GEOREAL: LOCATION-BASED SERVICES FOR REAL ESTATE AGENTS IN FLORIDA

MARTINA JOISTEN, OLIVER ULLRICH, KATHARINA HOVEN

OBJECTIVES

The objectives of the project are to:

- build a prototype smartphone app aimed at providing real estate agents with custom-tailored, adequate, and useful location-based information

- explore new location-based services for realtors, and, eventually, for other traveling sales personnel

- explore how complex geo-tagged and location based data is optimally presented in a user-friendly mobile interface

- build a cloud-based prototype back-end service connecting real estate agents using the smart-phone application with the TerraFly databases

Method

We apply a user-centered design approach with three iterative stages as described in Rogers et al. (2015). First, we conduct in-depth interviews with realtors in Florida to gather user requirements. Second, we create an interactive prototype running on mobile devices, and third, we test the prototype with realtors.

During the interviews we requested the agents to elaborate on a number of topics, including: desired mobile support for the planning and conducting of showings and follow-ups with clients; information needed to present to different groups of clients during showings; day-to-day work-related usage of mobile phones, apps, and websites; and current trends, desired improvements, and problems when out in the field.

The TerraFly System

The GeoReal mobile app will be based on TerraFly, an online geospatial big-data analysis and visualization system developed by Florida International University's High Performance Database Research Center. The TerraFly system serves worldwide web map requests providing users with customized aerial photography, satellite imagery, and various overlays, such as street names, restaurants, services, and demographic data (Rishe et al. 2005, Zhang et al. 2015).

Spatial data sources in TerraFly include demographic census, real estate, disaster, hydrology, retail, crime, and disease related data.
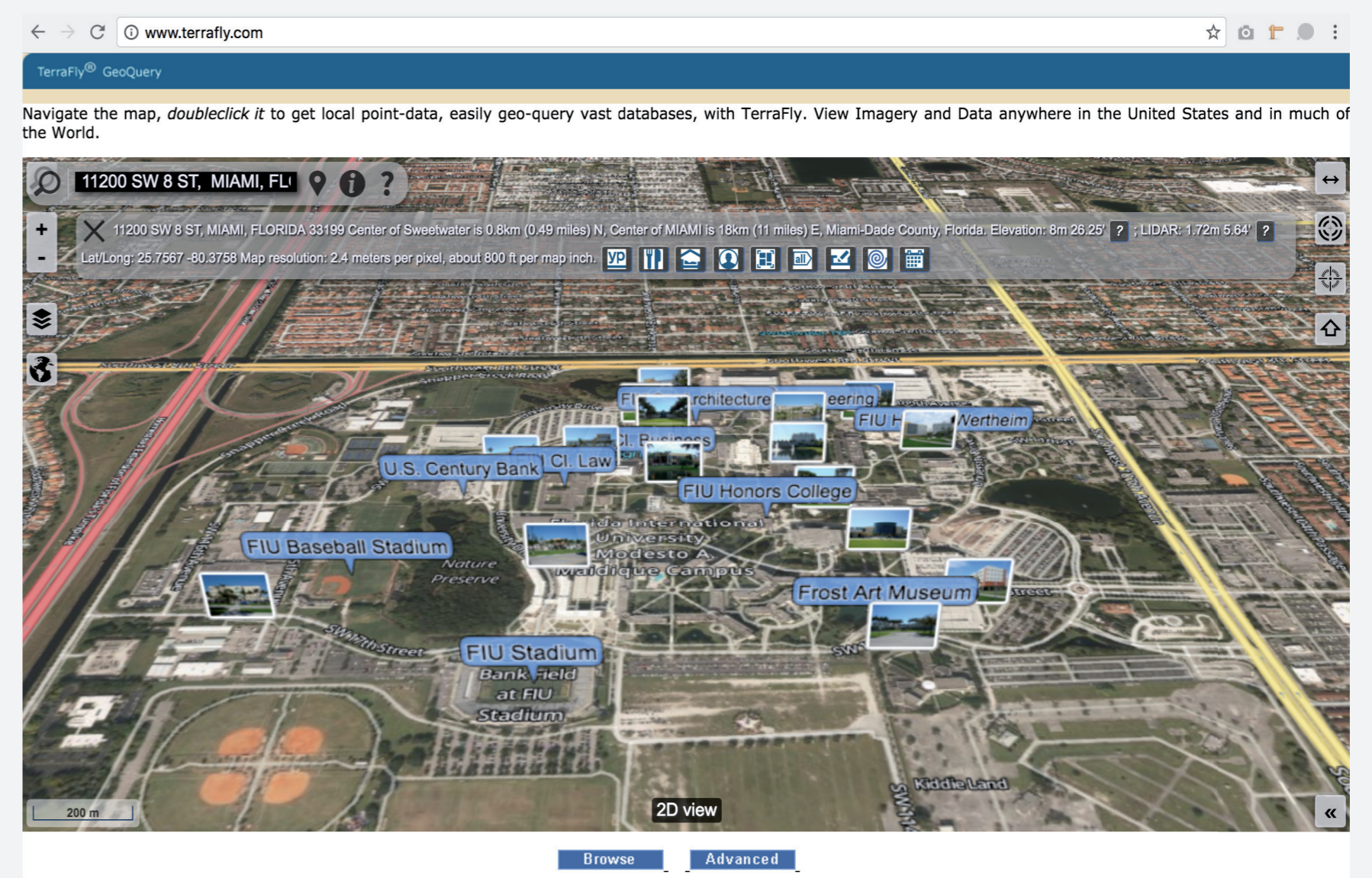

Findings from Interviews with Realtors

Within the first interviews some initial user needs were identified:

- When a client wants to view a property, the real estate agent needs routing and parking information, and information on how to enter to the property. Often, doors can be opened with an e-key via the smartphone.

- A relevant number of customers buy property without actually visiting the estate. Virtual showings with video streaming for clients that are not present during showings are thus another important need.

- Information about the property itself, a condominium building's common property, and the neighborhood clearly has to be tailored for different demographic groups: age, number of children, pets, professional occupation, and other characteristics will result in different information needs.

- Statistics about the prices of sold and currently advertised houses in the area are important information that is currently not available in aggregated form. Matching property recently sold and on sale based on certain criteria could help real estate agents to more easily estimate an realistic price for the current object on sale, and help to match buyers and sellers based on financial information.

First Design Ideas
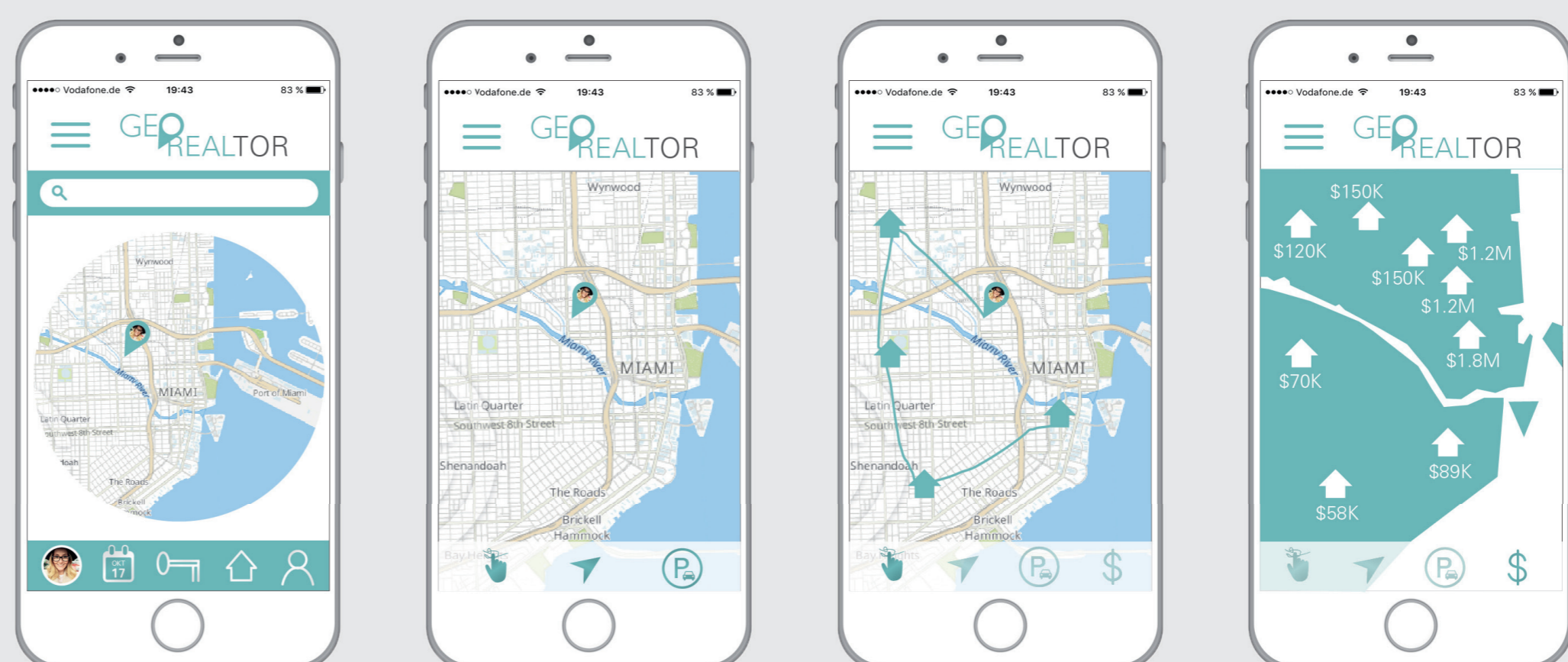
References

Rishe N, Gutierrez M, Selivonenko A, Graham S (2005) TerraFly: A tool for visualizing and dispensing geospatial data. Imaging Notes, 20(2), 22-23. Rogers Y, Sharp H, Preece J (2015) Interaction design: Beyond human-computer interaction. 4th edition, Wiley John & Sons.

Contact

Martina Joisten: martina.Joisten@rfh-koeln.de
Oliver Ullrich: oullrich@cs.fiu.edu

FIU FLORIDA INTERNATIONAL UNIVERSITY

Rheinische Fachhochschule Köln University of Applied Sciences