TECHNISCHE UNIVERSITÄT DRESDEN

Department of Computer Science Institute for System Architecture, Chair for Computer Networks

Application Development for Mobile and Ubiquitous Computing

Seminar Task
Final Presentation

GroupNo. 09
Team: Stephan Dinter / Julian Catoni

Content

shout

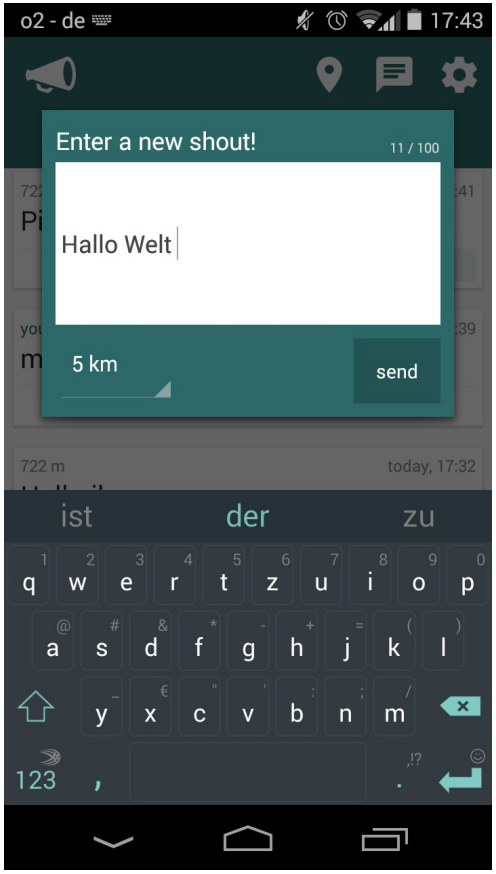
- some kind of anonymous Twitter based on locations
- for Android >= 4.0
- server based on PHP and MySQL
- communication via HTTP/REST and JSON

1. Application prototype / client

- reading shouts
  - listed shouts depend on reader's location
  - possibility to answer a shout via private message
  - report/unreport shouts

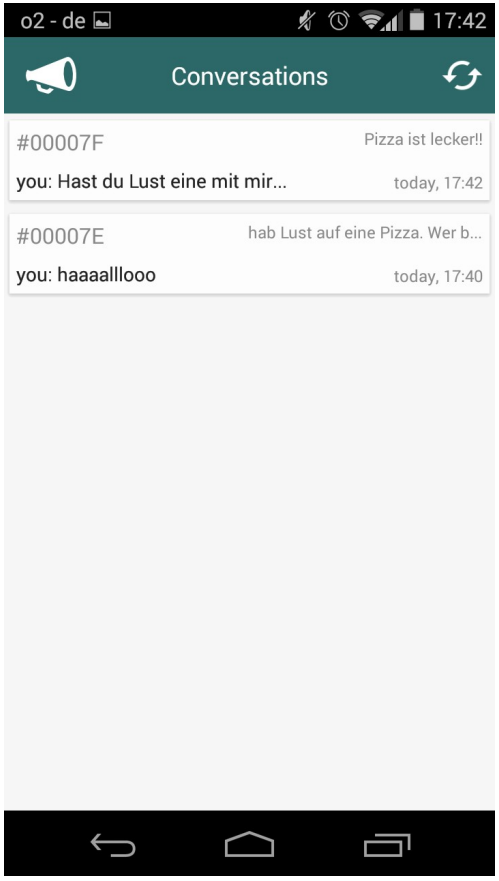
1. Application prototype / client

- writing shouts
  - different fixed ranges → 5, 50, 500, ∞
  - limited shouts per user per day
  - shout length limited to 100 chars

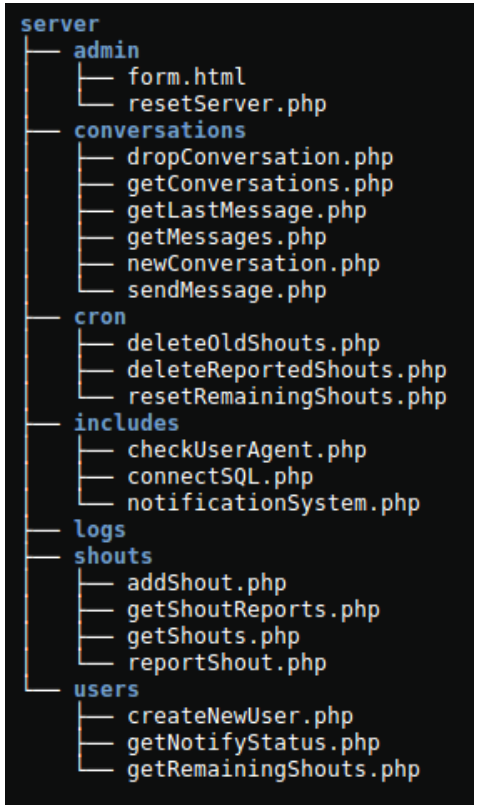


1. Application prototype / client

- private conversations
  - anonymous
  - can be canceled by each participant
  - notifications for new messages
  - if canceled, no restart possible

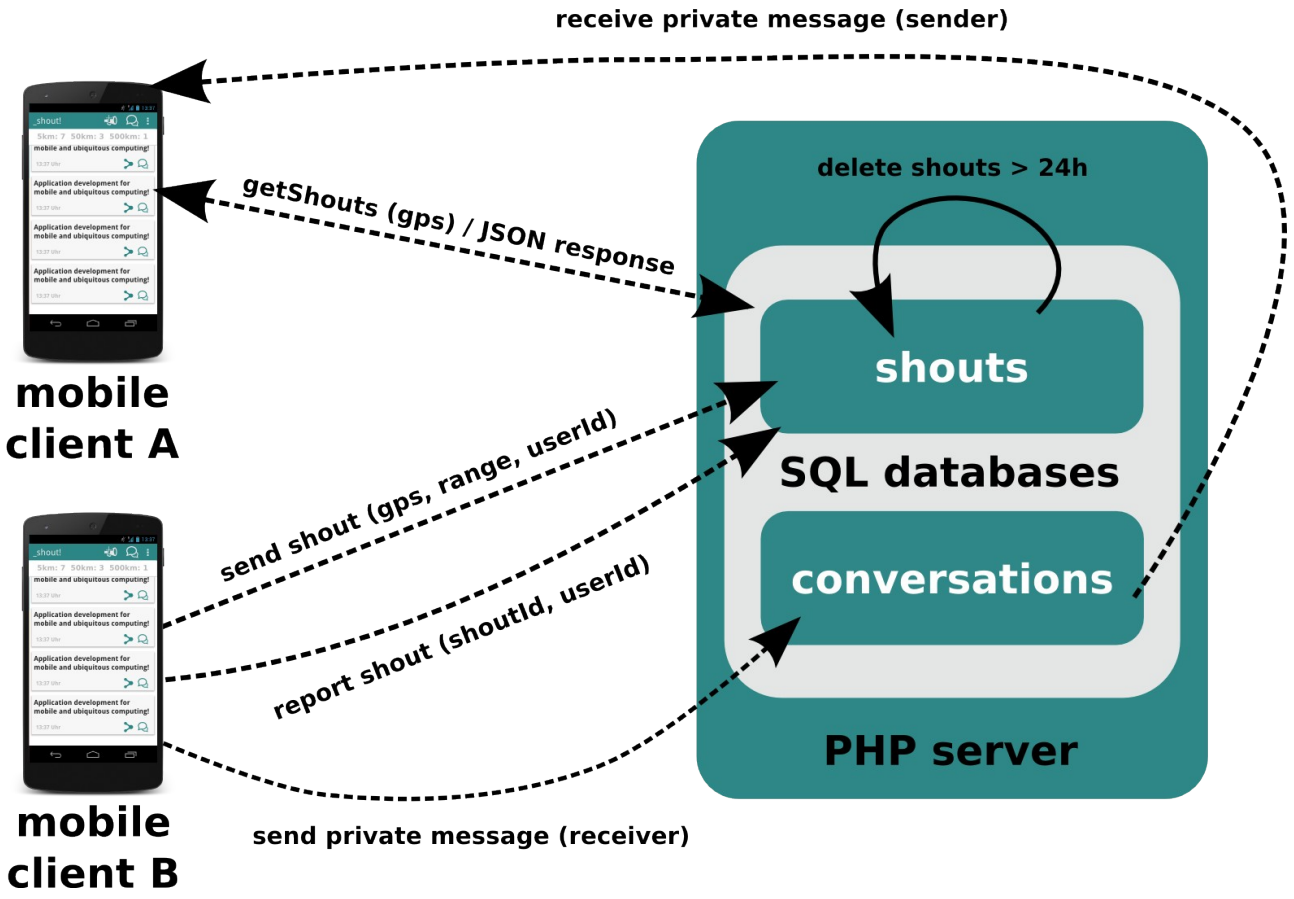


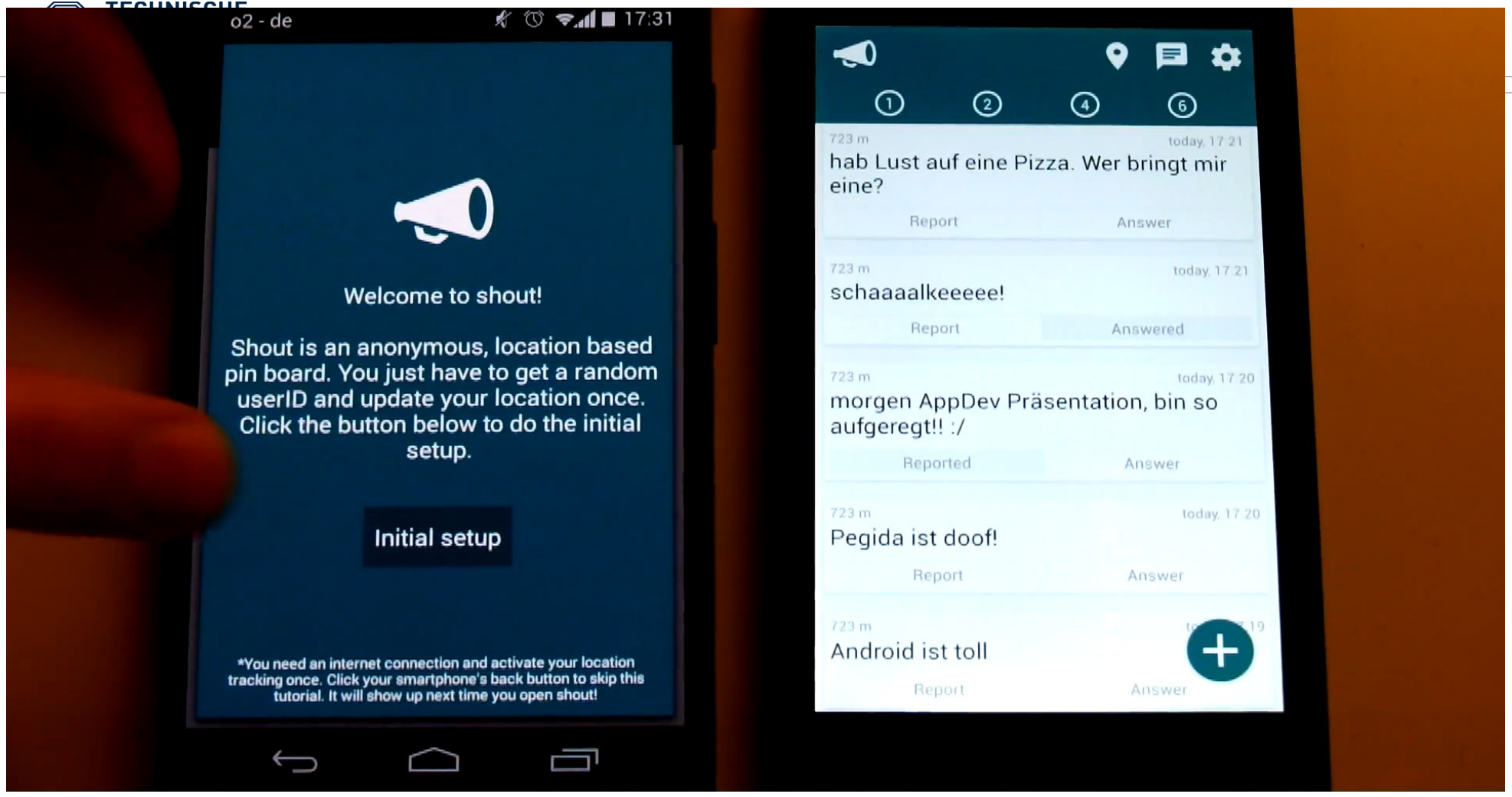
1. Application prototype / server



- uses PHP 5.6.3, MySQL 5.6.22
- php scripts recieving requests
- returns JSON
- cronjobs for
  - deletion of shouts older 24h/reports > 5
  - resetting of available shouts per user
- MySQL tables for
  - shouts, users, activeConversations, reports
- additional database for conversations

2. Architecture




o2 - de
17:31
Welcome to shout!
Shout is an anonymous, location based pin board. You just have to get a random userID and update your location once. Click the button below to do the initial setup.
Initial setup
*You need an internet connection and activate your location tracking once. Click your smartphone's back button to skip this tutorial. It will show up next time you open shout!
1
2
4
6
723 m
today, 17:21
hab Lust auf eine Pizza. Wer bringt mir eine?
Report
Answer
723 m
today, 17:21
schaaaalkeeeee!
Report
Answered
723 m
today, 17:20
morgen AppDev Präsentation, bin so aufgeregt!! :/
Reported
Answer
723 m
today, 17:20
Pegida ist doof!
Report
Answer
723 m
Android ist toll
Report
Answer

4. Issues of mobile computing

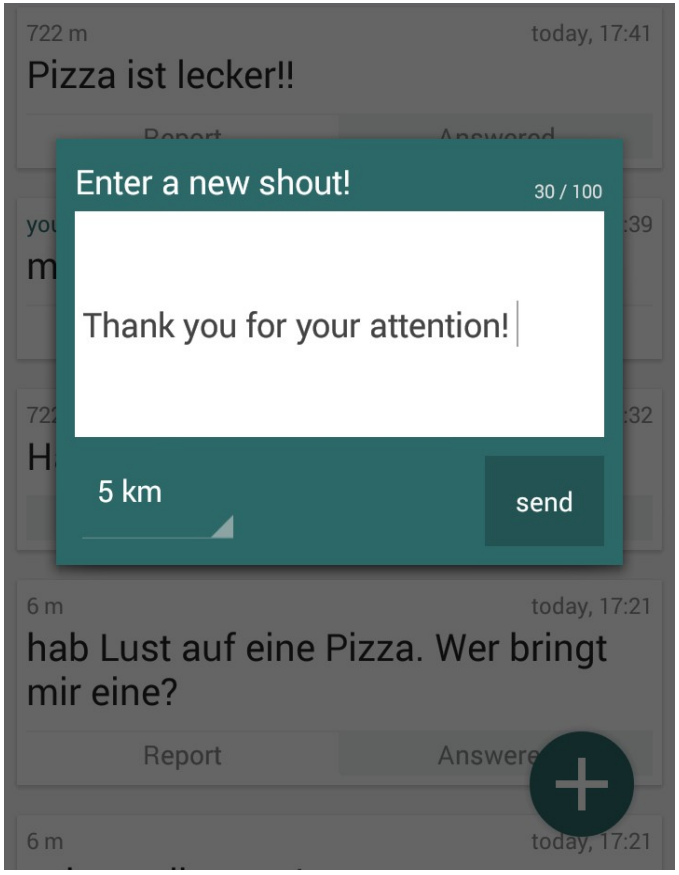
- offline challenge
  - downloaded shouts stored on device
- usability challenge
  - clear and structered user interface
  - use of of android specific gestures / controls
  - tutorial
- connectivity challenge
  - reduce amount of sent data to minimum
  - check if there is a internet connection (fast enough)
- location data
  - GPS dependend on surrounding/weather
  - additional network based tracking (using WiFi,GSM...)

5. Conclusion

- awareness of mobile computing challenges
- many opportunities to adapt to the user

5. Conclusion

- experiences and pitfalls
  - debugging of client-server-architecture sometimes exhausting (especially on server side)
  - encoding issues (MySQL ↔ PHP)
  - implementation of server-client communication generally not as hard as expected
  - team work and division of work was awesome
  - git is your friend


722 m
today, 17:41
Pizza ist lecker!!
Enter a new shout!
30 / 100
Thank you for your attention!
5 km
send
6 m
today, 17:21
hab Lust auf eine Pizza. Wer bringt mir eine?
Report
6 m
today, 17:21