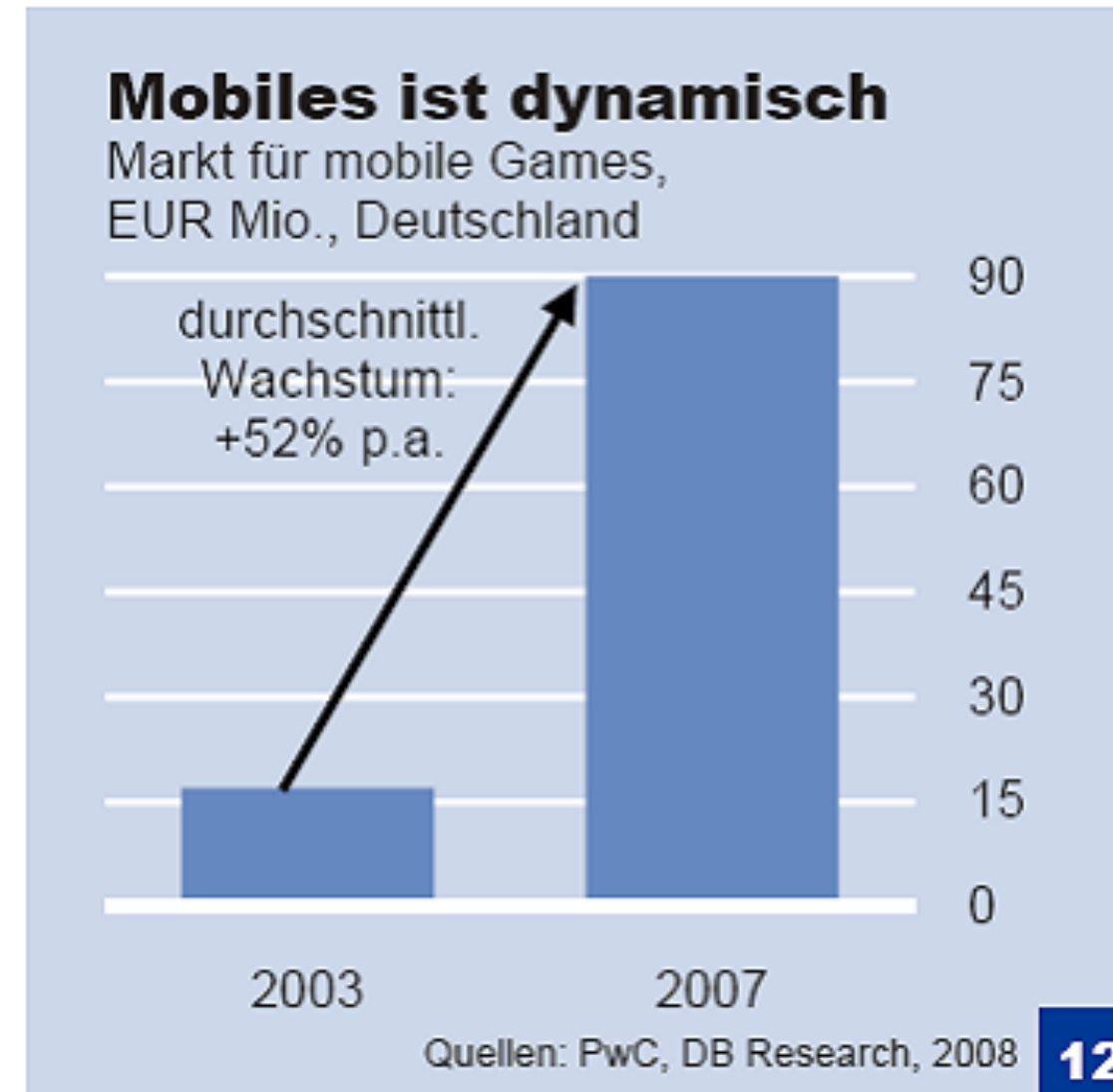
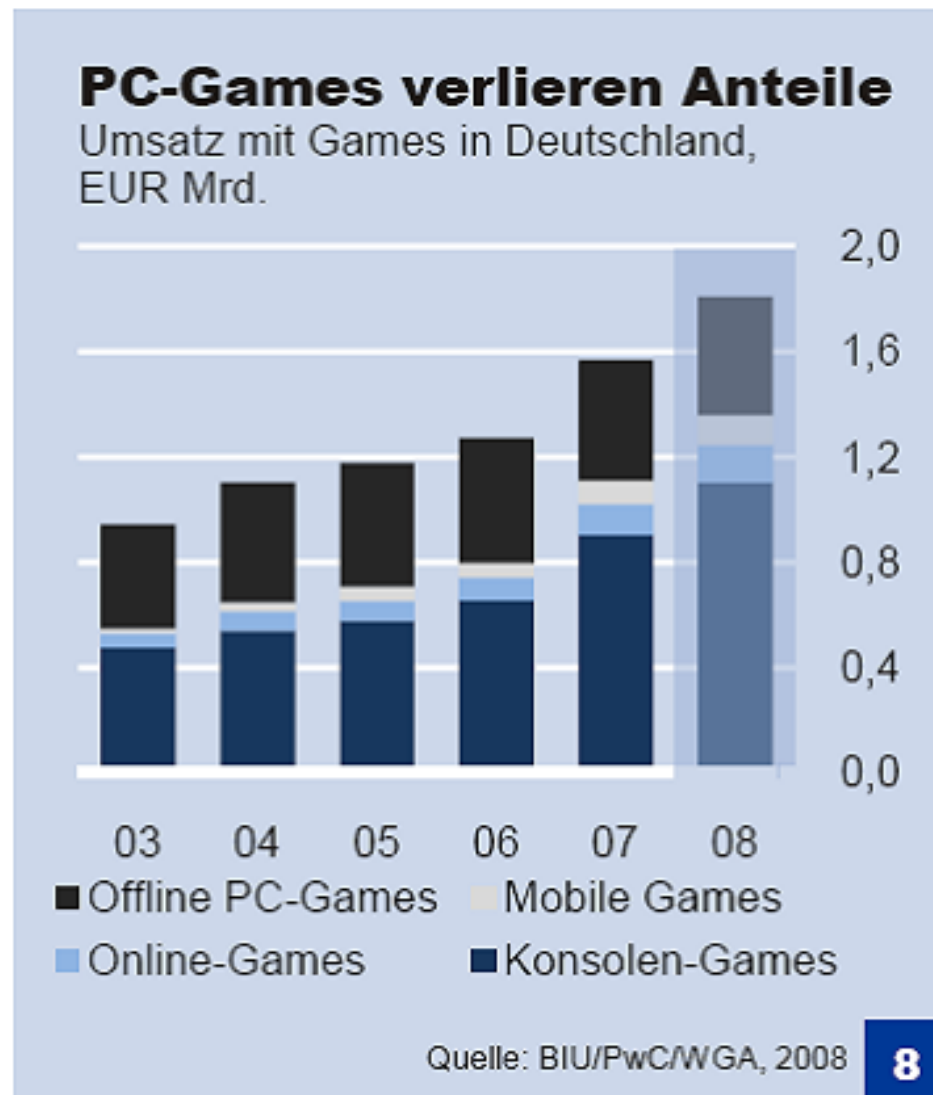


+12,7%

Smartphone sales

- Mobile broadband usage in Germany is growing (tns infratest)
- 90 % of German mobile users willing to pay for mobile offerings (tns infratest)

Mobile Gaming Market



„Android Market“

- Strategy Analytics: 900% growth 2009
- 18 devices in 2009
- Gartner: Android one of 3 surviving platforms in 2015
- 10.000 Apps (vs. 100.000 for iPhone)
And (still): **just a few good games!**



Smartphone OS 2012 (Gartner)

	Q1 2009	Q4 2012
Symbian	49,3 %	39 %
Android	1,6 %	14,5 %
iPhone	10,8 %	13,7 %
Win.Mo.	10,3 %	12,8 %
RIM	19,9 %	12,5 %
WebOS	0 %	2,1 %

K'UMPA released today

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All Android Market listings

	KUMPA v1.0.0 Games: Casual	(0)☆☆☆☆☆	0 total 0 active installs (0%)	Free	✓ Published
	KUMPA Levels: Qusqu South v1.0 Beta Games: Casual	(0)☆☆☆☆☆	0 total 0 active installs (0%)	€0.50	✓ Published

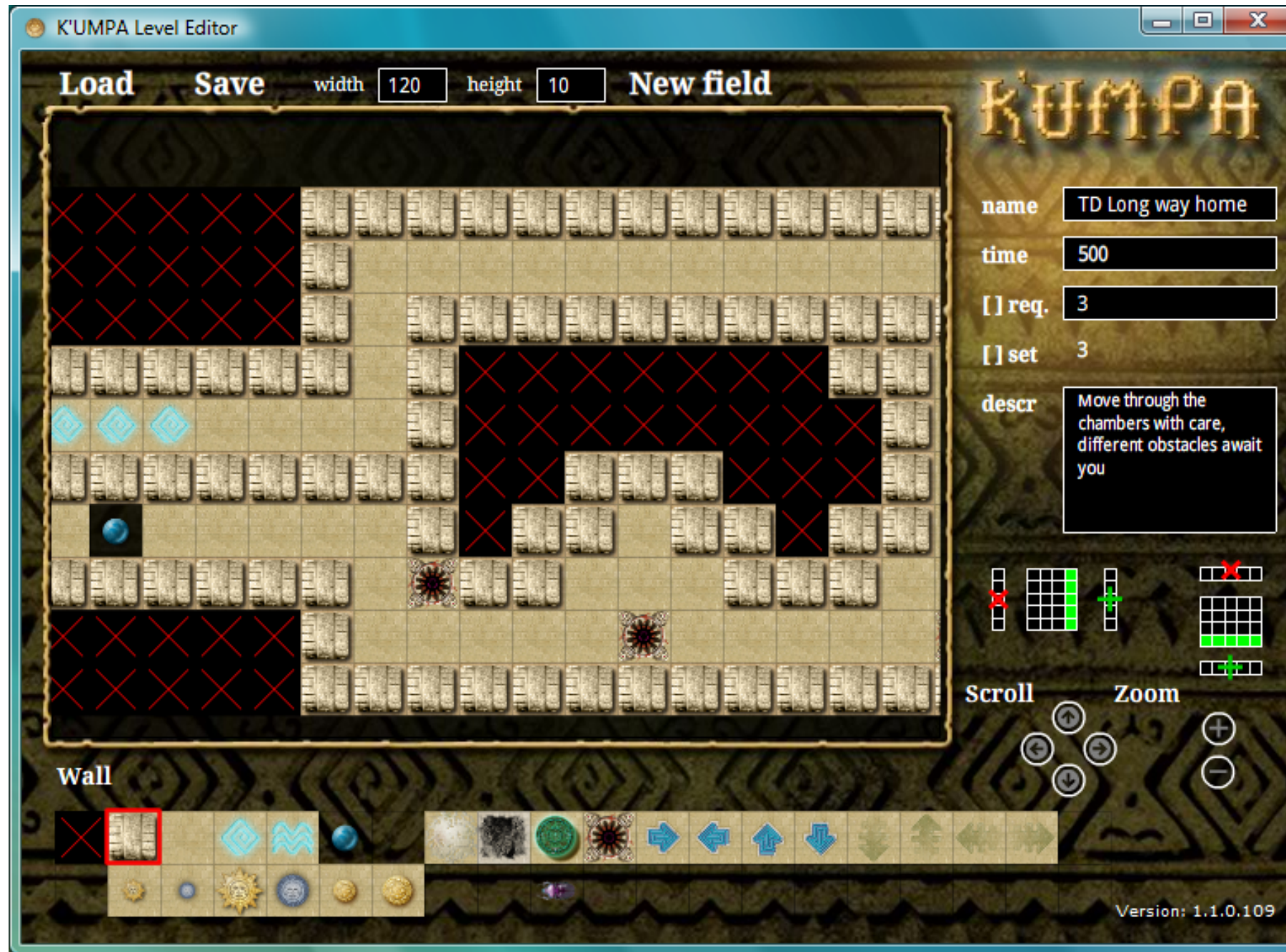
 Upload Application

- Search for „KUMPA“ in the Market

Live Demo



Level editor



„In-app-purchase“

- The iPhone has it...
- Work around for Android
 - Create a second, paid, app
 - Open market with Intent (package name)
 - User can buy the second app
 - User can go back to first app

Bitmaps

- Load with native hardware bit depth
- Use transparency scarcely
- Reduce Size: PNG24 for transparency, PNG8/JPEG for others
- Compose Bitmaps into one bigger Bitmap

Game Loop

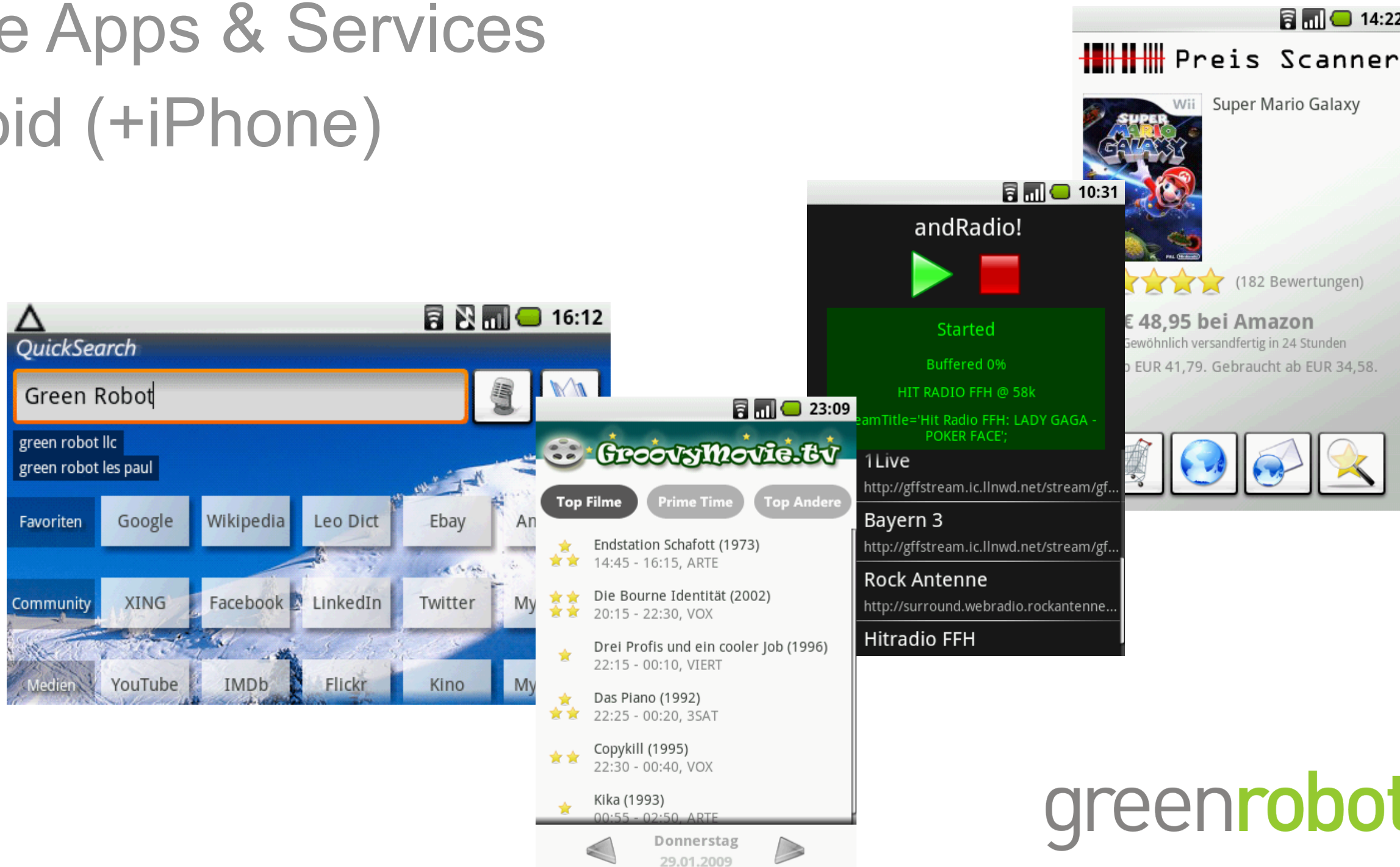
1. Read input controller
2. Measure the time since last iteration
3. Update the world (physics, state, ...)
4. Collision handling (do-it-your-own)
5. Draw, play sounds

Dalvik VM: Performance

- No JIT Compiler yet, stop-the-world Garbage Collection (slow!)
- Rule #1: Avoid Garbage Collection!!
- Do NOT create Objects in Game Loop
- Background Services...
- 16 MB limit (Android 2.0: 24MB?)
- Use Caching (SoftReference)
- Preload Bitmaps and Sound Effects in a background thread

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- Mobile Apps & Services
- Android (+iPhone)



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End of slides

- Thank you. Q&A

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