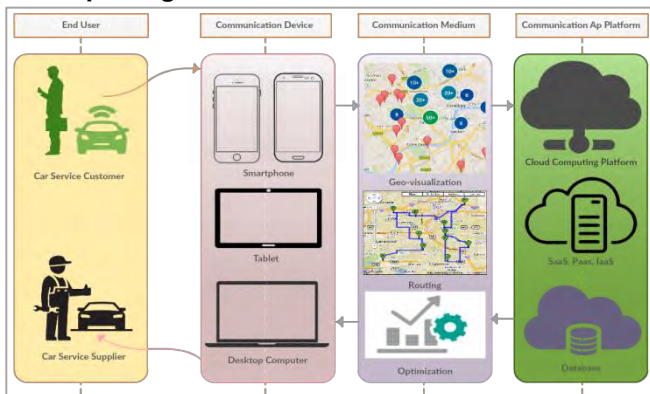


Realization of Geo-visualization, Routing and Optimization Methods in a Web-Application for Car Service Management

Abstract: This research presents a concept to simplify the communication and management system between customers and suppliers for delivering Car Related Services. There are different possibilities for simplifying the service delivery process in an automobile industry, including geo-information technology, for example geo-visualization, routing, and time, effort and cost optimization. Therefore, the goal of this research is to develop, design a solution for a cloud-based communication and management system, followed by the implementation of a prototype web application. This research has additionally delivered a summary on tools and techniques for geo-visualization, routing and optimization. The developed system furthermore acts like a model, able to be extended to many types of services in other industries.

Key Words: Geo-visualization, Routing, Optimization, Web-Application, Cloud Service, AngularJS, Node.js, Google Map API.

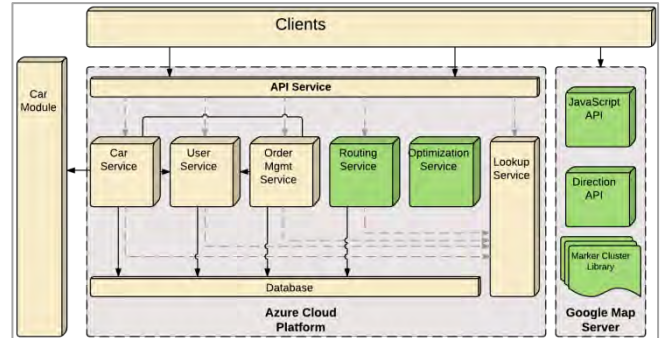
Concept Diagram



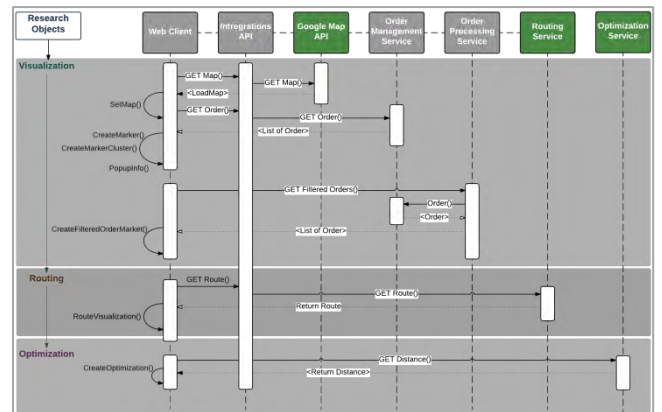
The research has been divided into two parts. The first part provides a theoretical context analysis to improve understanding and develop solutions. The second part utilizes a case study from the industry to assess client requirements, resulting in the implementation of a prototype based on this research. The existing environment from this case study is used research has been applied the industrial projects development ecosystem in the implementation stage, using among others the software and frameworks

Hochschule Karlsruhe – Technik und Wirtschaft
Fakultät IMM • Masters in Geomatics
www.hs-karlsruhe.de
Presented by: Md. Shamimul Islam
E-mail: rubel_ku03@yahoo.com
Supervisor: Prof. Dr.-Ing. Reiner Jäger

HTML5, Bootstrap, AngularJS, Node.js, Google Map API and Cloud Computing Services SaaS and PaaS.



NoSQL database DocumentDB has used, where the data is saving in JSON format. RESTful services has used for data communication.



This research has succeeded in developing and implementing a prototype web application for managing Car Related Services, including a geo-visualization scheme, route calculation scheme and optimization scheme.

