The Context Clipboard – Supporting Next Generation Simple Mobile Services

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INTRODUCTION

We propose to demonstrate the context clipboard as a framework for supporting 'Simple Mobile Services' (SMS) on mobile phone terminals.

In the UK the number of active mobile phone subscriptions now exceeds the human population [1]. In contrast the development and usage of mobile services are relatively low. The SMS Project [2] aims to develop a set of operator independent standards and innovative tools that will support a new generation of mobile services. It is expected such tools will encourage a proliferation of services mirroring the successes of the Web in allowing users to become service providers. It is important that such services are easy to find, use and trust by the user, thus an intuitive interface that can adapt based on specific context information is a key design objective.

The context clipboard represents a framework that allows users to associate mobile services to specific activities (context) such as a vacation or shopping trip. The clipboard is structured into a hierarchy of activity containers that hold associated services and relevant pieces of information. A key aspect of the clipboard is the ability to support on-going intermittent service interactions. Thus, connectivity to a service back-end is not always required in order to exploit service functionality.

During an activity, services become significant to the user depending on the current context. For example Figure 1 shows the service browser UI on the mobile phone displaying services relevant to the user when present in Manchester Airport. The list is filtered based upon the current activity the user is perceived to be active in and the context semantics associated with a service.

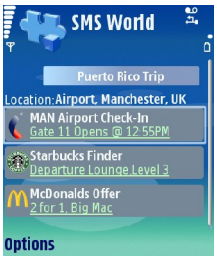

Figure 1. Service listing for Manchester Airport

CONTEXT CLIPBOARD FRAMEWORK

The context clipboard architecture consists of a Web Server with an interface that allows a user to create activities and link in services. A synchronisation component on the server permits the updated clipboard to be downloaded onto the mobile phone. An application on the mobile phone supporting a service browser can read the clipboard, applying context information (GPS Co-ordinates, time) to determine the most relevant activity and filter associated services accordingly. A service description held in the clipboard contains a URL to the services' back-end server.

DEMONSTRATION

In this demonstration, delegates will be able to observe how SMS services are associated with an activity via the clipboard Manager Web Interface. The generated context clipboard will then be synchronised between the Web Interface Server and the clipboard browser application located on a Nokia N95 mobile terminal. The browser application, using location context information will automatically determine the most appropriate and proceed to filter services that are most relevant to the user's current situation. Delegates will have the opportunity to see the interaction on the phone when selecting a service from the browser listing, namely the 'Text Retriever' service. This service allows users to 'drop in' pieces of text or documents (e-tickets, hotel information) that are deemed relevant for an activity.

REQUIREMENTS

(i) WiFi (802.11) connection allowing two laptops and a Nokia N95 to communicate.

(ii) Ideally a screen or suitable surface in order to project a computer display.

REFERENCES

[1] Office of Communications. (2006). The Communications Market 2006.Website: http://www.ofcom.org.uk/research/cm/cm06/main.pdf.

[2] SMS Project. Simple Mobile Services. (2007). Website: http://www.ist-sms.org.