TAMPERE UNIVERSITY OF TECHNOLOGY

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Towards the Utilization of Crowdsourcing in Traffic Condition Reporting

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Motivation

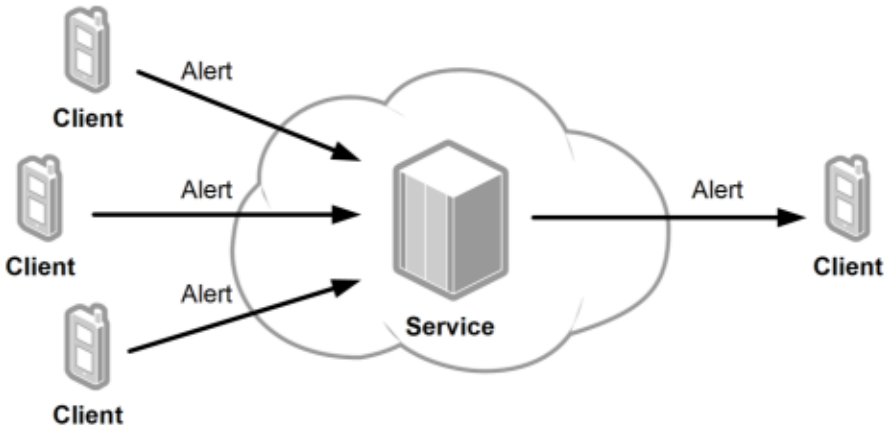
- Automatic traffic event detection can be challenging
- Events can be easily detected by humans
- Current services offer only limited communication methods for users
- Initiative for studies from a project corporate partner

Goals

- Possibility to use the service while driving
- Crowdsourced traffic event collection
- Research focus on easy to use user interface development

Architecture and System

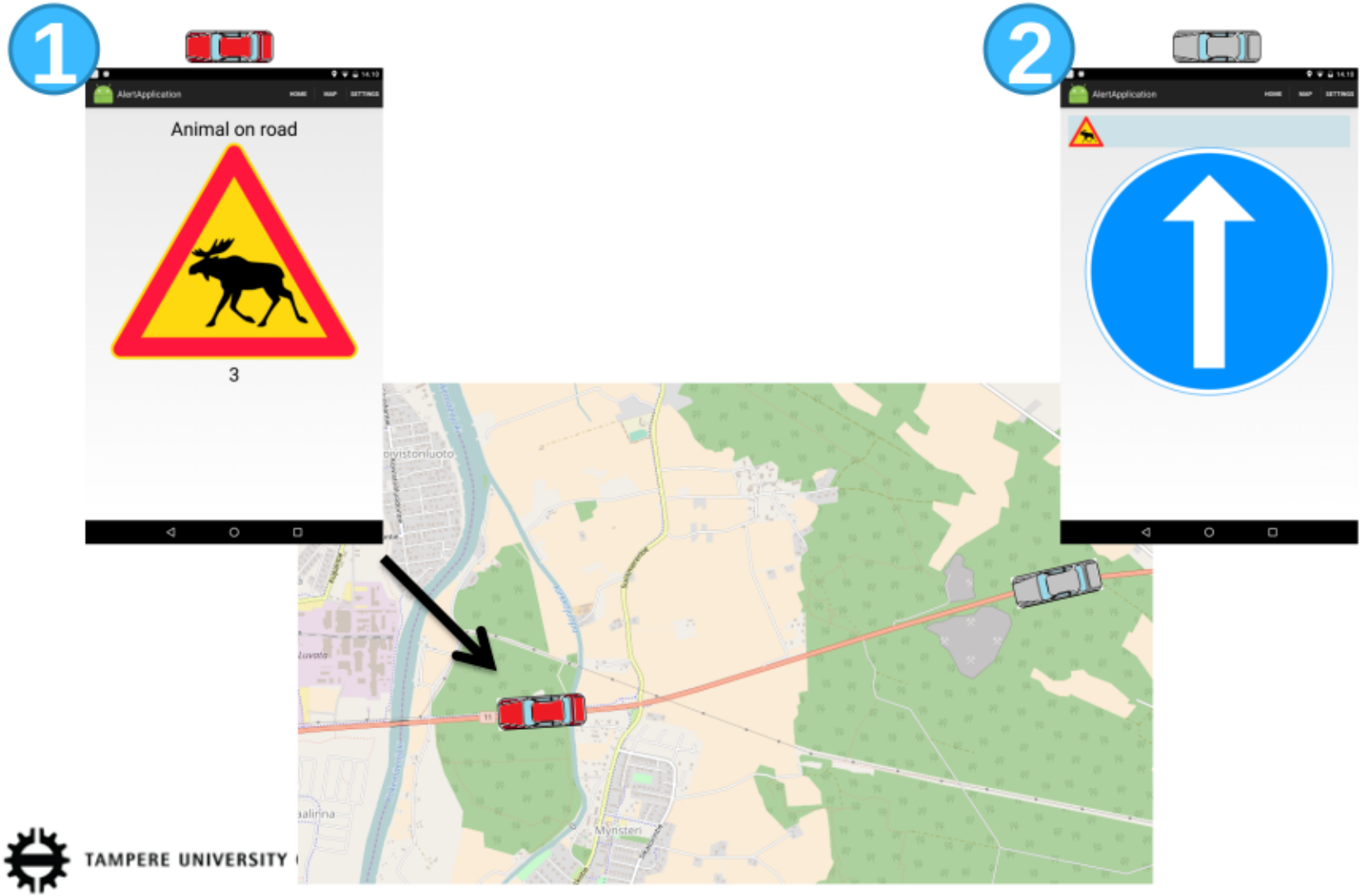
- Utilizes commonly used open source components
- REST APIs
- Support for user and alert groups
- Alert customization



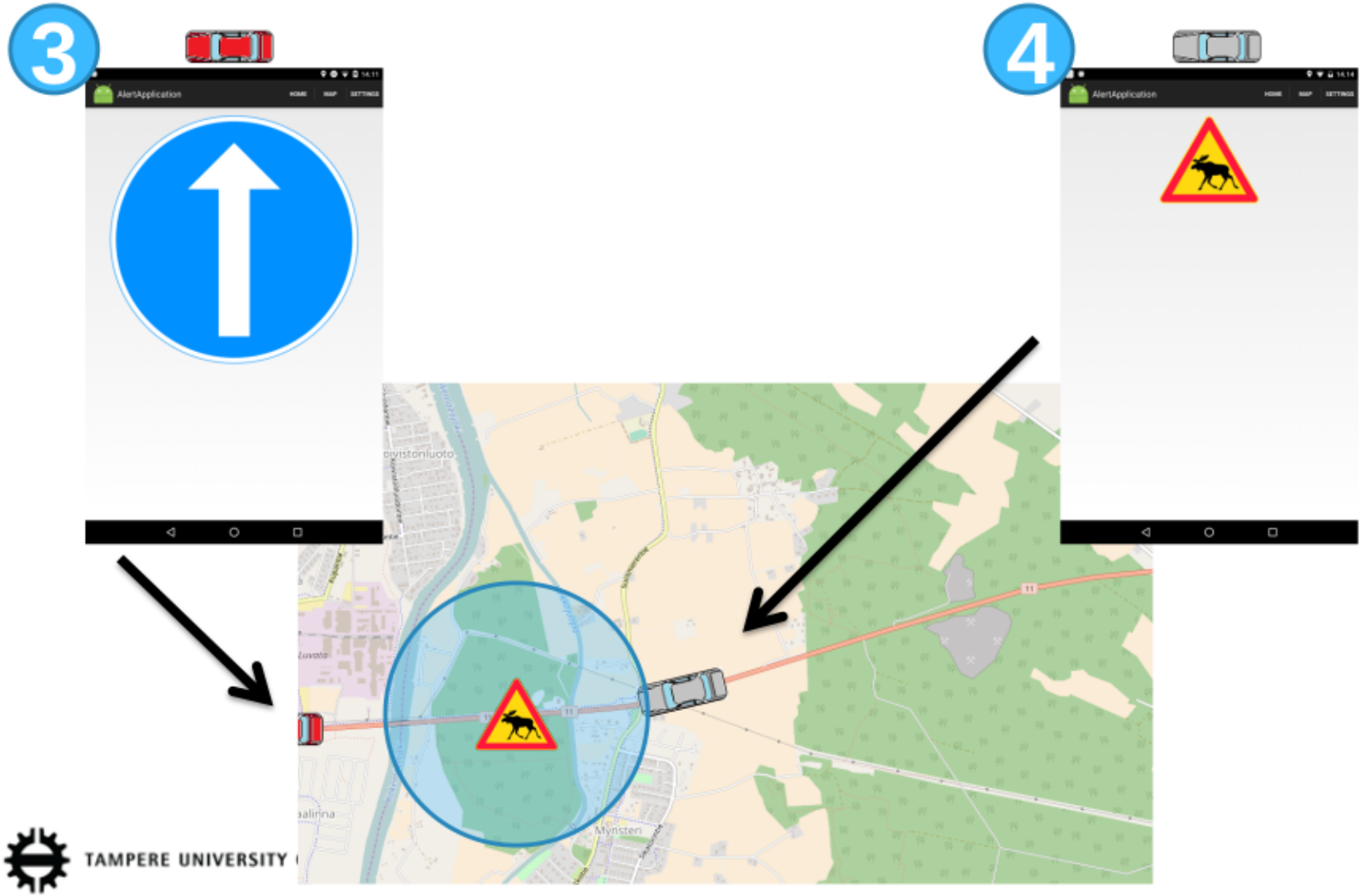
Prototype Application

- For mobile devices
- Primary use case: Driving a car
  - Minimize driver distraction
- Features
  - Report alert
  - Alert notification

Prototype Application
Use Case (1/2)

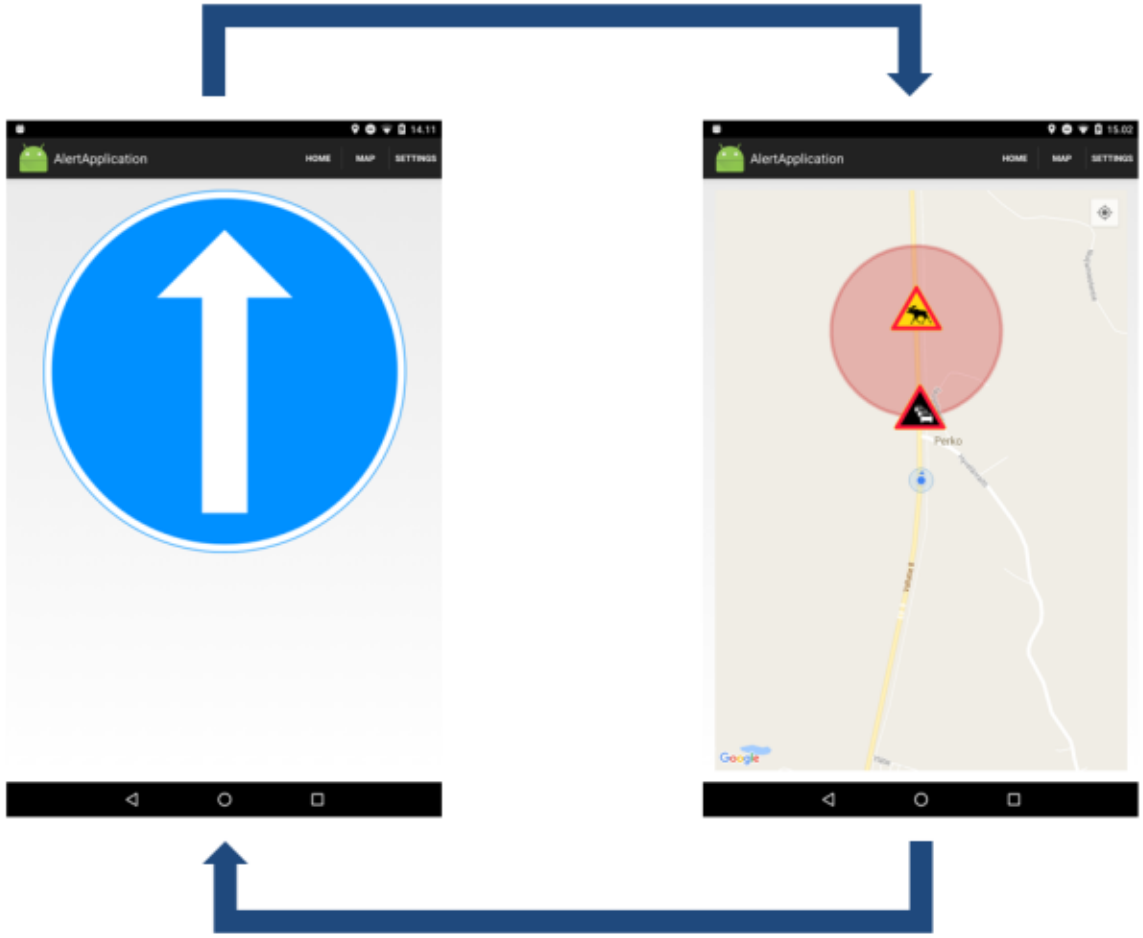


Prototype Application
Use Case (2/2)



Prototype Application
Alert Reporting

Prototype Application
Alert Notification



Challenges

- Evaluation with large user base can be problematic
- Alert validation
- Balancing UI attractiveness vs. traffic safety aspects (guidelines)
- Access to in-car systems restricted or limited

Summary

- Introduced an architecture for collecting and sharing traffic events
- Presented prototype application and user interface for reporting alerts and receiving alert notifications

Thank You!