

## Chapter 8

# Digitizing Library Outreach: Leveraging Bluetooth Beacons and Mobile Applications to Expand Library Outreach

**Somaly Kim Wu**

*University of North Carolina at Charlotte, USA*

**Marc Bess**

*University of North Carolina Charlotte, USA*

**Bob R. Price**

*University of North Carolina Charlotte, USA*

### **ABSTRACT**

*As technologies change, library outreach must similarly evolve to better meet the needs and expectations of library users. Mobile device ownership has steadily increased among all demographics over the past several years in the United States, but particularly among college students. This trend provides libraries with new avenues for outreach. Lack of awareness and access may complicate students' ability to use the information, resources, and services necessary for academic success. Libraries must leverage new technologies and tools, such as Bluetooth beacons and smartphone applications, to increase awareness of resources and services. Rather than relying on solely word-of-mouth outreach methods to increase awareness of resources and services, academic libraries can experiment with marketing technologies that reach users directly through their mobile devices. The ubiquity of mobile devices can make it easier for libraries to serve their users and empower students to become more independent as they seek, analyze, and synthesize information.*

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## **INTRODUCTION**

Libraries have long experimented with new and emerging technologies in order to find better ways of meeting the information needs of their users. As smartphones and other mobile devices become increasingly central to everyday life, libraries must be prepared to utilize wireless technologies to reach users through these devices. Using proximity marketing technologies to expand library marketing and outreach through mobile devices is one way for libraries to take advantage of the increase in device ownership.

Proximity marketing is widely used by retailers to send promotional materials directly to mobile devices in designated areas. Retailers send information about coupons, sales, and other events to potential consumers through the use of strategically placed beacons. While used widely in retail settings to attract potential consumers, few libraries have experimented with using these technologies to reach users. By utilizing proximity marketing technology, libraries can effectively engage users and better connect them with knowledge.

This chapter details the development of a proximity-based mobile application and the implementation of Apple's iBeacon in an academic setting for library outreach. Deployed on devices running iOS7 or later, iBeacon utilizes a low energy signal to detect the location of Bluetooth enabled devices. The chapter will also showcase a mobile application designed to work in conjunction with iBeacon that provides users with library specific mobile alerts. Alerts would provide students with information about new resources, workshops, events, study spaces, and other services. iBeacon detects and approximates the location of a user's Bluetooth-enabled device, and pushes content and alerts through the mobile application. Instead of waiting for library users to come to the reference desk, the application gives the library opportunities to reach students through new methods.

Using funding obtained through a 2014 Institute of Museum and Library Services (IMLS) Library Services and Technology Act (LSTA) grant, the project team who are the authors of this chapter, developed 49er Alerts, a branded mobile application that provides users with information when they are in proximity of specific spaces in the library.

The objectives of the chapter are to:

1. Provide an overview of a grant-funded project to develop a mobile application that would enhance discovery of library's resources and services.
2. Outline the challenges and opportunities associated with mobile application development in an academic library.
3. Increase awareness and usage of iBeacon and Bluetooth technologies.

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