

Reference Library in the Pocket: Mobile Reference Services for Libraries

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Abstract

Mobile communication technology and its rapid growth in the field of E-commerce have set an unprecedented tone in the growth of information and consumer science. The current E-commerce applications invariably combine the advancements of the current web technologies and the novelty of mobile technology to offer advanced level of service and business propositions to the general public and target the customers who are constantly on the move. Though libraries are perceived to be the sanctum sanctorum of man's quest for Information, where humanity has traditionally journeyed to quench their thirst for knowledge, today's information society seems to be living in a world where the library is engulfed in their own mobile phones right in their very own pockets. This paper looks at the overall impact of mobile services and applications in libraries and looks at the specific area of Reference services in the libraries where the potential, demand and opportunities are more for mobile applications.

Keywords

Mobile Communication Systems; Reference Services; Mobile Library Applications

1. Introduction

The Educause study on “Undergraduate students and the Information Technology” (Educause centre for Applied Research) carried out in 2009 clearly portray the fact that the teens and adults use mobile technology not only for communication, entertainment or for commercial applications but they use it for information as well. This sampling of research is not only applicable for the United State but also for the entire spectrum of students and researchers around the globe. While the new and exciting computing environment with the advent of web 2.0 and its allied services has enthralled the information seekers there is no doubt that the mobile telephony has further enlightened the information hungry modern society. While there is no doubt that the mobile and satellite communications are triggering a wave of unprecedented growth it is common knowledge that people are becoming more dependent on wireless communication systems (Olatokun: 2006). There is no doubt that Mobile phones have become an inseparable part of everyday life. Jacobs observes that “everywhere we go we cannot help but notice the number of mobile devices being used; cell phones, ipods, MP3 players, GPS systems, blackberries and even mini-laptops. Mobile access is the remediation of wireless internet” (Jacobs, 2009). While mobile communication system was born out of necessity, the consumer centered business world has quickly exploited this proliferation of services to its



advantage and provide services which are easily reachable for users who are constantly on the move. During this time of information explosion, Libraries cannot shun away from this development hence we see a number of services in the libraries which are becoming more and more mobilised targeting the users who are on the move. The advent of library services over the internet proved to be a blessing for users who found it hard to visit the physical library for accessing its collection. With the advancement of these services through mobile network it has become much more simple and easier for libraries to deliver them for the users who are on the move and delivers the entire spectrum of library services in the palms of today's library users and information seekers. Murry observes that by providing these specialised services to its users the librarians not only "provide new services or enhance traditional services, but also make it more relevant to their users" (Murray, 2009).

2. Growth of Mobile Communication system

The mobile communication services have grown dramatically from its humble beginning during the Second World War. The mobile network of that time was called as zero generation (0G) mobile networks where it was mainly used for military communication. This was followed by the first generation (1G) of cellular network, established in 1973, followed by the 2nd Generation (2G) in 1991 and the 3rd Generation (3G) in 2001. The current mobile network which hovers around the 4th generation is yet to be fully operational hence we see most of the 3.5 Generation services which are currently provided through the mobile networks. While the mobile network kept growing in its stature the mobile users also steadily grew over the years. The current mobile users in 2010 are estimated around 4.2 billion

(www.budde.com.au/research/global-mobile-subscriber-statistics.html), which represents more than 50% of the global population. Infonetics research predicts that by 2013 the number of worldwide mobile subscribers will reach 5.9 billion (www.itu.int/ITU-D/ict/newslog), mainly due to the anticipated growth in mobile communication in Africa, India and China. Along with the mobile network and mobile users the mobile gadgets have also started growing from the humble beginning of 2 pound heavy solid mobile phones to modern ultra lightweight mobile phones with a number of services embedded in them. With the future promises of TDMA (Time Division Multiple Access), CDMA (Code Division Multiple Access) and GSM (Global System of Mobile Communication) the mobile communication system is poised to an exciting zenith. The future Mobile communication system promises much better gadgets with increased internet accessibility with DSL and broadband with "possibilities of video conferencing and other related web 2.0 services which will resemble an ultra mobile personal computer".

3. Mobile applications and Libraries

Libraries have greatly utilized the growth of internet technologies, especially the advancements of web 2.0 applications in its library services. This positive trend has a great implication on libraries and its various services it provide. In the modern e-commerce world most of the works are easily accomplished through the mobile telephone. The emerging Information Service Delivery trends in libraries also tend to follow the same pattern. The users expect the information to be delivered where they are rather than going to the information. This is mainly because of the influence of e-commerce and entertainment services which make use of the internet and mobile

revolution to skillfully market their products and service especially targeting their customers who are on the move. Making use of such opportunities created by these commercial services the library and information centers have also started using mobile technology to further their cause. Murray quotes Spires with the observation that “the adaptation of mobile initiatives by libraries and librarians began with medical libraries, as medical professional were among the first user groups to implement an information-on-the-go philosophy into their daily work lives (Murray, 2009). Followed by this there are libraries that have modeled their services to mobile revolution and provide library services on the move in other areas of library labyrinth. While a number of mobile based applications are available for users the Reference Section in the library seems to be the ideal place for mobile based service as it has the potential to transform the face of the library.

3.1 Library Website

The adaptation of internet technologies into libraries saw the emergence of library websites which promote the library services through these websites. Any mobile phone which supports internet connectivity can access these library websites and its various services from anywhere. With this dynamic development it is important for the library administrators to provide due consideration for mobile users, who will be accessing the library website through their mobile devices since the viewing area and the downloading speed between the desktop user and mobile user will be vastly different. In modern context most of the libraries provide parallel websites for mobile as well as desktop websites. Though this is a good development it is time consuming for library web-administrators since simultaneous updating becomes mandatory when the updating of the websites is warranted. This is a huge challenge for libraries whose

funding and human resources are very limited but at the same time they have the inclination and need for mobile based websites.

3.2 Mobile OPAC (MOPAC)

Traditionally the Online Public Access Catalogues (OPACs) served as the binding wine between the user and the library collection. With the advent of mobile services, new Mobile based OPACs are being developed for mobile users in various libraries. Development of mobile optimized OPACs nicely cater for both the regular desktop OPAC users and mobile OPAC users. The biggest challenge in this endeavor is to scale the information display into the mobile optimized output. Sometimes it is very difficult since most of the library catalogues make use of the web 2.0 advancements and use lot of content enrichment and other allied services to their regular catalogues which will be very difficult to scale for the mobile phones. Many of the Integrated Library Services (ILS) has taken up this challenge and already there are some products which provide a good MOPAC service. Millennium ILS provides a catalogue service for mobile users called AirPac (AirPAC) which is a good model for consideration. Notable advancements such as Library Anywhere from LibraryThing (Bowker 2009) and initiatives of SirsiDynix and others in developing specific Mobile OPAC ignites a enchanting mobile catalogue revolution in libraries.

3.3 Mobile Collections

Apart from the above mentioned specific services libraries are also engaged in developing their collections specifically for mobile users. As more and more digital medium come into the library collection a number of libraries are looking ways into market them to the mobile users.

3.3.1. Ebooks

The advent of digital resources saw libraries embarking on Ebooks to strengthen their collection development and optimize its usage. The advent of mobile phones has taken these Ebooks to the next level of readership. While Ebooks can be used by any computer connected to the network, the mobile access to them have transformed these collections to be read and carried anywhere. There are a number of libraries which offer to their mobile users a number of audio books from their collection to be downloaded and used by them. Most of the libraries which give the mobile Ebook service concentrate on providing audio books for their patrons.

3.3.2 Journal Databases

Researches in modern libraries are greatly enhanced with the introduction of Electronic journals which are normally accessed through the desktop web. But the current trend is slowly moving towards providing mobility to these databases which offer some full-text access exclusively for the mobile users. Ebscohost (EBSCO, 2009), LexisNexis (Mintz, 2009) are few notable advancements in this area. These databases provide current and time critical information which a user might need urgently while on the move. Following EBSCOhost, Swets Information Service has also announced that their aggregation of electronic journals will be available soon on mobile. PubMed database is also available through mobile interface.

3.3.3 Other Databases

Apart from these specific resources there are a number of other databases and services which provide a combination of e-book, e-journals, e-reference and a number of other services exclusively for mobile users. BBC Audio books, arXiv, IEEE Explore, Social Science Research Network are some

of the notable databases and services which are available through mobile networks. Some support services like MobiLIB provide users with service which link to already existing information providers and act like intermediates and create simplified interfaces to the different services of the libraries such as its OPAC, Directory, library operations etc.,

4. Mobile Reference Services



Among the many services which are capable of changing the library landscape Mobile Reference is one of the foremost and notable service where the impact of mobile interface can be readily felt. The reference section is often considered to be most potential place where dynamic data are often consulted by library users. The advent of web 2.0 applications into library services, especially the Instant Messaging service saw the advent of an enhanced and dynamic web based reference service into the library mainstream. Most library catalogues make use of the Instant Messaging to provide services like “Reference Desk” and “Ask a Librarian”, where the librarians are connected through an instant messaging or voice chat environment to get most of the reference queries sorted. This healthy interactive trend along with the mobile telephone facilities has started adorning the library services. With more and more users wanting reference information on the move,

most of the libraries provide reference services through mobile interface. There are many specialized services and reference products which has made a great impact in Library services.

4.1. Mobile reference services and products

4.1.1. Mobile Encyclopedias



Important reference sources are now increasingly

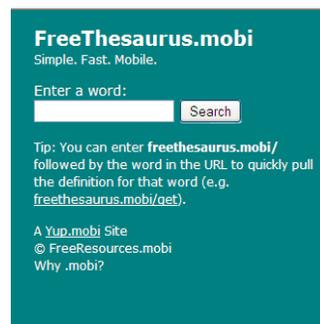
available as mobile reference sources for users. Time tested reference sources such as Encyclopedia Britannica are now available for mobile users. Subscription to this can be done individually or it can be routed through the network authentication which allows the users to access them while on the move. Britannica has specially optimized this site for mobile phones which ensures a wonderful experience for mobile users. Increasingly more and more reference suits are opening up for mobile users. Merriam Webster mobile English Dictionary Series (<http://mcylopedia.blogspot.com>), the concise Encyclopedia Britannica, the Big English Encyclopedia 8.3 (<http://downloads.zdnet.com/abstract.aspx?docid=800313>) are some of the growing encyclopedias for mobile users.

4.1.2. Mobile Reference website

Increasingly a number of mobile reference websites provide a third party reference interface to Libraries. Services like Mobile Reference.com, provide a handful of

different reference access on a subscription basis to libraries which can be effectively provided to the library users. These Mobile Reference websites have a selectable module based subscription approach where the needed subject references can be chosen for subscription.

4.1.3. Free mobile reference resources



While a number of subscriptions based mobile references are adorning the library collection there are a number of free reference sources

which are also available which provide good mobile interface and can be effectively tagged into the library mobile services. FreeDictionary.mobi and FreeTheasurus.mobi are some of the leading mobile reference sources which can be added to the mobile library services in a library. Services like google Mobile (<http://www.google.com/mobile/maps/>), Mobile GMAPs (<http://www.mgmaps.com/>) provide a simple but effective atlas and map services to the mobile users which are available free. These utilities can be effectively added to the library.

4.2 SMS Reference System:

Over the years it has been proven that SMS Referencing can be a major service which can be effectively run on mobile networks. Beth Stahr (2009) observes that “Text message library reference has several inherent advantages for the patrons. It is convenient, available, immediate and comfortable”. A number of very simple referencing services are run through the SMS system in various libraries. The most common and simple way of using SMS referencing is by making use of the Instant

Messaging (IM) service. Many university libraries including American University, Monash University and Rice University have implemented this type of reference system which is very cost effective and reliable. Libraries which don't want to depend on the IM services opt for independent SMS gateways. Through these independent gateways, as soon as the user sends a reference query as a SMS it reaches the library in form of an email. Once the library sends the reply through the email it reaches the users as a SMS.

4.2.1 Commercial SMS Reference Systems

Currently there are a few commercial SMS Reference Systems available which help the libraries in formulating a SMS based Reference service. Altarama's Reference by SMS

(<http://www.altarama.com.au/refxsms.htm>)

and Mosio's Text a Librarian (<http://www.textalibrarian.com>) are two

important commercial SMS referencing system currently used by a number of libraries worldwide. Both the systems are very simple to implement and easy to operate. In case of Altarama, the users can send their questions to a local number marked for SMS Reference and receive their SMS reference answer through Altarama system which either sends the question as an email or as a text to the library. Mosio's text-a-librarian also uses a similar process where the reference queries are routed through their server to the library and back to the user.

5. Conclusion:

The availability of a number of mobile based applications for libraries and the realization of the fact that the technology evolves every day and newer applications and innovations are implemented in every walk of human life there is no wonder that the Information dissemination has also taken

the noble path of adhering to the technological route. There is no doubt that mobile applications are influencing a major change in libraries. The underlying principle of providing next generation of library services is to connect – people, technology and information in the same context; to connect using their choice in the mode of communication – telephone, SMS, IM, texting email, name anything. By acknowledging and adapting to these newer technologies there is every possibility of advancing the field of information science and providing quality service to the users at large.

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