Providing Mobile Services for Government Web Sites Using OSS

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Abstract

The mobile Internet is growing extremely fast in Indonesia, partly due to the limitations of legacy networks. However, mobile Internet access in Indonesia is expanding exponentially mainly due to the high level of mobile phone penetration amongst the 240 million people in its population. This topic covers the latest news and information on the Indonesian mobile Internet expansion. [M., 2010a]

The use of mobile internet is being used as an opportunity for the Indonesian government to create a mobile based service. In this case, the services provided by the government of Indonesia is in the form of mobile web services that are used to provide information to the public on matters related to the activities of government, thus creating a transparent government.

Mobile services provided by this government were built using open source software. The use of OSS is expected to help support Indonesia Go Open Source which has been declared on June 30, 2004 by five ministries namely the Ministry of Research and Technology, Ministry of Communications and Information Technology, Ministry of Justice and Human Rights, Ministry of Administrative Reform and the Ministry of National Education.

This paper will explain the websites of government anywhere in Indonesia, which already provides mobile services.

Keywords: Internet, Government Websites, Mobile Services, Open Source Software

1 Introduction

The Mobile Web refers to Internet access on a mobile device. Due to the many usability issues and limitations associated with accessing the standard Internet on a mobile platform, many organisations support the "made for Mobile Web" concept. In essence, this is a world wide web specifically designed for access via a mobile device. The Mobile Web is all about discovering the right content when you need it. Its advantages are obvious – information access whenever, wherever. However, three years ago the Mobile Web reached a crossroads when mobile browsing figures declined; this was due to a number of different accessibility issues. [Nubi, 2010]

In Indonesia, growth of mobile users is very high. In 2009, mobile users in Indonesia reached 100 million more, and it is estimated, the number of mobile users in 2010 will increase to 146 billion. Increasing mobile users comparable with increasing of mobile internet. [Inigadgetmu, 2010]

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<tr>
<th>No</th>
<th>Country</th>
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<tr>
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<td>10</td>
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Table 1: The Largest Mobile Users in The World (Source: Wireless Intellegent)

Indonesia is ranked number five for internet us-
age amongst Asian countries, with 25 million internet users in Q1 2009, growing at 25% p.a. It is estimated that at least 10% of these users actually subscribe to internet services in their homes. The highest growth in Internet users has occurred in the Java region, which tends to see the greatest frequency of promotions and new product launches. [Spireresearch, 2010]

Figure 1: Percentage change in internet subscriber base: 2007 to 2008

Mobile Internet subscriptions are growing explosively—from 300,000 in June 2008 to almost one million in June 2009, year-on-year. GSM and CDMA operators are offering a variety of data packages. Aside from the intense competition that characterizes Indonesia’s de-regulated telco industry, the flexibility to move from one provider to another is one reason why mobile internet is in high demand. (See Figure 2 on the rise of mobile internet). [Spireresearch, 2010]

Figure 2: The Rise of Mobile Internet in Indonesia

Moreover, fixed line internet service has a vital weakness, namely the quality of infrastructure. While the internet connection via mobile phone even more stable. And, again about a more affordable cost. Another fact that also encourages the growth of mobile Internet users is 80% of the gadgets that circulated in Indonesia in the category of web-enabled.

Today, there are number of people connected to the internet through mobile phones. According to the increasing demand of mobility, the governments should provide their services through a system which called mobile government or m-government. M-government is strategy and its implementation involving the utilization of all kinds of wireless and mobile technology, services, applications and devices for improving benefits to the parties involved in e-government including citizens, businesses and all government units.

Currently, some sites Indonesian government has provided a mobile services that is accessible to mobile, such as Vice President of Republic of Indonesia, Ministry of Young and Sport Republic of Indonesia, Beasiswa Unggulan Ministry of National Education Republic of Indonesia. In this paper, we will explain kinds of mobile services that be provided of Indonesian government websites.

2 State of The Art

Ghysai and Kushchu in their paper [Ghysai and Ibrahim, 2004], present a comparative analysis of mobile applications in developing countries, provide an analysis of trends within development framework and discuss implications for policy makers, government official and IT solution providers. In this paper, we can get information about some m-government applications in developing countries, for example Turkey has MOBESE (Mobil Elektronik Sistem Entegrasyon) or Mobile Electronic System Integration, which is a G2G mobile government application for law enforcement agency that connects the law enforcement units to their respective police stations via a GPRS internet connection allowing the mobile law enforcement units to query citizens regarding validation of their identity, checking their record history. Czech Republic has One way Critical Information Delivery for Citizens, which is used to inform critical news and alerts to the public. Another example is Philippines has TXT CSC, which is an SMS service launched by Civil Service Commission (CSC) in Philippines. Its aim is to increase the efficiency and speed of service delivery.

Kushchu and Kuscu, in their paper [Kushchu and Kuscu, 2003], present technological drivers of m-government and present cases where these technologies are being used. They explain that the technological changes can be broadly described under three major trends: mobile device penetration; convergence of wired Internet and wireless telecommunication networks; and the move towards 3G services and higher data transfer rates. They mention the m-government services in law enforcement, fire fighting, education system, health care system, transportation, and m-democracy. Also, there are challenges for m-government such as infrastructure development, privacy and security, legal issues, mobile penetration rate and accessibility, compatibility.
3 Mobile Web Services in Government Web Sites

Nowadays, development of information technology in Indonesian Government has increased. Indonesian government, especially in Ministry, has developed web sites to share information about the happened event in government.

For instances, Vice President of Republic of Indonesia, Ministry of Young and Sport Republic of Indonesia, Beasiswa Unggulan Ministry of National Education Republic of Indonesia.

Vice President of Republic of Indonesia

Mobile services that be provided by Vice President of Republic of Indonesia is Mobile Portal dan Mobile CMS. Development of Mobile Portal has proposed to give information about activities in Government of Vice President RI or anything that be related with Government of Vice President RI. Users who want to access Vice President Site can access mobile portal using mobile phone on link http://m.wapresri.go.id.

Besides that, Vice President of RI also facilitate redactions to upload contents of websites using Content Management System (CMS). Considering high mobility of Vice President of RI, CMS version mobile also be developed. Redactions who have authority to access CMS can also upload content using Mobile CMS on link http://wapresri.go.id/cms_mobile.

Ministry of Young and Sport Republic of Indonesia

As well as Vice President of RI, Ministry of Young and Sport also provide mobile services in the form of Mobile Portal dan Mobile CMS. Mobile Portal Ministry of Young and Sport can be accessed in link http://m.kemenpora.go.id, where as Mobile CMS in http://kemenpora.go.id/mobile_cms. The objectives of development mobile services are to facilitate user to access Ministry of Young and Sport websites and to give easiness user get information using mobile phone about Ministry of Young and Sport in mobile situation.

Beasiswa Unggulan Ministry of National Education Republic of Indonesia

Beasiswa Unggulan Ministry of National Education Republic of Indonesia is a scholarship program in Ministry of National Education RI. In general, Beasiswa Unggulan Program has a duty to provide services about the scholarship to the community. In carrying out their task, Beasiswa Unggulan Program is also give mobile services. In this case, Beasiswa Unggulan Program provides Mobile Portal (http://beasiswaunggulan.kemdiknas.go.id/mobile) to share information about Beasiswa Unggulan Program, such as registration information, announcement of selection and events which held in Beasiswa Unggulan Program. Providing mobile ser-
vices is expected to give easiness to get information in mobile situation.

The advantage gained from the development of mobile services for Government websites is the low site load time used to access government websites. Bandwidth used to access mobile websites will be lower than the pc version to access websites that are accessed via mobile. Thus, the cost incurred when accessing mobile websites will be lower.

All of mobile services which are used in government website above (Vice of President Republic of Indonesia, Ministry of Young and Sport Republic of Indonesia, Beasiswa Unggulan Ministry of National Education Republic of Indonesia), be developed using open source software.

4 Development Mobile Services

Development mobile services for government website can use open source software. The big question of us is why we should use open source software to develop mobile service for government websites?. Nowadays, Indonesia has create action “Indonesia Go Open Source! (IGOS)”. IGOS is a spirit movement to increase the use and development of open source software in Indonesia. The spirit of this movement has the following objectives:

1. Provides more alternative software that can be used by society as a legal and affordable, so that the number of users of computers increases.
2. Increases capacity for research and development of national information technology software field.
3. Creates competition for information technology development to compete in the global arena.

Beside that, the use of open source software will reduce cost to buy software in provide mobile services for government website. Given the important role of information technology in social life associated with economic growth, it is necessary to increase self-reliance, competitiveness, creativity and innovation as key to the success of the Indonesian nation building. The government and the community agreed to make earnest efforts to master, leverage and utilize information technology. In order to support the success of these efforts, development and utilization Open Source Software is a strategic step to accelerate the mastery of information technology in Indonesia.

Development of mobile services for government website can use:

1. PHP for develop mobile web.

MySql is the world's most popular open source database. It is cost-effective, fast, robust, reliable, and requires very little administration. It's an extremely flexible and scalable product. Its replication features confer high scalability to our applications.

5 Conclusion

Currently, internet growth and use of mobile phones in Indonesia is growing rapidly. The high mobility of people caused many needs of the community will need information that can be accessed using a mobile phone.

The Indonesian government websites such as Vice of President Republic of Indonesia, Ministry of Young and Sport Republic of Indonesia, Beasiswa Unggulan Ministry of National Education Republic of Indonesia have developed a mobile service using the Open Source Software (OSS). Provision of mobile services for government websites using open source software has many advantages both for society and government itself.

From the government side, the use of OSS in providing mobile services to help support the activities of the government of Indonesia Go Open Source! (IGOS). In addition, the use of OSS can also reduce the costs of mobile services developed to build the system, because as is well known for developing mobile services OSS systems such as PHP and MySQL can be used free of charge.

In terms of society, people who use mobile services for government websites to obtain information needed is closely related to the development of the situation Government. This mobile service providers, are also able to reduce the site load time, because the bandwidth used to access mobile websites is smaller when compared with PC websites.
References


