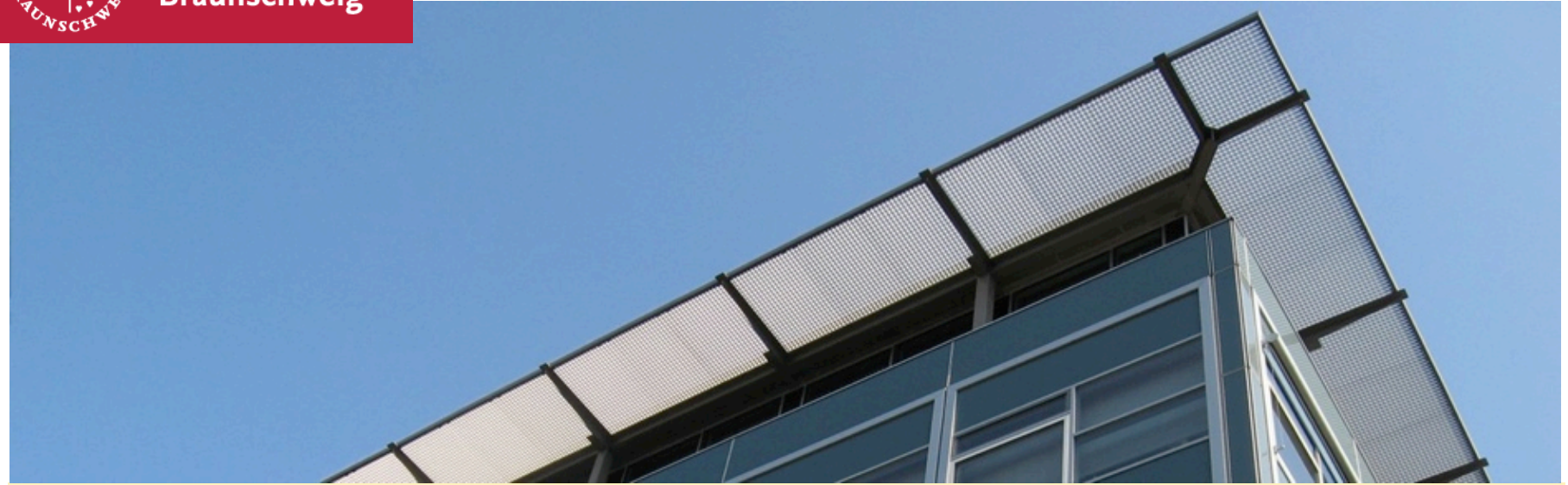




Technische  
Universität  
Braunschweig

Institut für Betriebssysteme  
und Rechnerverbund



## Android Labor #8

ALL OF 7

Sebastian Schildt, Björn Gernert

KickOff 23.10.2014

# Evolution



# Android Lab

- Learning by Doing
- You are expected to learn about the Mobile Platform by yourself and realize a complete software project from plan to finished App
- Regular meetings
- „Soft-Skills“: Present the results of your project



# Team

## Advisors:

Sebastian Schildt [schildt@ibr.cs.tu-bs.de](mailto:schildt@ibr.cs.tu-bs.de)

Björn Gernert [gernert@ibr.cs.tu-bs.de](mailto:gernert@ibr.cs.tu-bs.de)

## Responsible:

Prof. Dr.-Ing. Lars Wolf [wolf@ibr.cs.tu-bs.de](mailto:wolf@ibr.cs.tu-bs.de)

## Mailing List / Website

After today we will set up an mailing list. This will be used for organization purposes and is also open for discussion between participants.

On the website

<http://www.ibr.cs.tu-bs.de/courses/ws1415/Inm/index.html>

You will find current appointments and other information

# Semester Plan



- **First:** Definition of your project -> 3-Sheet-Paper (3-SP)
- **Then:** Learn, Work, Regular meetings
- **Finally:** Final presentation

# 3-Sheet-Paper

## Defines your project

Contract between contractor (you) und employer (us)

Project-Title

Project Team  
Names & Contact

Motivation, Problem  
Description

Place, Date

Signatures      Signature  
Project Team    Android-Lab

Cover Page

1. Goals
2. Requirements
3. Approach

Page 1

4. Project plan with  
Milestones
5. Possible  
problems and  
countermeasures

Page2

## 3-SP: Goal

### How much to promise?

- If you promise to little, you will not get the “job”.
- Do not promise too much: We will also evaluate against the degree of fulfillment of your 3-SP
  - If you can not fulfill a contract, you risk contract penalties...
  - ...unless you build airports in Berlin or belong to the energy or automotive industry...



### Needed Effort or Feasibility unclear?

- The section “problems and countermeasures” allows you to point out possible problems preemptively and plan for alternatives
  - “Maybe the current generation of Smartphone is not fast enough to carry out the calculation of Algorithm X in a reasonable time. In this case calculations will be deferred to a backend server”
  - “If company X will not grant access to the needed data, we can compensate this by doing an estimation based on source Y”

# „Outer“ Project Management

- Every team chooses a ***team leader***. This person is responsible for communication with us
- Every team uses the first week of the lab to create an 3-SP
- Every team will manage its source in a Github repository<sup>1</sup> (<https://github.com> )

<sup>1</sup> If you have a private Github repo, you need to give us (read) access

# Required Attendance

- Regular, weekly meetings for progress reporting  
Every week at least one member of each team needs to be physically present  
→ Dates: see webpage
- One required project review in December  
Everybody is required to attend
- At the end of the semester we will have the final presentations  
Everybody is required to attend

# „Inner“ Project Management

How you organize work within your group is up to you! We grade based on results.

**Use what you have learned during your studies so far.**

## Projects- What to Do?

You can define your own project for the term. However, you need to meet these requirements:

- Networking needs to be an integral part of your project  
(for example Multicast WLAN WalkieTalkie or a Game with Multiplayer Support on several devices: Yay!  
Single Player Game, which allows you to twitter your Highscore: *LAME!*)
- Not too simple -> We decide

Choose you destiny: **Multiplattform!!**

Free Choice of OS, as long as it is supported by one of the available Hardware Plattformen



Firefox OS



# Available Hardware



2012 Nexus 7

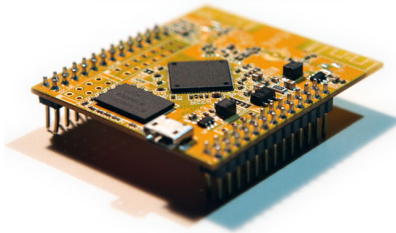
We provide at least 2 devices per group  
With your 3-SP specify which devices you need  
We will allocate based on supply, demand & arbitrariness



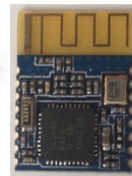
Nexus 10



Sony Smartwatch 2



WRNode (Embedded Linux node)

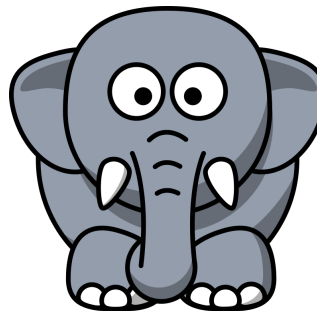


HM-11 Bluetooth LE Module



Nexus 5

# Groups



## Project idea: Babyphone 2.0

### Felix needs a Babyphone soon

- 2 Android Devices
- Transmission via Wi-Fi if available, else
  - W-iFi Direct
  - Bluetooth (LE?)
  - When no broadband channel available, maybe notification via SMS



[buesch@ibr.cs.tu-bs.de](mailto:buesch@ibr.cs.tu-bs.de)



# Project idea: Braunschweig Aktionsjahr Medien



- Entwicklung einer App zum “Aktionsjahr Medien”
- Anlehnung and “Qizduell”
- In Zusammenarbeit mit der Stadt Braunschweig, Fachbereich Kinder, Jugend und Familie
- Wir können Kontakt herstellen



## Registering for Exam: Yes/No/How?

This can not be answered easily!

This course can be taken (at least) by Inf, Winf, IST and ITIS students.

It is a M.Sc. course, but you can import it into your B.Sc., depending on your PO.

Depending on your situation you might or might not need to register.

The “official” name for this course is either **”Networking und Multimedia Lab”** or **”Mobile Computing Lab”**

Course numbers: INF-KM-023, INF-KM-020

Part of Modules: ET-STD1-22, ET-STD1-10, ET-STD-09, INF-KM-27, ET-STD1-11, INF-KM-11, ET-STD1-01, INF-KM-19, ET-STD1-12

CS students can participate

During the exam registration phase you need to register for this course!  
As this is a M.Sc. module, only master students can register online.

BSc students can “import” the module into their Bachelor using this form

[https://www.tu-braunschweig.de/Medien-DB/fk1/import\\_von\\_masterpruefungen\\_in\\_den\\_bachelorstudiengang.pdf](https://www.tu-braunschweig.de/Medien-DB/fk1/import_von_masterpruefungen_in_den_bachelorstudiengang.pdf)

**or** they can already take this module to use it later for their MSc studies:

[https://www.tu-braunschweig.de/Medien-DB/fk1/zusatzpruefungen\\_allgemein.pdf](https://www.tu-braunschweig.de/Medien-DB/fk1/zusatzpruefungen_allgemein.pdf)

In this case when applying during the registration week (§ 19 APO), you need to bring the appropriate filled form.

CS students will be graded.

In case of questions, contact Rebecca Weidner [r.weidner@tu-bs.de](mailto:r.weidner@tu-bs.de)

# WInfo

WInfo students can participate

Maybe not graded?

In case of questions, [pa-wi@tu-braunschweig.de](mailto:pa-wi@tu-braunschweig.de)

# IST

IST students can participate

IST students can pass or fail  
(but we give a grade anyway)

In case of questions, *maybe* [annika.wilke@tu-bs.de](mailto:annika.wilke@tu-bs.de)

ITIS students can participate

In ITIS-Module is called “Networking und Multimedia Lab” and has the number 3071.

[http://www.itis-graduateschool.de/web/content/lectures-and-modules?view=all\\_lectures](http://www.itis-graduateschool.de/web/content/lectures-and-modules?view=all_lectures)

During the exam registration phase you need to register for this course.

ITIS students will be graded.

In case of questions, contact Madlen Karasch

[Madlen.Karasch@zuv.uni-hannover.de](mailto:Madlen.Karasch@zuv.uni-hannover.de)

## Next dates

Date	Time	What
23.10.2014	14:00-	KickOff: Overview and Groups
29.10.2014	DEADLINE	Deadline, first version of 3-SP to <a href="mailto:mcl@ibr.cs.tu-bs.de">mcl@ibr.cs.tu-bs.de</a>