

MEMORANDUM
February 28, 2008

To: Chief W. Ronald Olin

From: Captain Stephen A. Zarnowiec

Ref: In-car police video

Police in-car video systems provide transparency to the community's law enforcement function while providing clear evidence furthering prosecution of criminals, and provide valuable feedback on officer performance. The result protects members of the community and officers from misperceptions about police contacts.

Police in-car video offers improved liability protection for police operations. Absent video, a review of an incident and subsequent determination of liability is often reliant only on the statements of the involved parties. An allegation of improper action can be more clearly evaluated if a detailed record exists. In-car video affords a detailed record of police activities. If that video contains pre-event capture, the liability review benefits more fully from the ability to review what was recorded just prior to the event in question.

A review of area law enforcement agencies shows police in-car video has become standard equipment in police patrol vehicles. From a public expectation standpoint, police in-car video has been a societal norm for years. Our review of thirty-one neighboring law enforcement agencies found that all have their patrol fleets equipped with video systems. These agencies include: Baldwin Police, Basehor Police, Bonner Springs Police, Douglas County Sheriff's Office, Eudora Police, Fairway Police, Franklin County Sheriff's Office, Jefferson County Sheriff's Office, Johnson County Sheriff's Office, Kansas City Kansas Police, Kansas City Missouri Police, Kansas Highway Patrol, Lansing Police, Leavenworth County Sheriff's Office, Leavenworth Police, Leawood Police, Lenexa Police, Mission Police, Olathe Police, Overland Park Police, Ottawa Police, Prairie Village Police, Roeland Park Police, Shawnee County Sheriff's Office, Shawnee Police, Tonganoxie Police, Topeka Police, University of Kansas Medical Center Police, University of Kansas Police, and Westwood Police. Only the Edwardsville Police Department was found to be lacking fleet-wide in-car video capabilities and that was due to having only two of their five vehicles equipped for video.

The Lawrence Police Department has long-term experience utilizing police in-car video systems using multiple technologies. We have spent many years using experimentation and research, one car at a time, in order to introduce an appropriate technology when funding would allow. Throughout the past several years the Patrol Division has examined several VHS based systems. Upon the creation of our Traffic Unit, seven vehicles were equipped with older VHS technology. As digital in-car

systems became feasible, we researched and evaluated those systems. From that research we progressed to one digital video recorder which is shared by two patrol vehicles and the Traffic Unit Breath Alcohol Testing van. Funding for expanding our use of digital recording systems has not been available since the initial acquisition of digital technology.

While we have not been able to equip our fleet, our research, communication with agencies using in-car video, and our direct experimentation with of in-car video has given us a strong understanding of how to properly integrate this technology into our operations. Equipment selection is critically important in order to avoid a purchase that fails. Any systems and equipment must be compatible with our existing infrastructure and methods of deployment in order provide a successful system. We have identified the following major best practice project concepts:

- Only International Association of Chiefs of Police (IACP), In-car Video Guideline compliant systems should be considered.
- Successful overall system management will require a digital system as the increased personnel resource overhead associated with answering requests for production of captured video from taped systems is cost prohibitive.

Pre-event capture (the ability of the video system to include what occurred for a period of time prior to the system being activated by the operator) is absolutely necessary and can only be found in newer generation digital systems.

- Adding additional non-integrated systems to the vehicle equipment already in place statistically increases the potential down-time for a given patrol vehicle thereby wasting officer availability time. Acceptable systems must be capable of utilizing our existing Mobile Data Computers (MDCs) for control of in-car video recorder functions.

The standard features now offered by vendors for vehicle mounted in-car video systems are sufficient to require any viable system be capable of supporting simultaneous recording of: a minimum of three cameras (one forward, one watching the interior of the car, and one watching the side of the car where officers engage in longer term contacts with people); two officer belt mounted microphone transmitters; and one vehicle interior microphone.

- The in-car equipment must be robust enough to operate 24/7 as we do not have a "twin fleet" (one fleet of outgoing officers and one fleet of incoming officers) architecture.

Any system utilized must be compatible with our existing in-house data storage servers and network architecture.

- All data, video and audio information collected through any system must remain the property of our department, and read only, ad-hoc, access to this information, as it is stored on the video storage infrastructure through the system's software/database, must be authorized and supported.
- Any audio or video codec used by a vendor should be common and non proprietary. An alternative is license to use and distribute the codec for the purpose of accessing or reviewing data, video or audio data recorded, stored, and maintained by our department.

In-car video requires support infrastructure beyond the actual vehicle components. The implementation of in-car video will require: video storage infrastructure, video docking infrastructure to facilitate the download of field recorded data, video, and audio, vehicle mounted camera and audio components for vehicles, sufficient numbers of officer worn audio transmitters and in-car video/audio data recording units to support one full shift of officers recording in the field while the last shift's recorders and transmitters are downloading and charging. Network and software systems must be in place to allow the review and production of information from the vehicle mounted equipment. These systems must allow officers, supervisors, the Evidence Unit, the Records Division, the Investigations Division, the Internal Affairs Division, and other users to be able to view, work with, and produce information from the recorded material.

Because server and software infrastructure are required for one or several cars, and the vehicles and officers must have redundancy on microphone, transmitter, and in-car storage in order to operate without downtime at shift change, the individual cost per car becomes a sliding scale based upon the number of cars which will be equipped. Project costs per car, including major components and infrastructure, are estimated and included in a table attachment to this memorandum.

The costs listed are estimates and will vary when the project is bid due to the uniqueness of vendor specific solutions and pricing. The project analysis is based equipping 36 of our vehicles including all marked Patrol Division vehicles, and upgrading all Traffic Unit vehicles to digital video capability. We have planned to reduce project costs through utilizing in-house expertise for software installation, server assembly, storage infrastructure installation, and officer training. Any vendor solution will require a statement of work providing for this arrangement.

An existing department in-car video policy is in place. Only minor changes to cover the administration of how and when officers would download the digital storage units would be needed. Officer and supervisor training will be required to teach officers how to use the specific system implemented and to re-assert familiarity with department policy. Our Technology Division will need time to integrate the systems with their document management infrastructure as the system is introduced.

Staged deployment of the project will be required in order to work properly through unforeseen software compatibility and implementation problems. The process

would be most efficient changing out the Traffic Unit systems first, and progressing to the Patrol fleet once the initial deployment has been tested. The project timeline would require about eight months implementation after a signed vendor agreement.

I request \$260,000 be allocated for the purpose of implementing a digital in-car video system for our department. We are prepared to submit specifications to continue the City's procurement process if the source of funding is identified for this important project.

Thank you for your consideration of this request.



Captain Stephen A. Zarnowiec
Operations Bureau

Attachment:

Table of Per-Car Budgetary Cost for Digital In-Car Video
 (Based upon a system design intent of completing all 36 vehicles over time)

Budgetary Cost Projection by Number of Cars		
Number of Cars	Per-Car Cost	Estimated Total Cost
1	\$33,400	\$33,400
2	\$20,280	\$40,560
3	\$15,906	\$47,718
4	\$13,720	\$54,880
5	\$12,408	\$62,040
6	\$11,533	\$69,198
7	\$10,908	\$76,356
8	\$10,440	\$83,520
9	\$10,171	\$91,539
10	\$9,784	\$97,840
11	\$9,545	\$104,995
12	\$9,346	\$112,152
13	\$9,178	\$119,314
14	\$9,034	\$126,476
15	\$8,909	\$133,636
16	\$8,800	\$140,800
17	\$8,653	\$147,101
18	\$8,633	\$155,394
19	\$8,405	\$159,695
20	\$8,300	\$166,000
21	\$8,204	\$172,284
22	\$8,118	\$178,596
23	\$8,039	\$184,897
24	\$7,966	\$191,184
25	\$7,900	\$197,500
26	\$7,838	\$203,786
27	\$7,781	\$210,087
28	\$7,728	\$216,384
29	\$7,679	\$222,691
30	\$7,633	\$228,990
31	\$7,590	\$235,290
32	\$7,550	\$241,600
33	\$7,512	\$247,896
34	\$7,476	\$246,708
35	\$7,442	\$260,470
36	\$7,441	\$267,876