EVOLUTION OF A SECURITY SYSTEM IN A SMALL LIBRARY

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ABSTRACT: This paper was written in response to an e-mail request I made to the IAMSLIC listserv for information about security systems in other research libraries. As manager of the library, I was becoming greatly concerned at the increasing loss of books and journals. Instead of receiving solutions and suggestions from the members, however, the majority of the responses were from those in similar situations who wanted the same information. Many who responded were from small research libraries, open twenty-four hours a day, with no security system and a loss problem, much the same as our Center's library, the focus of this paper.

As book and journal issue losses seemed to increase, I decided it was time to do an inventory of our holdings. After seeing the results of the inventory, I approached the library director at the main campus, explained our situation and asked for help in obtaining at least a minimal security system. The paper describes the outcome of this request.

INTRODUCTION

The William S. Richardson Library at Nova Southeastern University's Oceanographic Center is a small research library, separate (in distance and budget) from the main campus library. The Center is one of the few run on "soft" money, e.g., grants and contracts, brought in by the Center's researchers. Most of the library budget goes for journal subscriptions. Currently subscribing to 108 journals, the library's holdings at present are about 5,000 hardbound volumes, 3,000 books and monographs, various government documents such as Mariners Weather Log, Marine Fisheries Review, Climatological Data for Florida, and various NOAA and NMFS reports, etc. The library also subscribes to the Cambridge Scientific online database, ASFA (Aquatic Sciences and Fisheries Abstracts). There are two computers in the library for accessing the database and the Electronic Library (catalog).

The library is open 24 hours a day and anyone with a gate card to get into the laboratory complex can get into the library. The library serves 18 faculty members in all the

disciplines of marine science, several Ph.D. students in Oceanography, and about 60 students in the masters program which offers M.S. degrees in coastal zone management, marine biology and environmental marine science. Often, undergraduate Ocean Studies/Marine Biology students come from the main campus to use the library, as well. Although they are not supposed to check books out at our library, if no one is around they will take them anyway without letting anyone know.

Due to what seemed to be an increased loss of many books and journals over the past few years, I proceeded to do an inventory of our holdings. After assessing the results (as much as a 30% loss of books alone), I decided it was time to invest in some form of security system. Since our budget could not handle the cost of a comprehensive security system, I took our problem to the main campus. They were in the process of looking into a system for the new library that is to be built this coming year, so they included me in the meetings with security system representatives. Since they handled everything, I did not have to put in a request for proposal (RFP), but for any library that does, an article by Richard W. Boss (1994) gives an excellent detailed example of what should be included in a RFP.

METHODS AND MATERIALS

Problems Taken Into Account In Obtaining a Security System

***Cost*:** Most full-service security systems, including self check-out systems, cost upwards of $30,000. The Oceanographic Center was not prepared to invest this amount of money in the budget and the main campus was not willing to commit that much money to our small library.

Manpower: The library is staffed by me and an evening work-study student. The "official" library hours are between 10:00 A.M. and 10:00 P.M. I staff it during the day, and the work study student supplied by the main campus works 6:00 to 10:00 P.M. However, there are many times when the library is not staffed, such as during lunch breaks, vacations, on weekends or when I am attending meetings and appointments, as well as times when my student is unable to come in.

Old Checkout System

Previous to obtaining a security system, the checkout procedure was based on the honor system. A patron would pull the card, put his/her name on it and leave the card in a box for the librarian. This would no longer work as the tags would have to be deactivated with a deactivation card (or the alarm would go off) and this could only be done by someone on duty (librarian or work-study student). Of course, if no one is there to hear the alarm, patrons can still "walk" with the book or journal. I had to have a system that addressed this problem.

Research of Security Systems

I sat in on meetings with two different companies the Einstein Library was interested in. They both provided video demonstrations of their product.

3-M: "More than twenty years ago, 3M pioneered the concept of electronic protection of library materials" (3M 1999). The components of the 3M Digital Identification System include conversion stations that transition optical barcodes to digital identification tags, 3M™ SelfCheck™ Systems, 3M™ Staff Workstations, 3M™ Tattle-Tape™ Strips and 3M™ Detection Systems. The digital identification tags feature tiny transponders that contain information about the items they mark. A special reading device can decode this information and use it to do a multitude of tasks, such as allowing items to be checked into or out of the library, or making sure items are shelved correctly.

After seeing the demonstration, I came to the conclusion that it is an attractive system, but has some drawbacks. It is expensive and requires replacing *all* the barcodes as they have to be put in precise locations. It also demands inserting wires into the bindings of *all* the books and journals. On the plus side, the wires are hard to detect, unlike the beeper tags used by Checkpoint, the other company considered, which are 2" self-adhesive squares that are attached under or inside the book pocket.

3-M puts out a newsletter called the *Tattler* (3M 1999) which provides information on the latest news regarding the company and its products. For more information on 3-M their web address is: http://www.3M.com.

***Checkpoint*:** Checkpoint Systems, Inc. released its Intelligent Library System (ILS) in March. It, too, is a fully integrated system built upon Radio Frequency Identification (RFID) technology, which includes patron self check-out stations, intelligent sensor, inventory wand, staff station reader, and application software program. The system uses a paper- thin, flexible Circulation Circuit label that is permanently affixed to each item of a collection. The label has an embedded integrated circuit capable of storing information unique to each item along with other library-specific information. Checkpoint has been in the asset protection business for close to 30 years.

Checkpoint is the company presently being used by the main campus. In my mind, this system also has drawbacks as the beepers are easy to locate with only a pocket hiding the beeper. The pocket could be ripped out, along with the beeper tag.

Good points worth noting are the system does not require rebarcoding all the books. The main campus had been using this system for years and was satisfied with it, so this was the one decided upon. The other positive point in Checkpoint's favor was that since the Richardson library's checkout system is still manual, it only requires the deactivation card be inserted into the pocket, rather than having to purchase another piece of equipment to scan and deactivate the beeper wire.

System Procured for the Richardson Library

Since the Main Campus was purchasing the equipment, I had little input into the decision. However, I did request a video monitoring system that would be hooked up to the gate sensors, since the library is not monitored 24-hours. It was my thought that with the camera wired into the security system, if someone did walk out and trip the alarm when no one was around, it would activate the VCR and I would have a picture of the offending party. It was also my hope that just knowing the camera was there would deter some people from purposefully walking out with an item. The system they chose was the Checkpoint Quicksilver system with a single aisle and 2 antennae. The cost was $3455. Checkpoint also gave an estimate for $2567 for a color camera and monitoring system; $2167 for black and white. For more information on Checkpoint, their website address is: http:// checkpointsystems.com.

How the System Works

Before I leave for the day (or any other time I am going to be away for awhile), I press "record" on the VCR. The VCR records at 40H until the alarm is activated and then it drops to 8H. When you want to view the tape you press "scan" and then FF and it fast forwards to where the alarm went off and begins to play. To go to the next alarm you stop the tape, hit "scan" and FF again, continuing until you know you've hit all the alarms. The tapes tells you how many alarms there are, if any, and lets you know the date and time.

Problems Encountered After Installation

When the installer put up the gates, he did not conform with the specifications of the salesman and installed them two feet from the door for some reason. Also, the system worked only for a short time after he left. As a result I had to have him return and put up chains and recalibrate the sensor alarm. The fact that the gates are so far from the door allows students who are so inclined to try and put the books over their head and walk through. Then there was the problem with purchasing the video monitoring system mentioned above. It took almost six months from the time the gates were installed to get the monitoring equipment, for which the main campus did not pay.

Since our books had only been bar-coded by the main campus cataloger for about a year, many of our older books were not bar-coded. So, the next problem was to go through each and every book in the library and check to see, first if it was in the system, and second if it was bar-coded. If not, we had to do one or both. So, the other items required were a roll of barcodes, a roll of beepers, pockets for our journals and cards for the pockets. I did not have to purchase these as I was able to obtain all I needed from the main campus.

After we made sure that every book was bar-coded and entered into the online catalog, we put in the security beeper tag. Instead of putting a beeper on every new journal issue

that came in, we attached a pocket and "slid" the tag inside. We had placed the tag on an index card and cut it to size, so it would slide inside the pocket without being readily visible. Upon binding, the beepers would come out and only one would then be placed permanently in the bound volume. Thus, the beepers could be reused. This prevented patrons from walking out with the single issues, while saving on beeper tags. On the downside, the system used up a lot of pockets, so I came up with another method. I now use small strips of scotch magic mending tape on the top and bottom of the beeper which I attach to the back page of the issue. When the next issue arrives, I carefully "slice" out the tag with an X-acto knife and reuse it in the latest issue. This seems to work well. You can't see the tape, and you aren't using up a lot of pockets and beepers.

Other Problems

One problem it doesn't solve, however, is if a stranger walks out with a book. You've got his/her picture, but if no one knows who it is, so what? Hopefully the system will prove as a deterrent to prevent many of these instances.

Another problem is manpower. Tags have to be put in all the bound journals and this is very time consuming for a solo librarian. Also, since the tapes need to be changed daily, if while on vacation or at a meeting your backup (staff or student) does not come in, the tape doesn't get changed. Lastly, you have to remember to hit "record" each night and "stop" each morning as well as take the time to view the tapes.

CONCLUSIONS

I found the whole process somewhat frustrating: First, I could not get the system I really would have liked – a self-checkout system – which would allow patrons themselves to check out books at any time; and second, there was the problem I encountered in getting the video monitoring system installed and then working correctly. As for the system chosen, the dollar amount of our losses just did not justify a more expensive system. For a new, large library with an extensive collection (especially a large, rare collection), a more expensive system would make most sense. Realistically, however, for a small library on a tight budget, the Checkpoint system we chose is the most feasible option. It does not provide perfect security, but then, in the end, someone who wants to steal a book or journal will find a way to do so, even with a more elaborate security system. It is hoped that even a minimal security system, however, will stop those that simply walk out with a book thinking they will "bring it right back," (but don't) or those that just "forget" to check their items out. It is also hoped that it will make any opportunistic undergraduates think twice before walking off with the books and journals they need for their projects, as well.

When deciding on a system for your library, Michael Stack's (1998) paper on library detection systems offers many suggestions. First and foremost is proving return-on-investment, or ROI. This involves "knowing the library dollar loss, the cost of stopping the loss (specifically, the cost of installing a theft detection system, and substantiating

savings when you recoup the investment)" (Stack, 1998). To do this, you must first inventory your collection. The cost of the book alone is not the only thing to keep in mind. You should include the "professional expertise, time, energy, and additional expense that goes into selecting and processing library materials, as well as the time spent searching for the item." Stack's paper offers a chart to help calculate the annual money lost.

3M and Checkpoint are not the only vendors of theft detection systems. *The Librarian's Yellow Pages* have more extensive lists. Just keep in mind that all systems can be compromised. The purpose is to cut down on losses, not stop them altogether, something I fear is almost impossible. As for our new system, it has already "snagged" a few faculty members walking out with journal issues as well as students walking out with books, and but it is still too early to determine how effective it will be in the long run.

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