

Ball State University Libraries

Library services and resources for knowledge building

2004 LSTA Technology Mini-Grant Innovative Technology Option

Project Summary/Program Purpose

The Library Information Technology Services Group at Ball State University Libraries is interested in researching and developing a mobile computing compatible interface to library services and resources. Many modern academic library resources are in electronic format, available on the Internet, and are not bound by place. Campus community members have heavily invested in mobile computing devices: notebook computers, Palm/PocketPC devices, and Internet-enabled multi-purpose personal communication devices like cellular phones that support voice and data services. The focus of this project is to bring library resources and services to users of these personal communication devices.

The challenge is to retool complex, powerful, feature-rich interfaces for effective use on a powerful personal communication device with a very small screen and potential bandwidth limitations. Several projects with an education or library angle have been described in articles and case studies, and relate to programs that focus on a Palm or PocketPC based device.

The project focus for Ball State University Libraries is on personal communication devices such as PDA/Phone units. This project looks beyond Wi-Fi, which already is a basis for powerful new learning environments. Wi-Fi is still place-bound by Wi-Fi hot spots. Internet enabled PDA/Phone devices provide a truly mobile, anywhere-access model for learning and research.

The project group is seeking funding from the State Library through the LSTA Innovative Technology Mini-Grant program to investigate and develop this idea.

Activities

Activity Description

- Identify a core group of web based library resources and services that have the potential to be useful in a mobile environment. Minimally, the SIRSI Unicorn iLink implementation at Ball State will be included in the target group.
- Identify potential issues and develop solutions related to the small size of the personal communication device interfaces.
- Identify the appropriate development environment including software tools and target devices.
- Develop WAP (Wireless Access Protocol) computer programs that provide gateway services to the Ball State iLink and other targeted resources for personal communication devices.

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- Test and evaluate the programs developed with student and faculty groups.

Project participants

Project participants will include full- and part-time staff in the Library Information Technology Services unit at Ball State University Libraries, other library personnel, and students studying communication or computer science at the University. The possibility of partnering with one or more mobile Internet service providers will be explored.

Participant qualifications

Staff working on the program will be trained software developers, and administrators with years of library information technology management experience.

Needs Assessment

Need Determination

Dr. Arthur Hafner has challenged the staff of University Libraries to identify creative new applications of information technology for the student pursuits of academic success and faculty research endeavors. Recent advances in personal communication technology including cheaper and broader availability of mobile Internet services that present a new opportunity for libraries to reach customers. Many university students carry modern personal communication devices so an existing pool of potential users is currently in place. Further need is outline by the following statement from the Ball State Office of Information Technology: “Ball State University will be a personal and mobile computing environment that promotes universal access to networks, digital delivery environments, and content while enhancing the fluency of all users.”

Need not currently met

Strategic emphasis by the University and Office of Information Technology at Ball State on ubiquitous mobile computing has created a unique opportunity to develop information resources for researchers and students. Targeting users with library services through a personal communication device that is with them most of the time is a new service opportunity for the University Libraries. Users don't currently have easy access to library services from their personal communication devices.

Technology Description

Personal communication devices with small LCD screens from companies like Motorola, LG, Sony, Blackberry, and Nokia are the types of devices this project will be examining. Software development tools include the Macromedia Compact Flash application or Microsoft's .NET Compact Framework and Windows Mobile-based Smartphone platform.

Evaluation

We plan to use student and faculty focus groups at certain phases or project milestones to assess the effectiveness of the programs and services under development. A survey

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instrument might be used at the beginning to assess interest in this new library service format.

Awareness

The target population will be exposed to the new library services resulting from this project through several existing communication vehicles. The *LibraryInsider* newsletter, the DailyNews student newspaper and other local press, the library web site, and campus wide email are some of the marketing options available. The Project Directors anticipate writing one or more articles for publication in library journals at some point.

Time Frame

The estimated time line for the project is to design and develop applications and services in 2004. During the 2004-2005 academic year, the applications will be field tested with student groups for refinement, usability, and enhancement.

Budget Narrative

Programmer salary

We estimate \$10,500.00 in salary expenses to develop and administer this project. The bulk of the salary expense will be for research and application development.

Supplies

We estimate \$100 for miscellaneous supplies.

Other Services and Charges

We estimate up to \$2400 for a one year service contract for a mobile Internet service plan for three devices from a provider like AT&T Wireless or Verizon.

Capital Outlays

We estimate up to \$1000 for two PDA/Phone devices like a Blackberry 6710, a Palm TungstenSX56 device, or a Motorola MPx200 device. An additional \$1000 is requested for development software such as the Microsoft Smartphone development platform.

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