

Virtual Arabia2Go: Mobile Query Interface

Within the Virtual Arabia [1] project, the primary focus lies on the interactive visual exploration of huge data sets from built infrastructure combined with measured information (such as GIS or seismic data) on different scales. Such approaches allow studying complex scenarios in order to gain insight and to easily maintain infrastructure ranging from a single building to an entire metropolis.

This software lab addresses the design and implementation of an Apple iPhone [2] Application (App) as additional querying and input device for the Virtual Arabia system. Based on the user's actual position retrieved via GPS, the Virtual Arabia system is queried for information based on his coordinates. Once processed from the system, this information is transferred to the user in order to be displayed on the iPhone. Such information might vary from simple data such as the IP address of a network port in a room to objects/entities which are close to the user's position.

Furthermore, the App is intended to be used as interface for the Virtual Arabia querying system, which provides a SQL based query interface and offers database-like access to the framework. To keep up with the iPhone's limited computational capabilities and transmission bandwidth, sufficient reduction of the information density has to be considered, as well as efficient methods for memory handling and client/server communication.

Tasks/prerequisites of the project

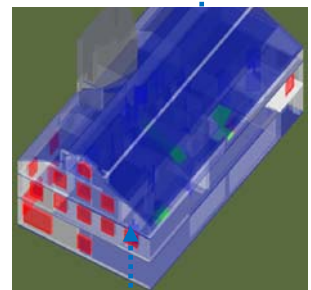
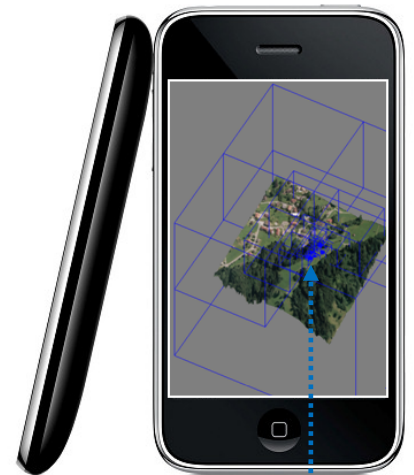
- Objective-C for software development on the iPhone/iPad
- Retrieving GPS data, implementing user dialogues, visualisations, and modifications such as pan, zoom, and rotate
- Implementation of client/server communication

Supervisor

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References

- [1] Virtual Arabia Project MAC@KAUST
http://www.mac.tum.de/wiki/index.php/Project_K2
- [2] Programming the iPhone
<http://developer.apple.com/iphone/>



```

#####
# Name: IfcWindow
# instanceID: #28571
#####
#
# Attributes:
#
# Gesamt_CO2: ? Proxy (LCAWindowPropsQuery) ?
# Gesamt_CO: ? Proxy (LCAWindowPropsQuery) ?
# Gesamt_NOx: ? Proxy (LCAWindowPropsQuery) ?
# Gesamt_SO2: ? Proxy (LCAWindowPropsQuery) ?
# Layer: A_Windows_therm_03
# Farbe: 256
# Linientyp: VONLAYER
# Hyperlink: ByLayer
# Kosten: 0.
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# Number: 38
# Width: 1135.
# Height: 1387.
# Style: Picture - Peaked
#####
  
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