Drupal Content Management System on Mobile Phone

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Abstract-We will demonstrate how an existing content management system, Drupal, can be used on a personal web site that is running on a mobile phone. It allows users to easily create and configure a web site to their mobile devices that is able to take advantage of the wide set of normal functionality of the content management system and the context and data of the mobile phone. We estimate that very easy creation of versatile mobile web sites has potential to boost the development of innovative mobile applications.

I. INTRODUCTION

Managing a web site manually is a tedious process. As a result most web sites are currently based on content management systems. Content management systems hide the detailed code of a web site and allow the users to develop and maintain the site with a high level graphical user interface. In addition to commercial content management systems there are a number of widely used open source content management. A community vote for the best open source content management systems listed Joomla!, Drupal, Plone, e107, and XOOPS as the five finalists [1].

Traditionally, web sites have been running on server computers that are connected to the fixed internet. The Raccoon mobile web server [2], which consists of the S60/Symbian port of Apache httpd and a connectivity solution that provides HTTP access to a mobile phone from the Internet, has potential to create new ways to use the web. With Raccoon the web server becomes mobile and personal which opens a set of new possibilities. Taking advantage of the changing context of the phone, remote and local access via browser to the core applications of a phone, and the affordability of the platform are some of the possible starting points. In emerging markets, where access to PC is not widely available, a web site on a phone could satisfy the needs of a small business.

One of the challenges of the Raccoon solution is that developing web sites for it requires special skills. Furthermore the reuse of existing tools for web site creation and management has not been possible. The focus of our present research has been to change that. So the key research question addressed in the demo is how to use the existing content management solutions on mobile phones.

Our initial focus has been on Drupal content management system [3]. Drupal is a free software package that allows an individual or a community of users to easily publish, manage and organize a wide variety of content on a website. The built-in functionality of Drupal can be extended by a large number of add-on modules, which will enable features such as blogs, wikis, forums, podcasting, picture galleries, peer-to-peer networking, eCommerce, authentication, etc.

By adapting the Drupal system to mobile phones we try to target multiple goals:
- Content management system makes content creation and management of the personal website of your mobile phone easy.
- Via the additional modules developing personal web sites for a variety of purposes becomes easier.
- With the creation of APIs that allow Drupal to access data in the core applications of the mobile phone we can create new website functionality that takes advantage of features available in the mobile devices.
- Drupal provides a very good test case for the underlying layers of the architecture.

II. Drupal on Mobile Phone

![Architecture of the personal web site on Symbian S60 device](image_url)

Drupal like any of a vast number of content management systems is based on the xAMP platform. In the acronym ‘A’
indicates Apache, ‘M’ MySQL database and ‘P’ PHP (sometimes also Python or Perl) scripting language. Most frequently x is substituted by ‘L’ for Linux giving rise to LAMP, but also versions e.g. for Microsoft Windows (WAMP) and Solaris (SAMP) are available.

In the mobile phone setting we use the xAMP stack that has been ported to Symbian S60 platform. We call this the Personal AMP (PAMP). In addition to the Raccoon port of Apache the stack consists of MySQL and PHP ports for Symbian S60 platform (see Figure 1). The details of PAMP stack are covered in greater detail in a separate demo [4] while the present demo focuses on the possibilities that the Drupal content management system at mobile phone opens up.

III. DEMO

In the demo we will highlight multiple aspects. First, the current mobile phone platforms have become so strong that they allow a full scale content management system to be executed on them. Second, how we can use the content management system to rapidly create our own mobile web site and how the website is able to access the content of the mobile phone as well as the contextual information. Third, via installation of add-on modules (e.g. for eCommerce) we show how a mobile phone can be turned into a platform that, for instance, small businesses could use. Figure 2 shows an example of calendar access via a Drupal generated web page at mobile phone.

IV. TECHNICAL REQUIREMENTS FOR THE DEMO

The demo will be running on our Symbian S60 mobile phones and a laptop computer will be used to browse the Drupal sites at phones. In the demo the communication will use WLAN.

The only external requirement for the demo is electricity to power our WLAN router.

REFERENCES


Figure 2 Example web page generated by Drupal on mobile phone