



Jfokus 2012

So whats so cool about Android 4.x?

Lars Vogel

<http://www.vogella.de>

Twitter: @vogella





Why Android 4.0 is great

Features of Android 4.0

Can I use it already?

Q&A





About me – Lars Vogel



Independent Eclipse and Android consultant,
trainer and book author

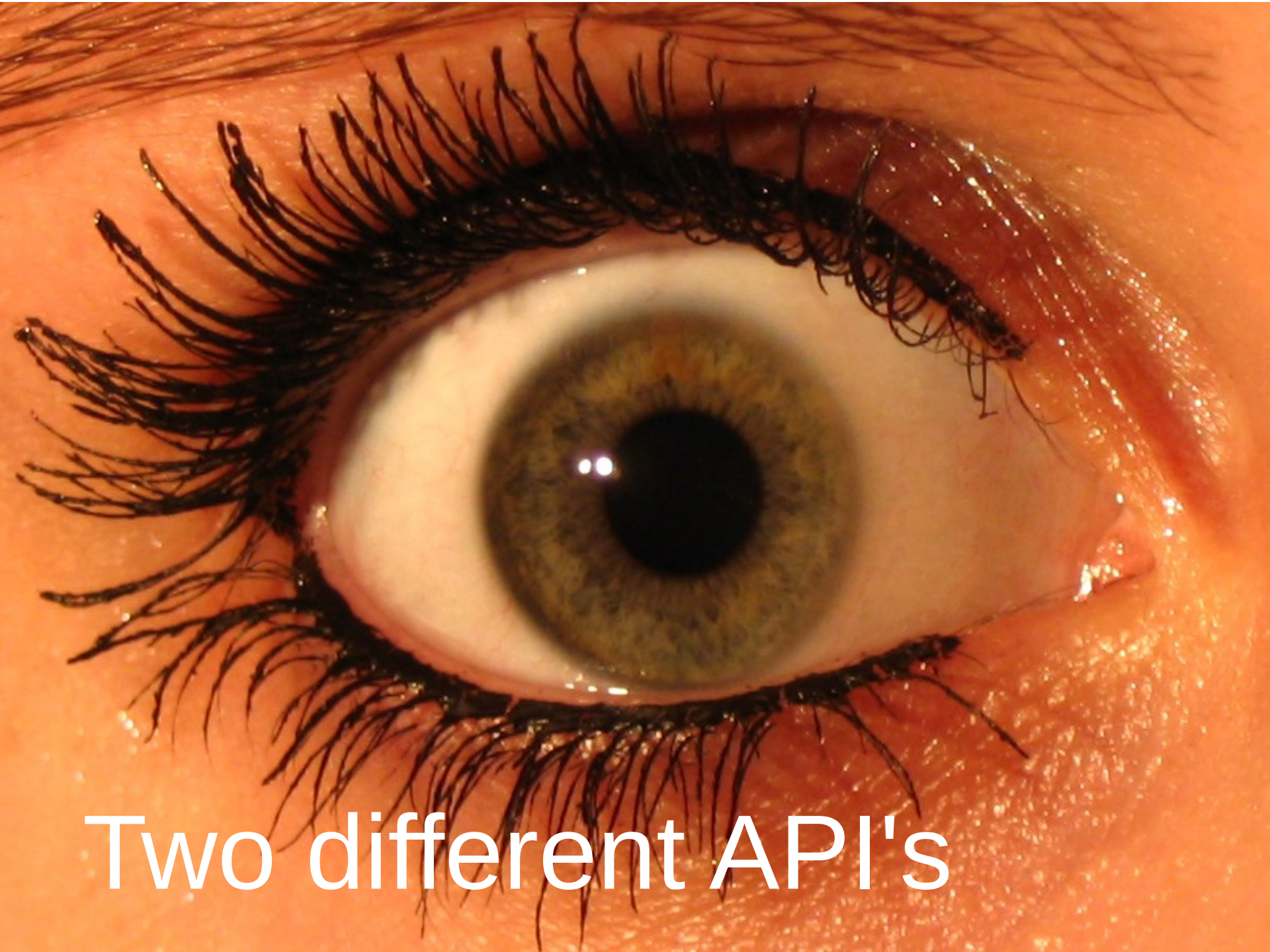
Eclipse committer

Maintains <http://www.vogella.de> Java, Eclipse
and Android related Tutorials with more than a
million visitors per month.

The world before Android 4.0

If I only had the source
code.





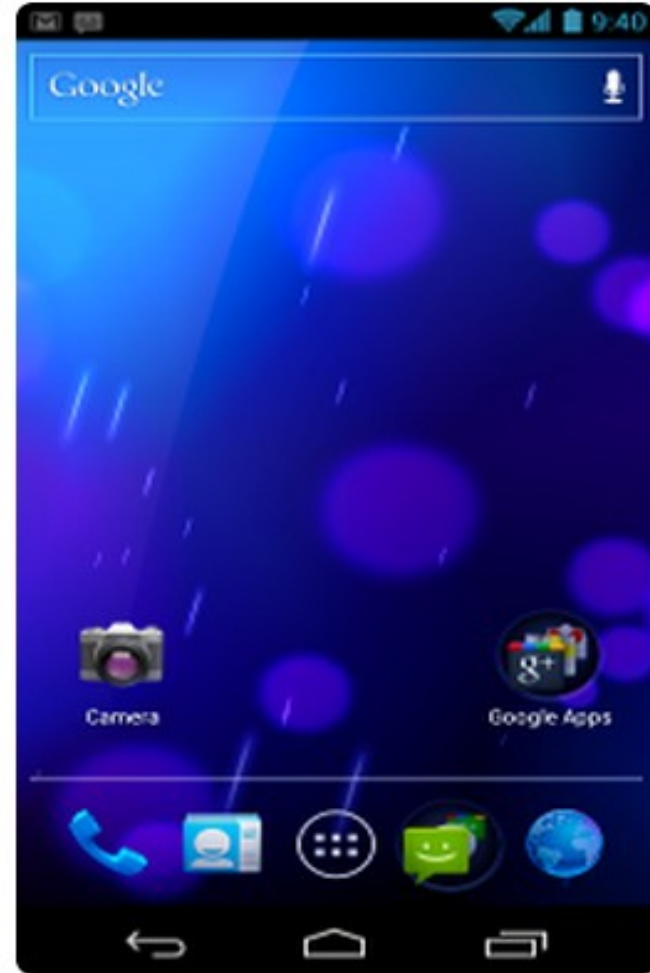
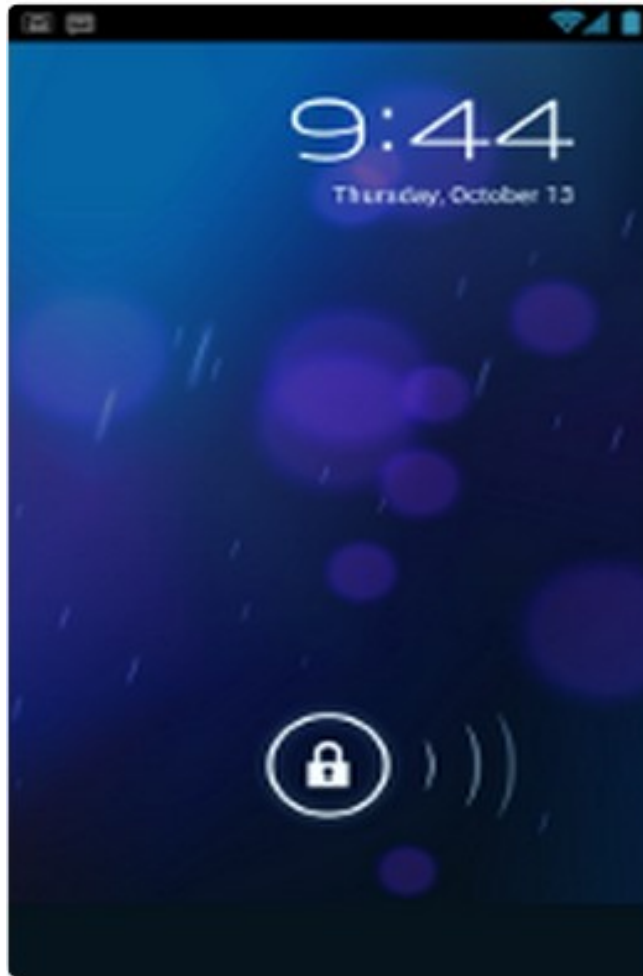
Two different API's

Fortunately Google merged the APIs of the tablet version with the handset version in Android 4.0 and released the source code.

Android 4.0



Android 4.0



**Hardware Rendering is
default**

Holo Theme – Consistent Theming cross devices

`android:theme="@android:style/Theme.Holo"`

Theme: DeviceDefault

**The code of this talk
examples assume that you
know some basics of
Android**

ActionBar



A wooden tray filled with a grid of colorful yarn balls. The yarn balls are arranged in a 3x4 grid, with each cell containing several balls of different colors. The colors include shades of blue, green, yellow, orange, red, pink, purple, and grey. The text "Grid Layout" is overlaid in the center of the image.

Grid Layout

Resizable Widgets



Drag & Drop





Camera Face Detection

Calendar API



StackView

Fragments



Reminder:

Activities are something like a screen in your application

Layout are defined as XML files

Layouts can be selected with resource qualifiers

Fragments

Always part of an Activity

Componets

Have their own life-cycle

**Re-use functionality for different
screensizes**

ViewPager

U.S. mathematician.
Dick test, *Med.* a test for determining susceptibility to scarlet fever in which scarlet fever toxin is injected into the skin, susceptibility being characterized by redness at the injection area. [1920-25; named after G. F. Dick, who devised it]

dick-ty (dik'tā), *adj.*, **-ti-er**, **-ti-est**. dicty.

dick-y (dik'ē), *n.*, *pl.* **dick-ies**. dickey¹.

di-clin-ous (di'klē nəs, di'kli'-), *adj.* *Bot.* 1. (of a plant species, variety, etc.) having the stamens and the pistils in separate flowers, either on the same plant or on different plants, either monoecious or dioecious. 2. (of a flower) having only one sex. [*clis* = probably unisexual; *di-* = two; *-ous* = -ous] [1820-30; *di-* + (*clis*) = (*clis*) = -ous]

di-co-fol (di'kō'fōl, -fol), *n.* a white crystalline solid, C₁₂H₆Cl₂O, derived from DDT and used to protect crops from mites. [laboratory coinage of unexplained orig.]

di-cot (di'kot), *n.* *Bot.* a dicotyledon. Also, **di-cot-yl** (di'kot'l). [by shortening]

di-cot-y-le-don (di'kot'l ēd'n, di'kot l-), *n.* *Bot.* any angiospermous plant of the class (or subclass) dicotyledoneae, producing seeds with two cotyledons and having an exogenous manner of growth. Cf. **mono-cotyledon**. [1720-30; < NL *Dicotyledones* a pre-Linnaean grouping of such plants. See *DI*⁻¹, *COTYLEDON*]

di-cot-y-le-don-ous (di'kot'l ēd'n əs, di'kot l-), *adj.* belonging or pertaining to the Dicotyledoneae; having two cotyledons. [1785-95; *DICOTYLEDON* + *-OUS*]

di-cou-ma-rin (di'kōō'mər in, kyōō'-), *n.* *Pharm.* dicumarol. [1885-90; *DI*⁻¹ + *COUMARIN*]

di-cou-ma-rol (di'kōō'mə rôl', -rôl', -kyōō'-) *n.* *Pharm.* dicumarol.

di-crot-ic (di'krot'ik), *adj.* *Physiol.* having or pertaining to a double beat of the pulse for each beat of the heart. [1700-10; < Gk *dikrot(os)* double beating (*dikrōtos* a clapping, rattling noise) + *-IC*]

1. dictation
dic-ta (dik'tā)

ment, and the force, accuracy, and style with which they are used: *The speaker was distinguished for his excellent diction; poetic diction.* **PHRASEOLOGY** refers more to the manner of combining the words into related groups, and esp. to the peculiar or distinctive manner which certain technical, scientific, and professional ideas are expressed: *legal phraseology.* **WORDING** refers to exact words or phraseology used to convey thought: *wording of a will.*

dic-tion-ar-y (dik'shə ner'ē), *n.*, *pl.* **-ar-ies**. 1. a book containing a selection of the words of a language, usually arranged alphabetically, giving information about their meanings, pronunciations, etymologies, inflected forms, etc., expressed in either the same or another language. *lexicon; glossary: a dictionary of English; a Japanese-English dictionary.* 2. a book giving information about particular subjects or on a particular class of words, names, or facts, usually arranged alphabetically: *a geographical dictionary; a dictionary of mathematics.* **Computers.** **a.** a list of codes, terms, keys, etc., and their meanings, used by a computer program or system. **b.** a list of words used by a word-processing program as a standard against which to check the spelling of text entered. [1520-30; < ML *dictiōnārium*, *dictiōnārius* < *dictiōn-* word (see *DICTION*) + *-ārium*, *-ārius* **-ARY**]

dic-tion-ary cat-a-log, a library catalog having an alphabetical sequence of entries including authors, titles, subjects, etc., in alphabetical sequence. [1875-80, Amer.]

dic-ta-graph (dik'tə graf', -gräf'), *n.* **Trademark.** a device for a telephonic device with a highly sensitive microphone obviating the necessity of a mouthpiece for making long distance conversations secretly or obtaining a record of them.

dic-tum (dik'təm), *n.*, *pl.* **-ta** (-tə), **-tums**. 1. an official pronouncement; judicial assertion. 2. a saying, a saying, command, word, n. use of the word. 3. See **obiter dictum**. [1660-70; *dictum*, said, a saying, command, word, n. use of the word; *dicere* to say, speak; cf. *INDEX*]

More Stuff

Android Beam via NFC

Wi-Fi Direct

Social API

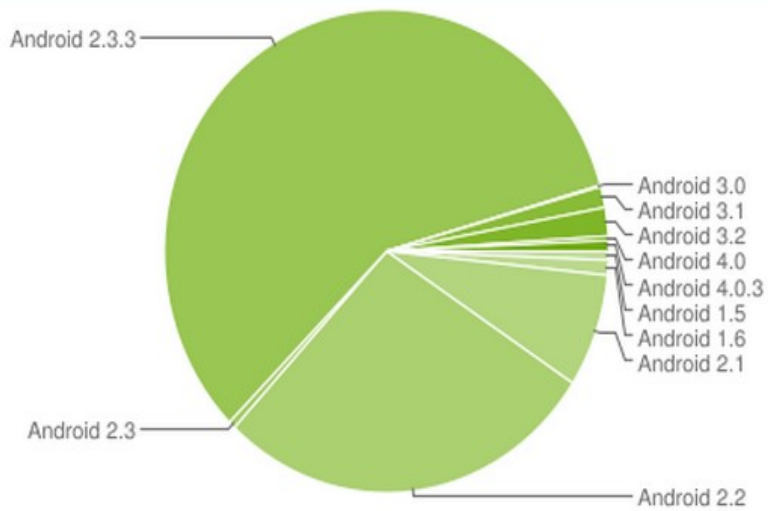
Bluetooth Health Device Profile

Graphics and Animations

TextureView – Like Surface View but integrated

... audio and media

Can I use it?



Platform	Codename	API Level	Distribution
Android 1.5	Cupcake	3	0.6%
Android 1.6	Donut	4	1.0%
Android 2.1	Eclair	7	7.6%
Android 2.2	Froyo	8	27.8%
Android 2.3 - Android 2.3.2	Gingerbread	9	0.5%
Android 2.3.3 - Android 2.3.7		10	58.1%
Android 3.0	Honeycomb	11	0.1%
Android 3.1		12	1.4%
Android 3.2		13	1.9%
Android 4.0 - Android 4.0.2	Ice Cream Sandwich	14	0.3%
Android 4.0.3		15	0.7%

Comp Lib

Fragments

Solution for ActionBar

ViewPager

GridLayout promised

Own package → needs replacement



Android 4.0



Android: Where to go from here:

Android Introduction Tutorial

<http://www.vogella.de/articles/Android/article.html>

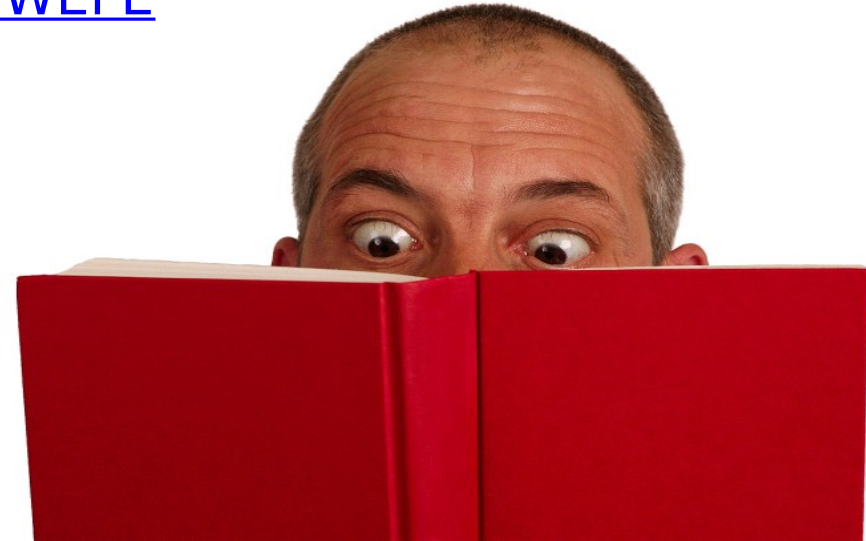
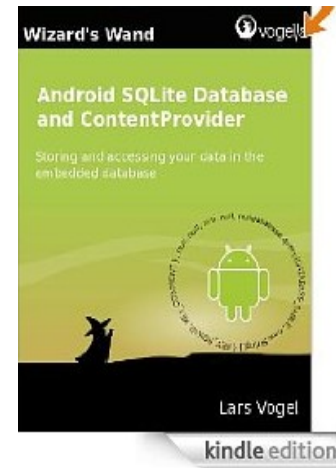
Or Google for „Android Development Tutorial“

Android SQLite and ContentProvider Book

<http://www.amazon.com/dp/B006YUWEFE>

More on Android

<http://www.vogella.de/android.html>



Thank you

For further questions:

Lars.Vogel@gmail.com

<http://www.vogella.de>

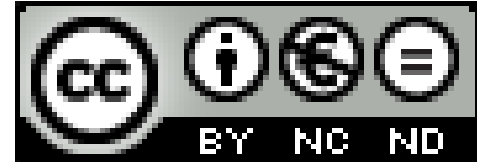
Twitter <http://www.twitter.com/vogella>

Google+ <http://gplus.to/vogella>



License & Acknowledgements

- This work is licensed under the Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 Germany License



- See http://creativecommons.org/licenses/by-nc-nd/3.0/de/deed.en_US