TAIS Client Application Improvements and Optimization for Tablets

Nikolay Teslya

SPIIRAS, St.Petersburg, Russia

teslya@iias.spb.su

Abstract— This paper presents improvements of a tourist attraction information service (TAIS) for supporting a tourist in a region. The service has been developed to recommend attractions to the tourist that could be interesting for him/her based on the current situation. Main changes that have been implemented in the service provide new user interface for client application and several background improvements in the service.

I. INTRODUCTION

TAIS has been developed under joint project of European Union, Finland and Russian Federation to provide cross-border e-tourism framework in Karelia and Oulu region [1]. The main purpose of the service is to recommend attractions to the tourist that could be interesting for him/her based on the current situation. Attractions, their descriptions and images are extracted from open, free of charge Internet sources (like Wikipedia, Wikivoyage, Panoramio) that allows to provide the service for any tourists' regions. List of attractions is ranged by the recommendation estimation provided by component of the service. Recommendations are based on ratings set by the TAIS users. The TAIS is recommended by the FRUCT community for finding way to the FRUCT conference venue and exploring places of interest around it (Fig. 1).

Service architecture is based on Smart-M3 information sharing platform that implement smart space concept. It makes possible to significantly simplify further development of the system, include new information sources and services, and to make the system highly scalable.

II. APPLICATION IMPROVEMENTS

The main improvements that have been implemented in TAIS can be divided on two groups: background and client application changes.

The main background changes lies in replacing of semantic information broker implementation used in service. Now the CuteSIB [2] is used. One of the preferences of the Cute-SIB is a higher stability and performance in compare to the RedSIB implementation of semantic broker [3].

Client application has been revised to provide better user experience during the interaction with service. The main tasks of the client application are: share information about tourist context, profile, and actions; communication with smart space; provide results to the tourist; and share tourist ratings of attended attractions, browsed descriptions and images with the smart space. Hence the main focus has been given to the UI elements organization and interaction between them.
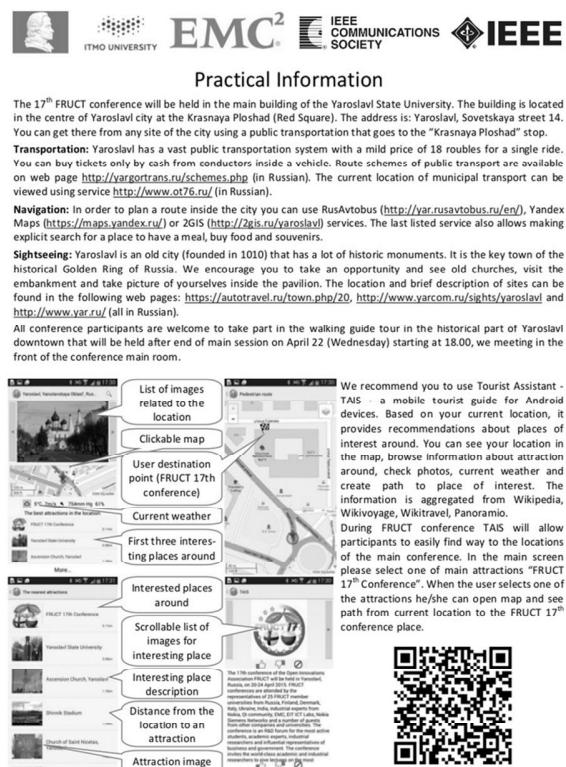

Fig. 1. Copy of the FRUCT 17th Conference program

New design of the client application is based on the Material Design paradigm by Google Inc. It allows to organize information on screen in a way to be comfortable for perception and interaction by the user. User interface has been optimized for different screen sizes, up to 10.1 inch tablets. Developed application is accessible for download in Google Play market for Android devices.

III. CONCLUSION

Updating of semantic information broker implementation allows to increase performance and stability of service. Interface updates allow to provide new experience to the tourist while exploring attractions with assist of TAIS. Information provided to the tourist is organized in a way to be more help-

ful in the current situation. Tablet interface optimization allows to use TAS on wide range of Android-driven devices.

REFERENCES

[1]   Smirnov A., Kashevnik A., Shilov N., Teslya N., Shabaev A., Mobile Application for Guiding Tourist Activities: Tourist Assistant – TAIS, Proceedings of the 16th Conference of Open Innovations Association FRUCT, Oulu, Finland, ITMO university, 27-31 October 2014, pp. 94-100.

[2]   Galov I., Lomov A., Korzun D. Design of Semantic Information Broker for Localized Computing Environments in the Internet of Things. Proceedings of the 16th Conference of Open Innovations Association FRUCT, Yaroslavl, Russia, ITMO university, 20-24 April 2015, pp. 36-43.

[3]   Morandi F., Roffia L., D'Elia A., Vergari F., Cinotti T.S. RedSib: a Smart-M3 Semantic Information Broker Implementation. Proceedings of the 12th Conference of Open Innovations Association FRUCT, Oulu, Finland, SUAI, 5-9 November 2012, pp. 86-98.