POLICE COMPUTERIZATION SURVEY

PCCD DEVELOPING A PUBLIC DOMAIN POLICE INFORMATION SYSTEM

Many of Pennsylvania's small- and medium-sized police departments are entering the early stages of automating their information systems. However, many lack experience in determining their needs, assessing the adequacy of the software and hardware that is available, and selecting systems which will effectively address their multi-faceted responsibilities. Without some assistance in these areas, departments may acquire systems that are unresponsive to their needs, or even obsolete by the time of installation.

In order to provide assistance to departments seeking to automate their records, the Pennsylvania Commission on Crime and Delinquency (PCCD) set aside federal Justice Assistance Act funds in a priority program to develop a public domain police information system. The Pennsylvania Law Enforcement Management Information System (PA-LEMIS), currently in the developmental process, will automate the basic management and administrative functions of small- and medium-sized departments. The system will run on various micro-computers and is being developed under the dBASE IV database management system. The system is tailored to the specific needs of Pennsylvania departments and will include incident reporting, name and vehicle searches, wants/warrants, traffic citations, accident, Uniform Crime Reporting and personnel functions.

The *Justice Analyst* series is designed to summarize the results of policy analysis in the areas of criminal and juvenile justice for the benefit of state and local policymakers and the general public. For the current issue we focus on the use of computers in Pennsylvania police departments.

We are most interested in knowing your reactions to this report and would be pleased to answer any questions. Also, any suggestions of topics for future *Justice Analyst* issues are welcomed. Please write to us at P. O. Box 1167, Federal Square Station, Harrisburg, Pennsylvania 17108-1167.

James Thomas
Executive Director

The system is being designed by Search Group, Inc., under the direction of PCCD and a PCCD-appointed project advisory board of law enforcement experts. Five departments are serving as beta test sites for the system. When testing is completed in several months, the system will be made available for distribution statewide as a public domain software product.

As we approach the end of the developmental process, one question which arises is how many departments in the Commonwealth are already automated but could benefit from a change in information processing, or how many departments are not automated but are interested in some

level of automation. Since this information was not available from any source in the state, PCCD developed a brief questionnaire to collect some of this information. The following information was drawn from this survey and was helpful in finalizing the software package.

PCCD CONDUCTS A COMPUTER SURVEY OF PA. POLICE DEPARTMENTS

The Police Computerization Survey Justice Analyst is intended as a resource for law enforcement professionals interested in the development of computer systems and computer applications in Pennsylvania police departments. This report summarizes information about computer hardware and software currently being used by departments throughout the state, as well as information about computer needs in local law enforcement.
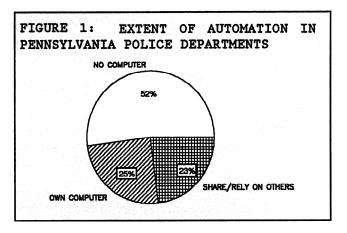
The data presented in this report was gathered through a survey of all police departments in the Commonwealth. In August of 1989, a brief six-item questionnaire was sent to all departments. Table 1 summarizes the distribution of, and the response to, the questionnaire.

A total of 762 departments responded to the computer survey. The lowest response rates were from the smaller departments; 74% of the departments with no full-time officers and 36% of those with 1 to 5 full-

time officers did not respond. However, based on the responses that were received from departments of this size, it can be concluded with confidence that there is little automation in the smallest departments.

The response of our larger departments was excellent. Of the 519 questionnaires sent to departments with 6 or more full-time officers, 426 or 82% responded.

SURVEY FINDS LESS THAN 200 DEPARTMENTS AUTOMATED

As shown in Figure 1, of the 762 departments responding to the survey, 52% indicated they did not have a computer and did not have access to computer services elsewhere, 25% indicated they have access to a computer in their department, and 23% indicated they relied on (or shared with) another agency for computer services.
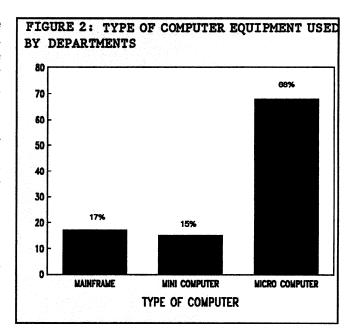
FIGURE 1: EXTENT OF AUTOMATION IN PENNSYLVANIA POLICE DEPARTMENTS

NO COMPUTER 52%
OWN COMPUTER 25%
SHARE/RELY ON OTHERS 23%

TABLE 1: RESPONSE TO THE POLICE COMPUTERIZATION SURVEY

SIZE OF DEPT.	NUMBER SENT QUESTIONNAIRE	NUMBER NOT RESPONDING	NUMBER RESPONDING
No Full-Time Officers	258	192 (74%)	66 (26%)
1-5 Officers	419	150 (36%)	270 (64%)
6-10 Officers	256	48 (19%)	209 (81%)
11-25 Officers	196	33 (17%)	163 (83%)
26-50 Officers	44	7 (16%)	37 (84%)
50+ Full-Time Officers	23	6 (26%)	17 (74%)
TOTALS:	1196	436 (36%)	762 (64%)

Table 2 presents the findings in Figure 1 by size of department. As one might assume, few part-time departments have access to computers. Also, many of our smaller, full-time departments do not currently have access. Of the 642 departments with complements of 1 to 25 full-time officers, 52% indicated they do not have access to computers. Most of the departments in this size range that do have access to automation rely on another agency for these services. Only 151 or 24% of the departments have their own computer. Our larger departments seem to be in good shape as only four (or 7%) of the 54 large departments responding indicated that they do not have access to computer services.

FIGURE 2: TYPE OF COMPUTER EQUIPMENT USED BY DEPARTMENTS

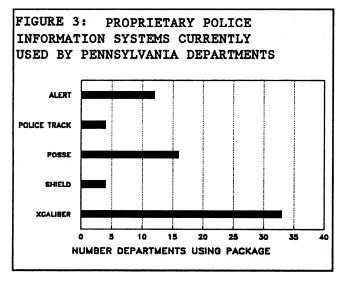## MICRO-COMPUTERS ARE THE EQUIPMENT OF CHOICE IN DEPARTMENTS

Of the 193 departments reporting access to their own computer, 132 (or 68%) indicated their equipment is a micro-computer, 28 (or 15%) indicated a mini-computer, and 33 (or 17%) indicated a mainframe computer. The micro-computers are rather evenly distributed throughout departments ranging in size from one to fifty officers. Although it might be expected that the larger computers are found in only the largest of the departments, about 50% of the mini-computers and mainframe computers are located in departments in the 11-25 officer size range.

FEW DATABASE MANAGEMENT SOFTWARE PACKAGES ARE CURRENTLY USED

As part of our effort to determine the need for a public domain police information system, we asked the survey respondents, which indicated they are automated, to identify proprietary software packages they use to produce their information. Of the 181 respondents indicating they are using proprietary software packages, 42% (76 departments) indicated they are currently using a proprietary police records management system. The Excaliber System was the most popular package (33 departments).

TABLE 2: AVAILABILITY OF COMPUTERS TO DEPARTMENTS

SIZE OF DEPT.	NUMBER RESPONDING	TYPE OF COMPUTER ACCESS		
		HAVE OWN	SHARE	NONE
No. Full-Time Officers	66	1 (2%)	12 (18%)	53 (80%)
1-5 Officers	270	26 (10%)	89 (33%)	155 (57%)
6-10 Officers	209	49 (24%)	39 (19%)	121 (57%)
11-25 Officers	163	76 (47%)	28 (17%)	59 (36%)
26-50 Officers	37	28 (76%)	5 (14%)	4 (10%)
50+ Full-Time Officers	17	13 (76%)	4 (24%)	0 (0%)
TOTALS:	762	193 (25%)	177 (23%)	392 (52%)

FIGURE 3: PROPRIETARY POLICE INFORMATION SYSTEMS CURRENTLY USED BY PENNSYLVANIA DEPARTMENTS

Chart showing number of departments using each package:
- ALERT: ~12
- POLICE TRACK: ~3
- POSSE: ~16
- SHIELD: ~3
- XCALIBER: ~34

NUMBER DEPARTMENTS USING PACKAGE (0 to 40)

MOST AUTOMATION IS IN SOUTHEASTERN PENNSYLVANIA

Of the 193 departments reporting some level of automation, 34% (or 66 departments) are located in southeastern Pennsylvania. The central and northwestern sections of the Commonwealth report the lowest levels of automation.

DEPARTMENTS IDENTIFY AUTOMATION-RELATED PROBLEMS

A number of respondents took advantage of the opportunity offered in the survey to provide comments regarding automation. The comments offered most frequently included:

(1)   Many departments operate on very limited budgets and report they cannot purchase their own computer system.

(2)   There is a conviction among respondents that any computer system will require modification before it is operational and meets the specific needs of a particular department.

(3)   There is an expectation that the department itself will not have the expertise to develop, maintain, and modify a system as needs may arise.

(4)   Smaller departments indicate that they need to be able to share and exchange information with other agencies.

It seems that several of these issues may be addressed at the state level. State assistance could be provided to local departments in the following areas: (1) assisting departments in the use of the existing state computer purchase contracts and possibly making multiple purchases at a reduced cost; (2) providing "turnkey" systems; and (3) developing system support services at a reasonable cost. PCCD will be taking these points into consideration as we finalize the PA-LEMIS.

FUTURE OF AUTOMATION IN LAW ENFORCEMENT

A good information system, one that provides accurate and pertinent information to those who need it when they need it, is critical to the operation of any police department. Pennsylvania law enforcement administrators are increasingly realizing that their information systems need to be automated. Although our survey found that less than 200 of our departments are currently automated, we also found widespread agreement among the respondents that their information systems need to be automated. Virtually all the responding departments want to automate, are already automated to some extent, or have made plans to do so. Most of the systems in use, or planned, are micro-computer based systems. These survey findings indicate that PA-LEMIS should be right on target when it becomes available for distribution.

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