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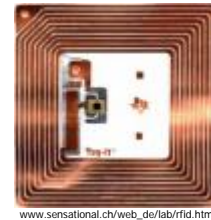
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## REVISED

# Frequently Asked Questions On Radio Frequency Identification (RFID)

### How does RFID work?

Radio frequency identification (RFID) is a method of remotely storing and retrieving data using devices called RFID tags/transponders that can be attached to or incorporated into a product. RFID tags contain antennae to enable them to receive and respond to radio-frequency queries from an RFID transmitter/receiver. [en.wikipedia.org/wiki/RFID](http://en.wikipedia.org/wiki/RFID)



www.sensational.ch/web\_de/lab/rfid.html

### How does RFID work in a library?

In the library context, RFID works by placing a one-inch passive tag, without power supply, in each library item (book, CD, DVD, etc.). Each tag contains only barcode information for that item. When library patrons place items to be checked out on or near a receiver pad and insert their library card, the items are checked out to them. This occurs when the minute electrical current induced in the antenna by the incoming radio frequency scan (from the transmitter/receiver) provides enough power for the tag to send a response to the receiver. Items can also be checked back in easily, saving time and energy, and simplifying up-to-date inventory tasks.

### Why did the Berkeley Public Library decide on this technology?

Berkeley Public Library staff began to investigate RFID technology before the renovated Central Library re-opened, as early as 2000. The Central Library reopened in April 2002 with no increased funding for staff, although the facility is nearly double its original size. In mid-2002 a Library committee was established to address these staffing inadequacies and investigated operations that would offer safety, efficiency, and effective public services without increased staff. RFID was one of the technologies identified.

### Where is RFID currently used?

RFID is presently used in many U.S. public and university libraries and in many libraries worldwide. Many libraries in Northern Europe have used RFID for several years. RFID is also being used for purposes such as vehicle identification and medical-errors avoidance and by a number of retailers, both large and small.

### How and when was the Library's RFID plan made public?

Public discussions of RFID began in August 2002 at open Board of Library Trustees (BOLT) meetings. Throughout the next twelve months, BOLT public meetings included discussions on RFID, often in conjunction with the Berkeley City Council request to address the skyrocketing Worker's Compensation costs. Between October 2003 and January 2004, the Library Director gave ongoing public updates to BOLT on investigations and review of RFID issues. Between

January and April 2004, BOLT deliberated in public session numerous issues related to RFID, including privacy, worker safety, staffing constraints, cost, and workload.

### **What are the costs and benefits of the Berkeley Public Library RFID system?**

Total costs for worker injuries at the Library between 1998 and 2003 were approximately \$2 million. Staffing constraints and rising wages/benefits reduced public service hours by 17% in 2004. The RFID system, purchased in 2004, cost \$650,000 including interest, to be paid over six years. The Board of Library Trustees approved RFID for an investment in long-term capability to promote public service while using efficiency measures to accommodate staffing constraints and reduce worker injury costs.

### **How does RFID benefit the Berkeley Public Library and the public it serves?**

RFID will promote Library efficiency by self-check-out and faster check-in service. RFID will also save money by providing an effective, integrated security system for all the Library branches for the first time. RFID will help Berkeley Public Library focus on service to our patrons for many years, and will be completely paid for in 2009. RFID is expected to reduce staff injuries, thus reducing the Library's Worker's Compensation costs.

### **Is RFID a substitute for a library worker?**

RFID in the check-out / check-in system is intended to promote efficiency and help free library workers to have more contact with the public. By allowing patrons to check out their own materials and by making the Library's check-in process more efficient, RFID allows Library workers to help patrons seek information, find materials, and use Library equipment such as Internet computers and copy machines. Those friendly conversations across the check-out desk will now take place throughout the library. No library staff members were or will be laid off due to the implementation of RFID.

### **How does RFID protect patron confidentiality?**

Because there is only barcode information in the RFID tag, it is not possible to retrieve other information from the tag. No book title, author, or publisher data, no patron name, or use pattern is available through the RFID tag. Furthermore, the range from which these tags can be read is quite limited – approximately two feet. In contrast, it is easy to discern what a patron is reading by looking at the physical materials. Berkeley Public Library believes that the use of the RFID self-check-out system will increase patrons' confidentiality.



[www.checkpointsystems.com/default.aspx?page=ils](http://www.checkpointsystems.com/default.aspx?page=ils)

#### Selected Bibliography

- Bhuptani, Manish and Moradpour, Shahram. *RFID Field Guide: Deploying Radio Frequency Identification Systems*. Prentice Hall, 2005. On order for Berkeley Public Library.
- Shepard, Steven. *RFID: Radio Frequency Identification*. New York: McGraw-Hill, 2005. Central New Books 658.787 Sh47r
- RFID Journal's Frequently Asked Questions -- <http://www.rfidjournal.com/faq/28>
- American Library Association Resolution on Radio Frequency Identification (RFID) Technology and Privacy Principles  
<http://www.ala.org/Template.cfm?Section=ifresolutions&Template=/ContentManagement/ContentDisplay.cfm&ContentID=85331>

**For additional information, call the library at 510-981-6100.**