

Scribo: A Livejournal Client for the Maemo 5 Platform

Diana Zaiceva, Artyom Mezhenin, Aleksandr Sannikov,
Kirill Germanov, Dmitry Korzun
Department of Computer Science,
Petrozavodsk State University (PetrSU)
Petrozavodsk, Republic of Karelia, Russia
Emails: maemo-scribo@cs.karelia.ru, dkorzun@cs.karelia.ru

Abstract

Social networks and their services cover a large part of today's Internet world, and a typical example is blogging. At the same time, mobile access to such services are becoming increasingly popular in the Internet. More and more users would like to be presented in a social network using her/his mobile device, hence independently on the location. These clear trends seem to continue in future Internet leading to a new class of mobile applications—clients to services of various social networks. In this progress report, we describe the current state of the project Scribo from the Petrozavodsk State University. Scribo is a mobile Maemo client to such blog services as Livejournal. Its current iteration (phase) started after the 6th FRUCT seminar in Autumn 2009; the target is publishing the Scribo release for the Maemo 5 platform running on Nokia N900 Internet tablets.

I. INTRODUCTION

Social networks and their services cover a large part of today's Internet world. Blogging is a typical example in this area. There are many blog services available for public and private use: Livejournal [1], Blog.ru [2] and WordPress [3] to name a few. Blogging provides a way for many users to participate in distributed discussions on various topics, forming a social network of bloggers.

Today, a typical blogger is not pure mobile. She/he uses a personal computer (PC) or laptop connected to Internet. A web browser allows online access to the blog of her/his interest. Indeed, the blogger can move and use a terminal available at her/his current location; she/he even can always carry a laptop with her/him and exploit Wi-Fi technology.

Another way exists, and some bloggers would be happy to participate in blogging via her/his mobile device. Increasingly many people have mobile devices and use them for phone calling, reading books, watching video, etc. The benefit is clear. My mobile device is always with me; it is light and universal. Why I cannot blogging independently on location: at office, at home, at cafe, at airport or in car (when I am not a driver)?

Direct moving to the browser-based solution is not a panacea. Browser user interface is suitable for PC but becomes unfriendly at a mobile device with small screen, with tiny keyboard and without mouse. A blogger can start a browser at her/his device and then make blogging as usually on PCs. The usability and satisfaction, however, seem questionable. A new class of mobile applications—clients to blog services are needed in this case.

The Scribo project develops a Maemo client for blog users. Scribo primarily oriented to such mobile devices like Nokia Internet tablets (N8x0, N900). The project was initiated in 2009 at the Petrozavodsk State University (PetrSU), PetrSU-Nokia-NSN laboratory of wireless and mobile technologies [4]. Scribo belongs to the family of FRUCT research projects [5]. In

this progress report, we describe the current (third) iteration of the project. Its primary target is moving to the Maemo 5 platform [6] and publishing the Scribo release for N900 users.

The rest of the report is organized as follows. Section II introduces the blog terminology. Section III lists the key facts of the development history of the Scribo project. Section IV briefly describes how to use Scribo for blogging; the focus is on the currently supported features and on our plan of their further enhancement. Section V summarizes Scribo internal details, including its high-level architecture and implementation technologies.

II. PRELIMINARIES

Blog (from the “**web log**”, online journal or diary of events) is a web site. Its content consists of regular text messages with images or multimedia. The key difference from traditional diaries is the following. Blogs are public and they usually involve third-party readers who may publicly debate with the author. Readers make their feedback in the current blog (messages) or in their own blogs. Hence, readers become writers, and the blog content are from many participants. It is similar to forums, but the relations between blog elements are slightly different.

Consider the basic blog terminology. *Blogger* is a person who has an account at blog service (login/password), and the *blogger* is an author of one or more blogs at this service. A blogger can participate in other blogs if they belong to her/his friend. A blog can be personal, group (corporate, club) or public (open). If a blogger has accounts at different services, her/his *profile* refers to combined information from all accounts of the blogger. Several bloggers can form *a group* in accordance with their mutual interests. The collection of all blogs of all bloggers is called *blogosphere* .

A blog is initiated by *a post* , the first message written by the blog author. The post opens the discussion on a specific topic, and a structure of *comments* from author or other bloggers (friends) is eventually constructed. Each comment is a message in response to one of the previous messages.

In cross-service scenarios, a blogger can write the same post into several blog services simultaneously. It is a key point for the further blogosphere integration. Note that current browser-based solutions do not support this feature.

III. SCRIBO HISTORY

The Scribo project started in February 2009 as a student software engineering project at the Department of Computer Science, PetrSU. The idea was initiated from the FRUCT Program [7], thanks to Sergey Balandin. The project activity is performed by PetrSU-Nokia-NSN laboratory of wireless and mobile technologies [4], and Scribo acts as a FRUCT research project [5].

The first iteration run till May 2009. The project leader was Mikhail Kryshen, a lecturer at CS Dept. of PetrSU. On this phase, the project elaborated the idea of a mobile blog client for the Maemo platform. The development focused on the functionality to view/edit user profiles at blog services and to make blog postings. As a result, the basic concept of Scribo appeared; it was presented at the 5th FRUCT seminar [8] and the AMICT’2009 workshop [9].

The second iteration started in August 2009 as lab study in the PetrSU IT park and continues till October 2009. The target was producing a demo runnable at N8x0 tablets. Several usecase scenarios were designed. The demo was written in C, oriented to Maemo 4.x platform facilities [6] and supports Livejournal [1] as a blog service. Implemented scenarios

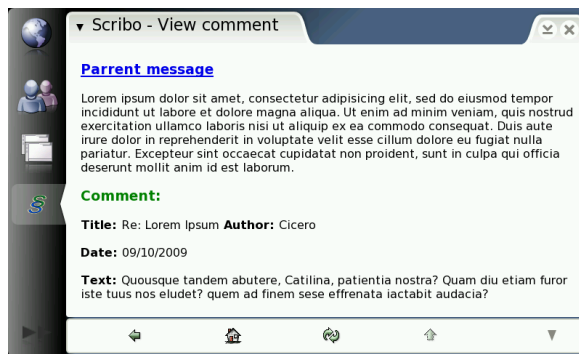


Fig. 1. How Scribo looks in Maemo 4.1 Diabolo

allows a user editing/viewing her/his profile and basic blogging at Livejournal. The demo was presented at the 6th FRUCT seminar [10]. A demo Scribo screenshot is shown in Fig. 1.

The third iteration is from November 2009 till May 2010, led by Dmitry Korzun, an adjunct professor from CS Dept. of PetrSU. The primary target is to develop a version of Scribo for the Maemo 5 platform [6] and for the corresponding device Nokia N900 Internet tablet. The project moved to another set of technologies, particularly from C/GTK to Python/Qt (PySide). At the end of this iteration we plan to publish the Scribo release for the open source community.

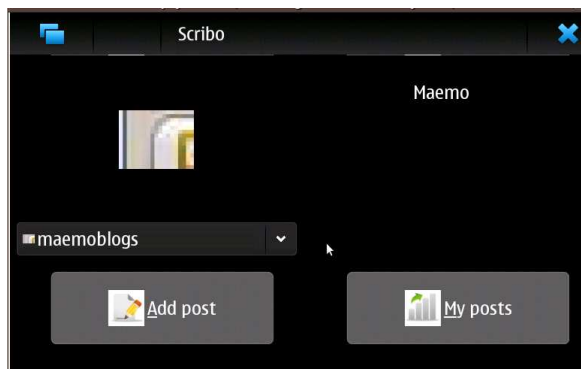
IV. BLOGGING WITH SCRIBO

Scribo has the basic functionality similar to browser-based solutions. In contrast, GUI is simplified as much as possible to take into account the specifics of mobile devices and Maemo 5 features, see Fig. 2. Scribo uses its own local database that is similar to web caching but is more flexible when Internet access is temporarily unavailable. Scribo supports cross-service features, and the post duplication is an example; more features are currently on the design phase.

In the basic scenario, a blogger views and edits her/his profile as well as makes blog postings/comments. The current version supports Livejournal; additional blog services are in progress. LiveJournal [1] is a free blog service that includes photo storage, publishing tools, style templates, and various configuration options. Blog.ru [2] is yet another free blog service that implements online diaries. WordPress [3] provides a publishing platform, including the blog support.

Initially, a blogger should log in a blog service using a selected account. This function is available directly from the main window, see Fig. 2(a). The selected account defines user's default profile. By clicking "Add post" a blogger opens the form for writing her/his post text with html tags as Fig. 2(b) shows. Then the user sends the post to the blog service. Scribo shows the blogger her/his posts in a list, see Fig. 2(c). The list is available with the "My posts" button in the main window. To read the post the blogger selects the item in the list, and the post text is opened as shown in Fig. 2(d).

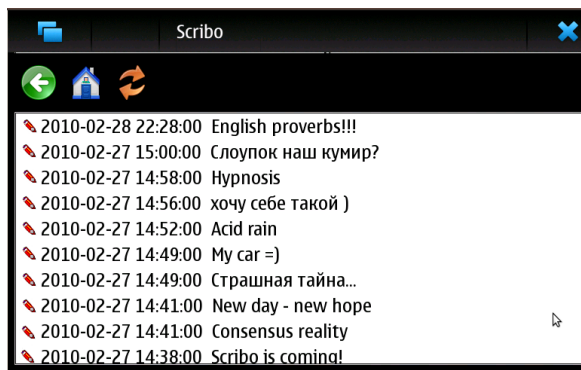
Several cross-service features are in progress. They allow working with multiple blogs simultaneously. Scribo retrieves content from several blog services, hence combining the data from different sources. The Scribo way for blog-aware combining and representing is currently on the design phase.



(a) Changing account



(b) Writing and sending a post



(c) List of posts



(d) Viewing a post

Fig. 2. Scribo screenshots (Maemo 5 emulator)

Data retrieved from blog services will be used to construct a cross-service user profile that is applicable for many services. It will combine their friend relations and groups. Scribo will allow creating a so-called distributed blog that combines posts and messages from several blogs. That is, users work with posts as if they are written in a single blog, make duplicate posts into different services, track comments and participate in cross-blog discussions.

V. SCRIBO ARCHITECTURE

Scribo is a Python application [11] Recently, Python 2.5 is used. The application is Qt-based. We use PySide [12], which is currently the only Qt library available for Python in Maemo 5. The high-level architecture is shown in Fig. 3.

The application consists of Local Data Manager (LDM), GUI, and network scripts. LDM implements the Scribo logic, orchestrating the data and control flows between the user and the blogosphere. The network communication is implemented as a set of scripts. Blog service API must allow reading and writing posts, messages and comments as well as the login/logout/account function. Current version of Scribo supports Livejournal based on its XML-RPC API [13]. The local info space stores user profiles and caches blog content (posts, messages, comments). Its implementation is on top of SQLite library [14].

We plan to apply the FOAF ontology [15] to receive a friend list of the current blogger. FOAF is supported by some blog services, including Livejournal. Furthermore, we plan to apply RSS format [16] for tracking posts from blogs of other bloggers.

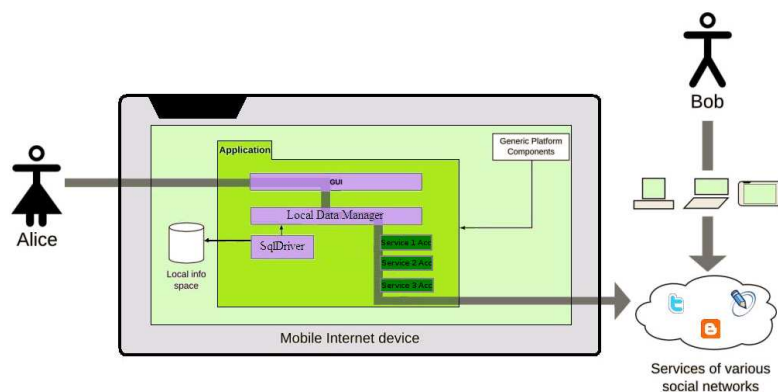


Fig. 3. High-level architecture of Scribo

REFERENCES

- [1] Livejournal website. <http://www.livejournal.ru/>
- [2] WordPress: a state-of-the-art publishing platform. <http://wordpress.org/>
- [3] Online diary service. <http://blog.ru/>
- [4] Open Platforms for Mobile Devices. By Petrozavodsk State University, Department of Computer Science. <http://oss.fruct.org/>
- [5] Distributed blogs for the Maemo Platform. http://fruct.org/index.php?option=com_content&view=article&id=64%3Adistributedblogs&Itemid=59
- [6] The Home of the Maemo Community. <http://maemo.org/development/>
- [7] The FRUCT Program. <http://fruct.org/>
- [8] The 5th FRUCT Seminar, Apr. 27–30, 2009, St.-Petersburg State University of Aerospace Instrumentation., http://fruct.org/index.php?option=com_content&view=article&id=67&Itemid=74
- [9] Mikhail Kryshen, Diana Zaiceva, Artyom Mezhenin, Alexandr Sannikov, Kirill Germanov. A Cross-Blog Client for the Maemo Platform. To appear in Proc. of Annual International Workshop on Advances in Methods of Information and Communication Technology (AMICT'2009, Petrozavodsk, Russia, May 19–21, 2009). Petrozavodsk, 2010.
- [10] Diana Zaiceva, Artyom Mezhenin, Alexandr Sannikov, Kirill Germanov, Mikhail Kryshen. Scribo: Multi-service Blogging Application for the Maemo Platform. In Proc. of the 6th Seminar of Finnish-Russian University Cooperation in Telecommunications (FRUCT) Program (Helsinki, Finland, Nov. 3–6, 2009). St.Petersburg, 2009, p. 204.
- [11] Python documentation by Python Software Foundation. <http://docs.python.org/>
- [12] The PySide project: Python for Qt. <http://www.pyside.org/>
- [13] XML-RPC Client/Server Protocol Reference. Part III. Client/Server Protocol. <http://www.livejournal.com/doc/server/ljp.csp.xml-rpc.protocol.html>
- [14] SQLite: a software library to implement a self-contained, serverless, zero-configuration, transactional SQL database engine. <http://www.sqlite.org/>
- [15] RDFLib: a Python library for working with RDF, a simple yet powerful language for representing information. <http://www.rdflib.net/>
- [16] Mark Pilgrim. Universal Feed Parser. <http://www.feedparser.org/>