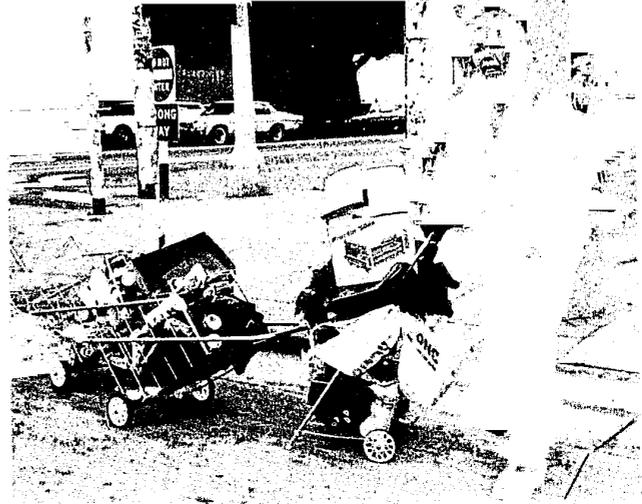


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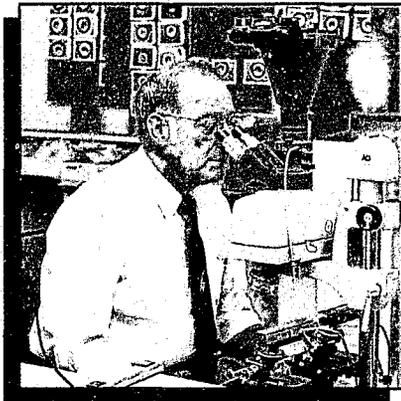
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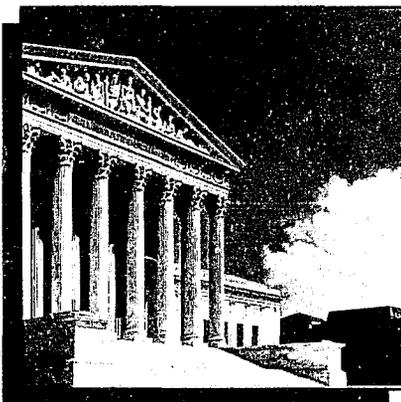
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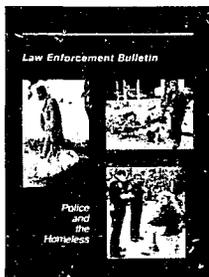
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The Cover: As the number of homeless in this country continues to grow, public policy must address the problems they present to law enforcement. Cover photos courtesy of Victor Alferos, Santa Monica, California, Police Department.

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William S. Sessions, Director

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A Low-Cost Approach to High Technology

By
MARK CLARK

How does a department move out of the time-honored carbon copy world into the computer age? Obviously, this is not an easy question to answer, because the process itself can be a monumental undertaking. Yet, it can be done, as many police departments across the country have proven. This article details the steps taken by the South Portland, Maine,

Police Department to enter into the world of computerization.

When the chief of police in South Portland decided to expedite the department's recordkeeping process with automation, he stipulated certain conditions. First, the task at hand was to simplify department records without deleting any part. Second, only \$25,000 could be used from the department's budget,

and third, the transition would be handled by an officer. That was my assignment—to acquire and maintain the new computer system.

My first step was to talk to the neighboring police department in the Town of Scarborough, since its police department was also interested in automating its record system. Since they also had funds available, the officer assigned to

coordinate the Scarborough computerization effort and I arranged to acquire jointly a computer system for both police departments. This provided an immediate advantage because we could purchase a computer system at a substantial discount since we were buying in larger quantity.

This joint venture later developed into a broad cooperative effort between the City of South Portland, the Town of Scarborough, and the Sanford Police Department. It also created a criminal justice information network that has grown into a statewide standard.

CHOOSING THE RIGHT HARDWARE AND SOFTWARE

Computer Hardware

We concentrated first on hardware needs, primarily because most computer downtime is caused by hardware problems, not by software. Ease of installation and low maintenance costs, as well as readily accessible and long-term hardware support, were our other major concerns.

Because we did not know what our needs were at first, we contacted all the major vendors by means of a reverse bid. These vendors then submitted non-binding hardware proposals of what they believed we needed. These proposals allowed both departments to compare and justify speed (processing) requirements, RAM requirements, main memory storage, and provided an excellent springboard for us to write our actual bid. This also made it easier to

see how much money would be left to purchase software.

After the vendors placed their bids, we met with representatives from each vendor to let them explain why their system was better and what they could do for each department. This was an eye-opening experience, because often what the vendor's literature boasted at bid time was not always exactly what the purchaser actually received. It also allowed us to make educated, progressive decisions toward accurately assessing any longer term needs.

After considering all the options, we decided to purchase a mini-mainframe. This would allow for easier expansion with minimal cost. Also, with a mini-mainframe, a computer terminal can be added for one-half the cost of purchasing a separate personal computer.

Computer Software

The world of computer software is inundated with buzzers,

bells, and flashing colors. At this point, all the major software vendors put on excellent presentations of their packages. Yet, even though these software packages were everything in the world a user could want, they were also accompanied by a price tag ranging from \$8,000 to \$20,000. Packaged systems contain a number of good features, but they also have features that are not wanted or needed. For example, most criminal justice software packages come with a standard computer-aided dispatch system. Yet, for our department, this feature was unnecessary, and therefore, not wanted.

Since the vendors could not supply an applicable software package within our price range, we decided to contact another police department in Maine that had developed its own software using the Relational Database Management approach. This software, written on the Informix SQL RDBMS system, covers topics such as com-

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***...with vision, insight,
and forethought, any
police department can
enter the computer age
with relative ease.***

”



Lieutenant Clark is a member of the South Portland, Maine, Police Department.

plaints, accidents, property/case control, and uniform crime reporting. It is also very flexible and allows systems administrators to customize each program to meet the individual needs of their departments. But, the most important factor to consider was that it was offered to us free of charge. This system provided everything we needed and also allowed us to remain well within budget. Now came the hardest part of the whole process—the task of implementing the automated system.

IMPLEMENTING THE SYSTEM

Without proper planning, implementing a computer system can be very stressful. It is usually simple to install the hardware and to run the wiring, but this is far from the operational stage. With technical assistance from hardware and software vendors, it is usually fairly painless. But, because we did not purchase a software package from a vendor, there was no followup support. Therefore, we had to deal with the following items without benefit of software “experts”:

- Software installation
- System administration
- Customization
- Documentation and
- Training

Software Installation

Installing software is usually fairly simple. The installer simply

has to follow the directions and load the system one disk at a time. In our case, the hardware vendor who set up the equipment was very helpful at this point because the operating system was part of their original bid.

System Administration

System administration is a major concern, because it is at this point that the in-house systems administrator takes on the day-to-day role of problem solver. If the computer system does not work, this person had better know how to solve the problem or at least have a telephone number of someone who can. However, it does not take someone with a computer background to solve most problems. In

“**Throughout this process, it became obvious that all the prior research into the various hardware vendors definitely paid off.**”

this case, with three departments on the same system, systems administrators could use each other as resources or consultants. This is important because in most police departments, the officer who is the systems administrator, as I am, usually has other duties to perform and may not have time to become completely familiar with how the system operates.

Customization

Customization is the process of taking a generic computer program and tailoring it to a department’s exact needs. This is one advantage of the Informix SQL RDBMS system over a purchased software package. Because the programs were customized to duplicate currently used forms and reports, training time was greatly reduced. Officers also did not have to rewrite any of the information they gathered. And dispatchers and data entry personnel were already familiar with the computerized format.

Another feature customized into this system was the prompting lines at the bottom of the computer screen. These prompting lines ask the user for the proper data to enter for each field. For example, if the user was attempting to make a numerical entry and accidentally typed in a letter of the alphabet, the computer screen would flash and tell the user that the entry was invalid.

Another strong point of the system was that alterations could be made immediately at no additional cost. With the majority of software packages on the market today, this is much more difficult, unless the systems administrator has extensive experience and training in computer programming. But, with this type of system, anyone can learn to make such changes without specialized computer education.

Documentation

Documentation was an important step in the process because each

time data were entered or changes were made in the system, they had to be preserved. For this reason, backup copies were made each month and retained, as well as hard copies of the codes, in the event of a system failure. As an added precaution, the backup data were stored off-site in the case of fire or any type of disaster.

Training

Because the departments were not staffed with civilian dispatchers, any officer could be assigned to dispatch duties for 13-week cycles. Therefore, for the system to become fully operational, everyone in the department had to receive training. But, because we had not purchased a commercial software package, there were no support personnel from the vendor showing up to answer questions or solve problems.

Added to this was the fact that most of the departments' personnel were not computer literate. Therefore, I decided to write a handbook/tutorial that would lead the officers step-by-step through the entire process, from data entry to printing files. I kept the handbook's instructions as simple as possible. For example:

1. Type in LOGIN; push return key;
2. If this does not work, make sure the monitor is turned on;
3. Type in your LOGIN.

This may seem oversimplified, but when faced with training 50 officers who worked 3 different shifts, it was much more effective. I also wrote the handbook to include examples of all the programs and

Current Modules Available in the System

- Accident
- Associated people
- Bicycle registration
- Budget
- Business/stores
- CAD
- Calls for service
- Case status
- Court arraignment
- Dog licensing
- Equipment issued
- Evidence
- Firearms permits
- Fixed assets
- Hours
- Intelligence
- Job applicants
- Master name
- Missing/wanted
- Office memos
- Officer training
- Parking tickets
- Personnel
- Property
- Vehicle management

screens. These handbooks were placed at all the terminals, and extra copies were handed out to each officer.

The next step was to allow everyone to experiment on the system for 1 month. During this time, officers entered data into the system and hard copies were kept in case of mistakes. During that time, I arranged for formal training in small groups for the officers. Sixty days from going operational, the system was completely on-line.

Training continued, and the handbook was updated and amended as needed. And, as the officers became more comfortable with the system, they learned to use advanced commands and system shortcuts. Supervisors also received additional training so that they could help the officers assigned to their particular shifts.

Operational Considerations

Throughout this process, it became obvious that all the prior research into the various hardware vendors definitely paid off. For example, in case of problems or questions, the hardware vendor for this system had an 800 telephone number that put the user in contact with an engineer. The engineer could then either dial into the system with a modem, or in most cases, diagnose the problem over the phone. As a result, in the 2 years of operation, the system has not experienced any downtime due to hardware or software problems.

Finally, as our needs grew, so did the software package. If a particular police department needed a program for parking tickets, it was written and documented. Then, copies were given to the other police departments to customize and use.

Point of View

This system has expanded to include 25 programs that effectively meet the needs of the participating police departments.

CONCLUSION

Even though it may seem like a monumental undertaking, with vision, insight, and forethought, any police department can enter the computer age with relative ease. But, most important, this can be accomplished cost effectively. A quote from the technical report of

“
**Without proper
planning,
implementing a
computer system can
be very stressful.**
”

the National Consortium for Justice Information and Statistics noted that this “...information system...is an excellent software package capable of meeting the principle management and operational information needs of law enforcement agencies throughout the State of Maine. Its implementation in numerous agencies both within and outside the State are testimony of its thoughtful design and operational utility.”¹

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Footnote

¹ David J. Roberts and Julie K. Gutierrez, Search Group, Inc., “Report of Technical Assistance provided to the Maine Department of Public Safety,” p. 7. This work is unpublished at this time.

Dispatching Units Improvements for the “First Line”

By BOB BLANKENSHIP

Uniformed patrol officers are generally looked upon as the most essential element of any police organization. Police management views these officers as its first and foremost contact with the public. Investigators and detectives are also perceived as fulfilling a challenging and worthwhile first-line role. Unfortunately, this perception does not always extend to police dispatchers.

Generally, dispatchers and other individuals in communications and recordkeeping posts are often not as highly valued as patrol officers or investigators. Not only is this view incorrect, but it also creates serious problems in police departments around the country. And, in the future, improvements in technology and officer training will be severely undermined if dispatching units, in many cases the department’s first contact with the public, are not re-evaluated and improvements implemented.

The Problem

In most departments, the dispatching unit is part of the Records and Communications Division—the nerve center of the agency. Here, calls for service are relayed to officers for response, and thus, this function serves as the patrol



Chief Blankenship heads the Redding, California, Police Department.

officer’s life-line to assistance and information.

Obviously, departments would be better served if dispatchers remained on the job and became experienced, motivated members of the law enforcement team. However, such a preferred scenario takes place in only a few departments. Personnel in these units are usually expected to perform tasking and stressful duties with little training and even less recognition. This leads to frustration, job burnout, and eventually, decreases the effectiveness of the department in serving the community.

In addition to stressful working conditions, relatively low pay, and little organizational empathy, dispatchers are expected to work in small, cramped rooms with no windows and to answer several telephones, radios, and

teletype machines, without adequate staff to ensure either lunch or rest breaks. These conditions, along with a general lack of respect from officers and investigators, serve to discourage and frustrate dispatchers.

Recommended Changes

Dispatchers often have the first official contact with the public. They talk to potential witnesses, victims, and survivors of violent attacks. They may also speak to people suspected of criminal activity. They keep track of officers in the field at all times. They provide information to officers for record checks, phone calls, and car stops. Because of the importance of these functions, the department should value dispatchers as professionals by making every effort to ensure that the personnel in these positions are properly selected, well-trained, and encouraged to remain with the organization.

Background investigations should be conducted for every applicant who an agency considers hiring. Psychological testing and evaluation should be mandatory for individuals applying for dispatcher positions, enabling an agency to identify those candidates who may not be suited to work in a highly stressful environment.

Departments should develop a training manual to be given to each new dispatcher. The manual should be categorized into weeks, with the first week concentrating on basic information, such as code numbers most often used by dispatchers and officers' call num-

bers. In succeeding weeks, more detailed information should be presented, such as instructing dispatchers on the proper way to handle specific situations and other more complex topics. Also, dispatchers should be assigned to an experienced training officer, one who has been instructed in successful training methods for dispatchers.

"...departments would be better served if dispatchers remained on the job and became experienced, motivated members of the law enforcement team."

Dispatchers should attend a mandatory basic dispatcher course for a minimum of 40 hours. Here, they should be schooled in the criminal and civil code sections dispatchers encounter frequently. It is important that dispatchers understand the elements of these various code sections. This training should also include hands-on, practical exercises in emergency phone situations that are often encountered by police dispatchers,

such as speaking to potential suicides or hostage takers. Supervisory dispatchers should receive further supervisory training, just as other police managers do.

Agencies should ensure that newly assigned dispatchers are familiar with departmental rules, regulations, general orders, and chain of command. Dispatchers should also be familiar with those employees with whom they will be working, either directly or indirectly.

Conclusion

Dispatching units are essential to the mission of all police agencies. Yet, many departments suffer from high turnover and burnout rates for personnel assigned to these positions. As the potential pool of candidates for these and all law enforcement positions becomes smaller, it will be increasingly important for agencies to hire and train qualified personnel. Until significant improvements are made in dispatching units, however, many departments will find it difficult to do so. The recommendations outlined above are intended to offer viable solutions to a problem which, left unchecked, may result in serious consequences for many departments.

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Point of View is a forum for law enforcement professionals to suggest recommendations to improve police work. Submissions for this feature should be no more than 750 words, typed, double-spaced, and forwarded to Editor, *FBI Law Enforcement Bulletin*, Room 7262, 10th & Pennsylvania Ave., NW, Washington, DC 20535.