

# **A PROPOSAL FOR THE DESIGN OF AN RFID STUDENT LABORATORY: ISSUES AND BACKGROUND**

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## **INTRODUCTION**

The purpose of this article is to describe a proposal for a curriculum and supporting laboratory to acquaint students with Radio Frequency Identification (RFID) technology and as a primer for the academic new to the area. RFID technology promises increased efficiency in organizational logistics, customer service process improvements (like automatic checkout from retail outlets), and increased savings associated with the new processes.

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The potential import of RFID is well illustrated by a recent article by Zaheerudin Asif and Munir Mandviwalla in the *Communications of the Association for Information Systems* citing a 2003 article in *Nucleus Research* stating that Wal-Mart alone anticipates savings of \$6.7B in reduced labor costs, \$.6B in out-of-stock supply chain cost reduction, \$.5B in theft reduction costs, and another half a billion dollars in other miscellaneous savings (Asif and Mandviwalla, 2005).

This article proposes a pedagogical approach and a laboratory design to support introducing MIS majors to the concepts and design considerations involved in implementing RFID technology. This in response to the greatly increasing interest (but lack of academic resources) in teaching and learning about RFID technology. As an illustration of the surge in interest in RFID within academia, a search at the ACM (Association for Computing Machinery) digital library shows a total of 365 references overall but only 35 of those references were dated prior to January, 2002 (Cooney, 2005). By comparison, a search of the more mature relational database technology resulted in 31,821 references, prior to January, 2002 there were 4,810 references recorded (Cooney, 2005).

In addition to dealing with the technology itself and the hardware and software interfaces involved, the proposed curriculum and laboratory would acquaint students with the myriad of database and application design issues that RFID implementations raise. The course would be delivered in a laboratory setting and framed using a hypothetical scenario wherein the students are asked to consult on an implementation of RFID technology.