TECHNISCHE UNIVERSITÄT DRESDEN

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

Application Development for Mobile and Ubiquitous Computing

Seminar Task
First Presentation

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- Application scenario
- System architecture
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Application Scenario

- A traveller, with/without visit plans, just arrives a new place.
- Real-time local information (weather, trends, news, flight and trains etc) can be obtained.
- Based on that new plan can be made or old plan can be adapted.
- Without Internet connection, alerts in the high security situation (serious attack or natural disaster etc) will be sent by SMS.

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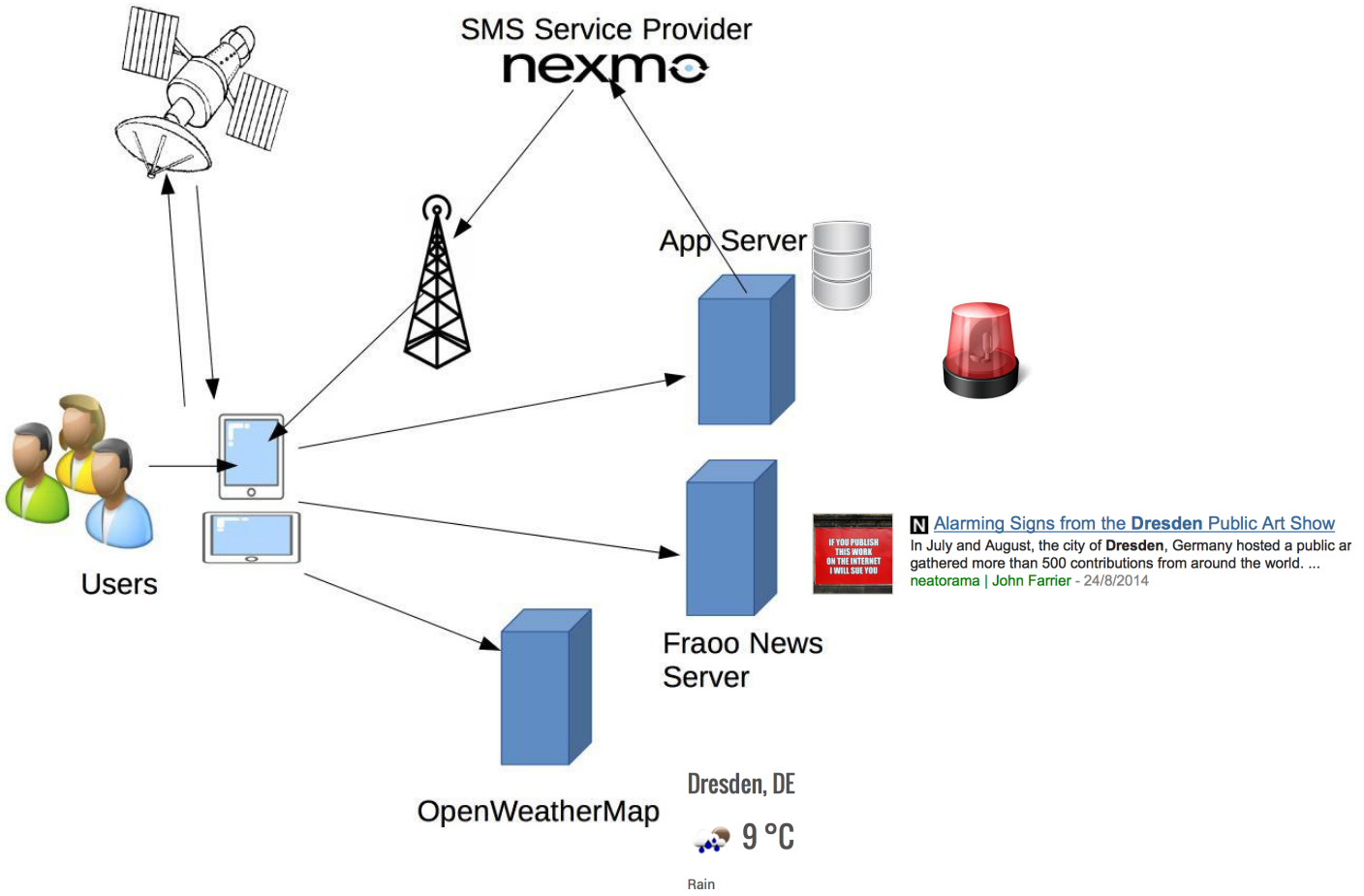
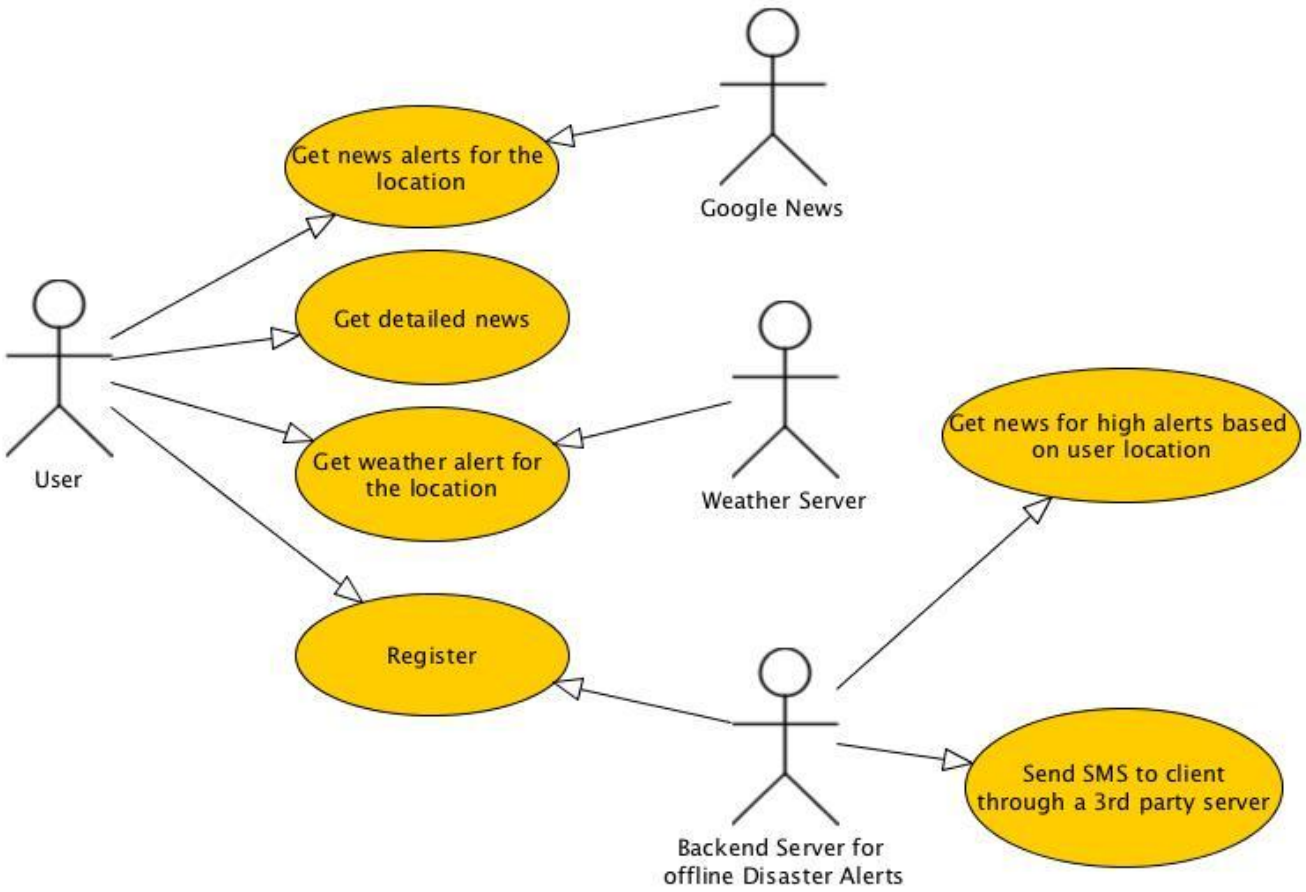
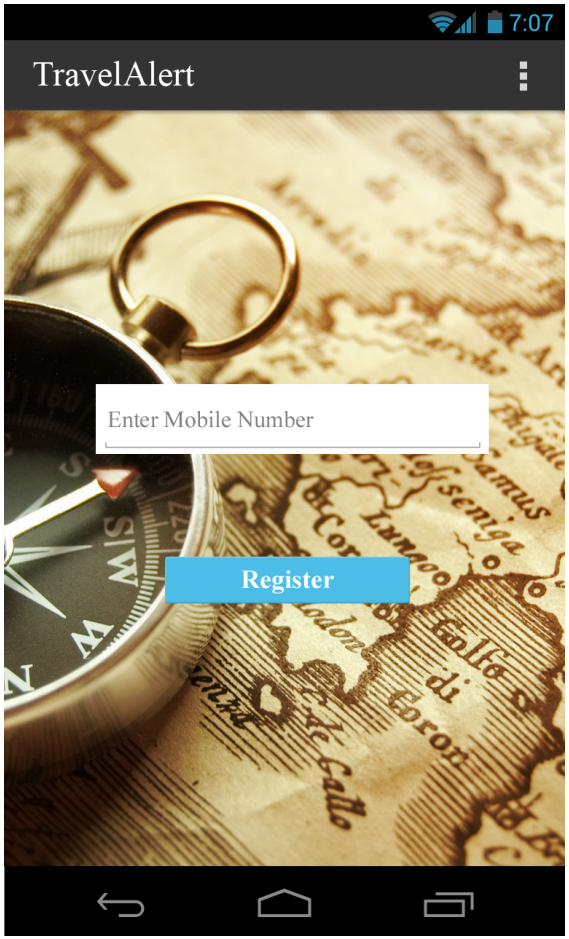
System Architecture

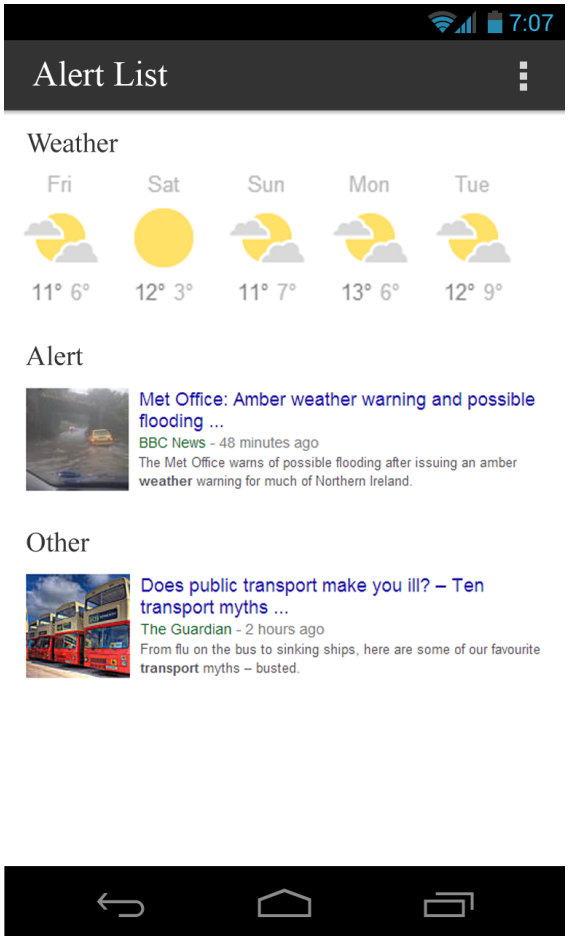


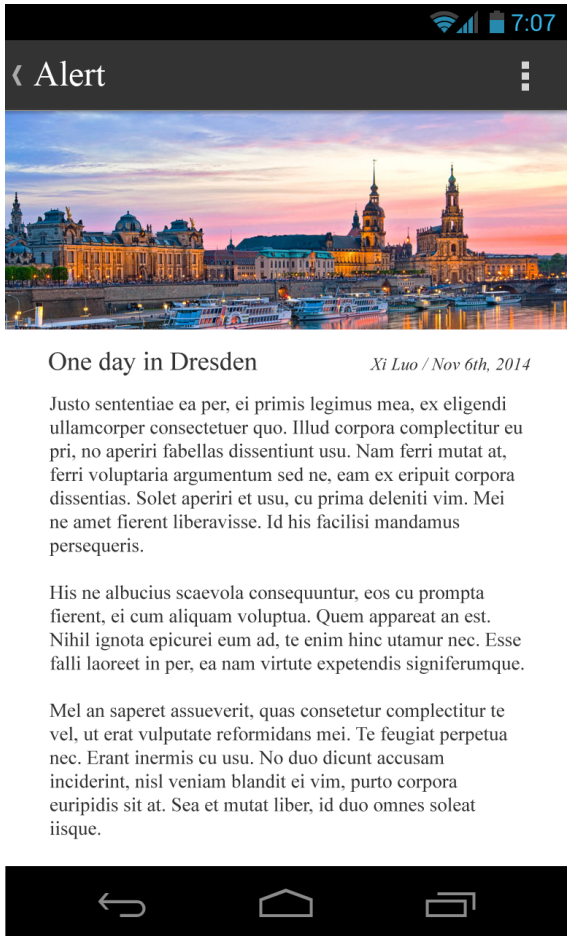
Use Cases


Get news alerts for the location
Google News
Get detailed news
User
Get weather alert for the location
Weather Server
Get news for high alerts based on user location
Register
Backend Server for offline Disaster Alerts
Send SMS to client through a 3rd party server

Mockup


7:07
TravelAlert
Enter Mobile Number
Register


7:07
Alert List
Weather
Fri Sat Sun Mon Tue
11° 6° 12° 3° 11° 7° 13° 6° 12° 9°
Alert
Met Office: Amber weather warning and possible flooding ...
BBC News - 48 minutes ago
The Met Office warns of possible flooding after issuing an amber weather warning for much of Northern Ireland.
Other
Does public transport make you ill? – Ten transport myths ...
The Guardian - 2 hours ago
From flu on the bus to sinking ships, here are some of our favourite transport myths – busted.


7:07
Alert
One day in Dresden
Xi Luo / Nov 6th, 2014
Justo sententiae ea per, ei primis legimus mea, ex eligendi ullamcorper consectetuer quo. Illud corpora complectitur eu pri, no aperiri fabellas dissentiunt usu. Nam ferri mutat at, ferri voluptaria argumentum sed ne, eam ex eripuit corpora dissentias. Solet aperiri et usu, cu prima deleniti vim. Mei ne amet fierent liberavisse. Id his facilisi mandamus persequeris.
His ne albucius scaevola consequuntur, eos cu prompta fierent, ei cum aliquam voluptua. Quem appareat an est. Nihil ignota epicurei eum ad, te enim hinc utamur nec. Esse falli laoreet in per, ea nam virtute expetendis signiferumque.
Mel an saperet assueverit, quas consetetur complectitur te vel, ut erat vulputate reformidans mei. Te feugiat perpetua nec. Erant inermis cu usu. No duo dicunt accusam inciderint, nisl veniam blandit ei vim, purto corpora euripidis sit at. Sea et mutat liber, id duo omnes soleat iisque.

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Technologies

- **Client side**

  Android platform will be used as it has wide user base and more stable environment for mobile applications. Also the APIs required for application development are readily available.

- **Server side**

  App servers running providing web services for user registration. The app server uses a database to store user specific information.

  App server uses external sms services providers for sending sms in user offline mode and high alert situations.

Challenges

- **Client side**
  - Understand and use Android SDK.
  - Fetches news from News Server, with minimal usage of network as user is travelling and is under roaming charges.

- **Server side**
  - High availability of the alerting services.
  - Providing reliable services.

Work Plan

- **Mobile application development**
  - Understand Android SDK.
  - Develop user interface.
  - Set up mobile application to access various web service for weather, news etc.

- **Web server development**
  - Development of web service for user registrations and monitoring of the user online/offline.
  - Setting up the SMS gateway for high alert situation.

Thank You!

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Questions?