

DUBwise



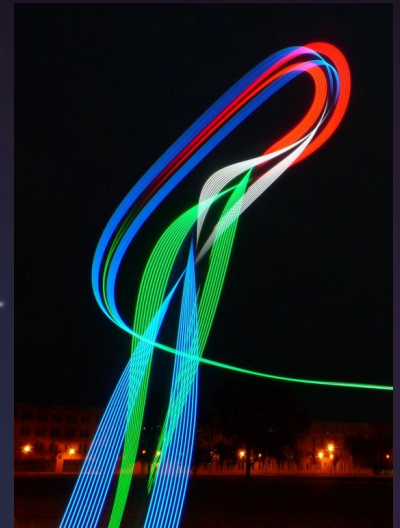
interfacing mobile phones with
embedded hardware like
multicopter's via bluetooth

outline

- why multicopter?
- why an app for that?
- features of DUBwise
- history (from J2ME to Android)
- Android vs. J2ME
- bluetooth on Android
- misc
- stats
- Android Resumé
- Links / Contact

why multicopter?

- photos of nature from above
- catastrophe help
- flying sensor (gas / heat / toxics / ..)
- airshots of archaeological sites
- roof or chimney inspection
- movies / flying camera
- playing UFO at night !-)
- fun
- ...



why an app for that?

- reduce the times you need a laptop
- mobiles are cheap and include all the stuff needed (CPU, LCD, Bluetooth, SoundCard/Speaker)
- easily mountable
- there was none
- it was possible
- fun
- ...

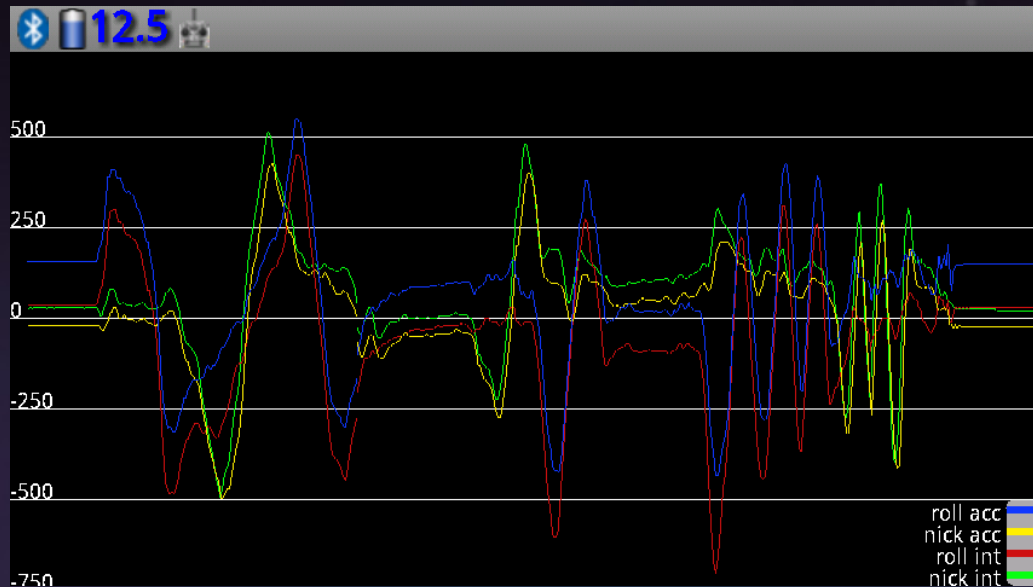


some mounts



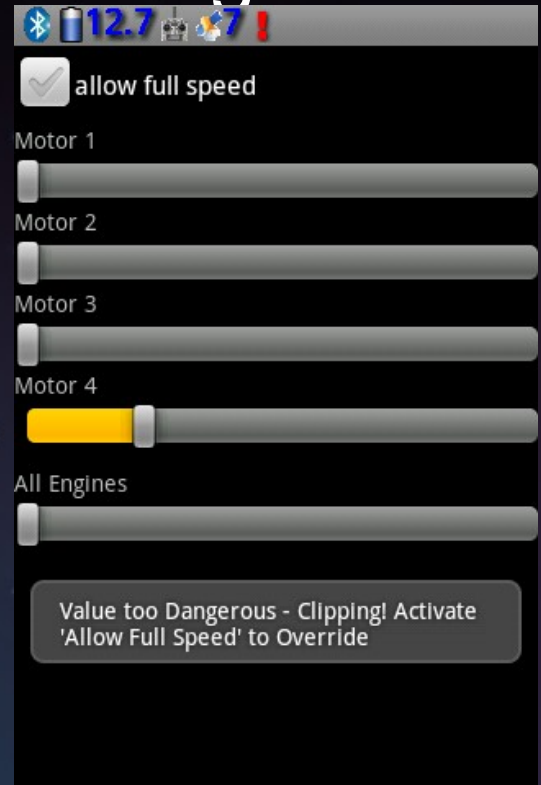
features (J2ME&Android)

- tts with important values like voltage, altitude, warnings, ...
- draw graph with sensor data



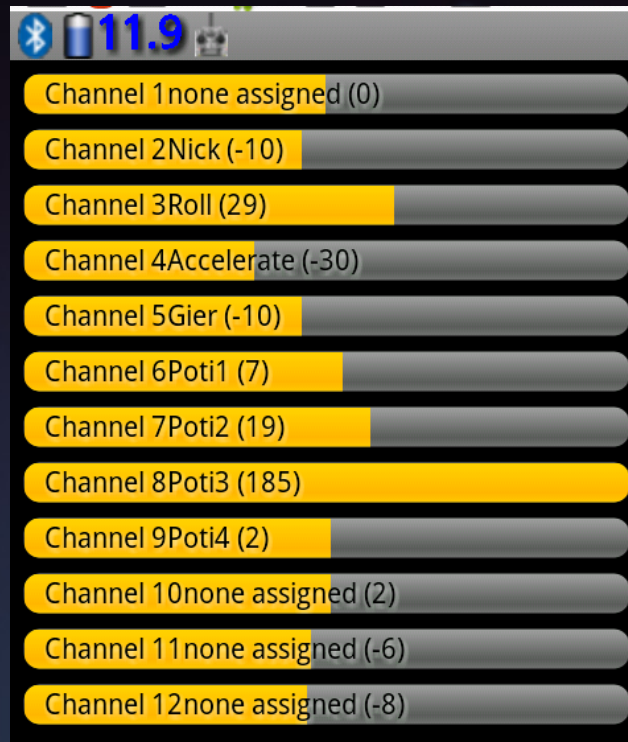
features (J2ME&Android)

- flight settings / mixer settings
- proxy function
- motortest
- LCD



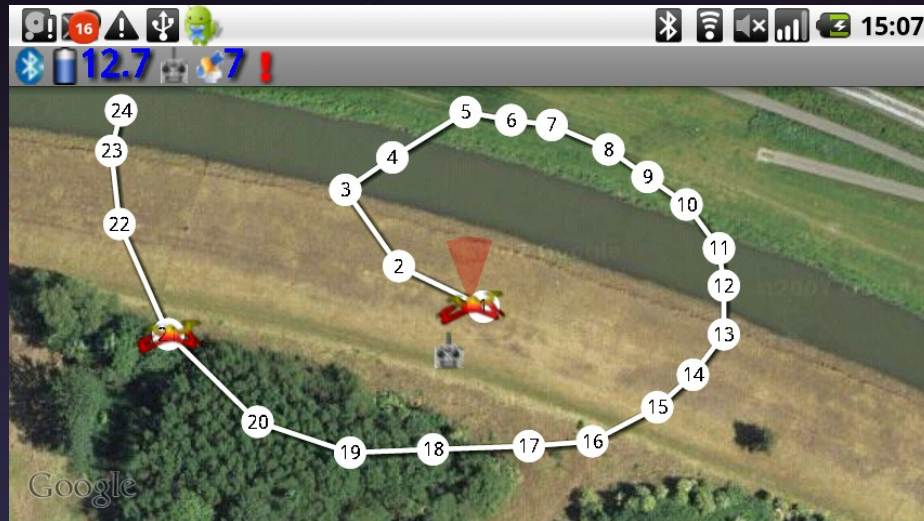
features (J2ME&Android)

- Display Data (debug, RC, ..)
- Cockpit-Screen with artificial horizon



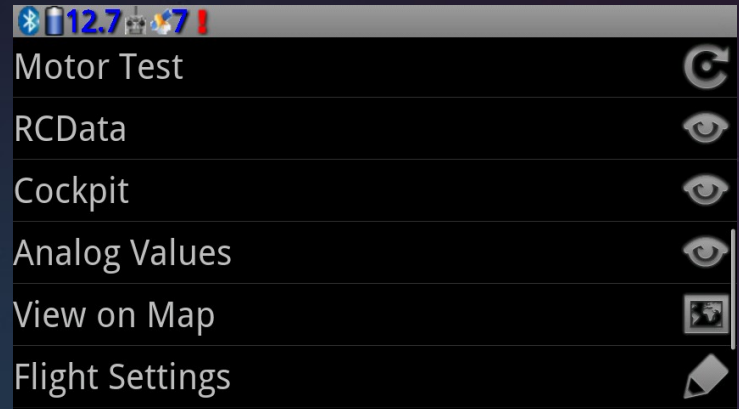
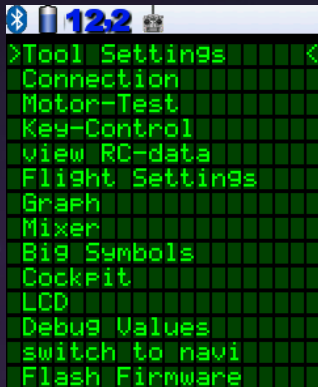
features (Android only)

- BlackBox (telemetry to SD-Card)
- see position and heading on Map
- draw/upload to ufo/save/load waypoints



History (J2ME>Android)

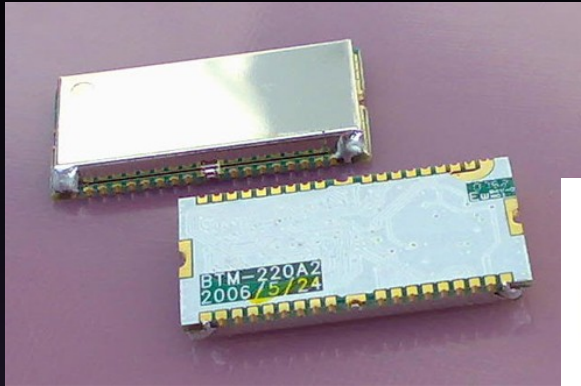
- j2me version started 2007
- android version started 2009 (after BT-API became available with android 2.0)
- reuse the whole protocol code
- completely rebuild UserInterface



Android vs. J2ME

- deployment: 1 apk (<200kb) v.s. 3456 jars (>3GB)
- great, powerfull map api on android v.s. no good one on j2me
- fast on device testing via adb vs. big big pain
- more java goodness/syntax-sugar on android

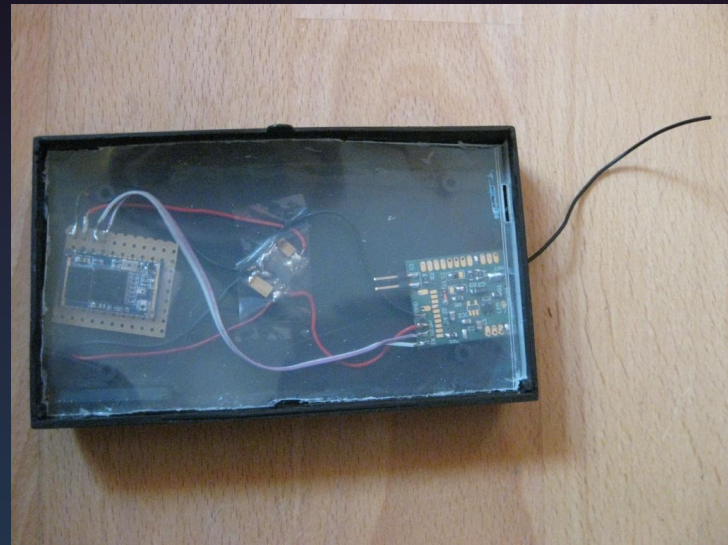
Bluetooth on Android



- Problem with missing SDP on clients (please star issue #5427)
- sometimes you need reflection ...
- JSR-82 with btssp:// url's was better
- no bluetooth in the android-emulator

misc

- 'opensource' but special license (CC with no violent use clause)
- tracedroid - now obsolete with froyo
- range extending bluetooth via wi.232
- mobile multimeter



stats



[DUBwise](#) v0.84
Applications: Tools

(23) ★★★★★

981 total
202 active installs (20%)

Free

[Errors \(2\)](#)

✓ Published



[gobandroid](#) v0.48
Games: Brain & Puzzle

(140) ★★★★★

5370 total
2030 active installs (37%)

Free

[Errors](#)

✓ Published

Aktivste Themen

1	Stammtisch Rhein-Sieg-Kreis	1688
2	MK-Fliegen im Frankfurter Raum	1629
3	MK Handy Software DUBwise	1468
4	EPI-OSD	1336
5	Code Redesign by killagreg	1259
6	Q4-AHM-X8 / Y6	1177
7	Umbau von Standard-BI-Stellern auf I2C-Ansteuerung	1040
8	Bedarfsabklärung FatShark RCV922	1022
9	MK-Fliegen im Münchner Raum [Dauerthread]	893
10	FlightCtrl und MLX90609-R2 Gyro	797

Meist gesehendes Thema

1	Umbau von Standard-BI-Stellern auf I2C-Ansteuerung	159674
2	Q4-AHM-X8 / Y6	126445
3	Code Redesign by killagreg	114867
4	MK Handy Software DUBwise	112976
5	EPI-OSD	103085
6	C-OSD - Die open-source Software fuers EPI-OSD / EPI-Strom	86218
7	GPS, ...es ist vollbracht... -->> V0.67g incl. GPS -->> V0.68d incl. GPS	79133
8	Das große C hat nen kompletten im Programm	78293
9	Navi-Ctrl: Stand	76958
10	FlightCtrl und MLX90609-R2 Gyro	75823

Android Resume

- I like intents
- emu is slow - but testing directly on device works like charm
- contact users on the market
- Beta/Test support on market
- eclipse plugin could be improved
- adb is great (adb over tcp would be even greater)
- Android is the future because it is open

Links / Contact

- <http://ligi.de> (Blog)
- ligi@ligi.de (email)
- [@mr_ligi](#) (twitter)
- <http://github.com/ligi> (code)
- <http://www.mikrokoetter.de/ucwiki/en/DUBwise> (project wiki-page)

License



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