



DATE: June 1, 2017

TO: Council Technology Application Committee

FROM: Director of Information Technology/CIO

SUBJECT: City Recorded Video Data and Retention Costs

RECOMMENDATION

That the Committee discusses the costs associated with extension of the retention period of city camera video data to one year to meet the requirements set forth by existing government codes regarding video retention.

BACKGROUND

At the February 2, 2017 CTAC meeting, the Committee requested an agenda item to discuss costs associated with potential extension of the retention period of city camera video data to one year. This report provides the Committee with a list of city cameras, the total current recorded video data capacity, and a cost estimate to extend the retention period to comply with state video recording retention requirements.

This report focuses solely on the cost of compliance with existing state law regarding recorded video. An interdepartmental staff working group is currently developing a policy to guide V5 public safety camera placement throughout the City anticipated to come before this Committee in September.

DISCUSSION

Article 4, Section 34090.6 of the California Government Code grants the head of a department of a city the discretion to destroy recordings of routine video monitoring after one year. Routine video monitoring is defined as "video recording by video or electronic imaging system designed to record the regular and ongoing operations of the department, including in-car systems, jail observation systems, and building security recording systems." All the video captured by the City's camera systems is considered routine video monitoring, and as such must be retained for at least one year before it may be destroyed. Though staff have updated the Records Retention Program (Administrative Rule 1.9) to reflect Article 4, Section 34090.6, the City's video storage capacity will also need to be upgraded to fully comply with this retention period requirement.

Body worn public safety cameras are not considered routine video monitoring, and are therefore not subject to Article 4, Section 34090.6. Retention of video recorded by body worn cameras is governed by AB 69, which sets a minimum retention period of 60 days for non-evidentiary data. Currently, the Hayward Police Department's internal policies require retaining non-evidentiary video data for 90 days before deletion. Video data related to a criminal or administrative investigation is retained for up to five years, as are other evidentiary materials.

This analysis looked at the costs of complying with these retention requirements for both City-Operated and Public Safety Cameras. The discussion below is grouped into these categories.

CITY-OPERATED CAMERAS

City Hall, Watkins/Mission Garage, Main Library:

City Hall currently has 26 cameras deployed throughout the building and basement garage. The Watkins/Mission garage is outfitted with 17 cameras, while the Main Library operates one camera on their property. All 44 cameras currently record video at 6 frames per second at a resolution of 1280x960, but are capable of recording at 25 frames per second at a resolution of 3072x2048. The camera system currently utilizes a 30-day retention period for recorded video.

A project is already underway to upgrade the server supporting all 44 cameras which cover all three locations mentioned above. Each camera is estimated to require 2TB of storage to achieve one year retention of video. The project will increase storage capacity of the server to 120TB (RAID 6 configuration). On Target Electronics, the City's current camera vendor for these locations, has quoted the upgrade cost at \$9,550.80, which includes a parts and labor warranty spanning 3 years.

Corporation Yard:

The Corporation Yard currently operates 7 cameras. The current configuration records video onto the same server used by the City Hall, Watkins garage, and Main Library camera system. All 7 cameras record at 6 frames per second at a resolution of 1280x960, but are also capable of recording at 25 frames per second at a resolution of 3072x2048. Retention is set to 30-days.

Staff is currently exploring upgrade options with On Target Electronics, the same vendor contracted for the City Hall project. Plans are for an installation of a separate camera server at the corporation yard site. The vendor has provided an estimate for a server with two storage options. The initial quote estimates are \$3,200 for a server without RAID (data redundancy) and \$6,400 for a server with a RAID configuration. These cost estimates include a 3-year parts and labor warranty.

WPCF Water Treatment Facility:

There are currently 4 cameras in operation at the waste water treatment facility. The cameras are motion activated, and record at 10 frames per second at a resolution of 720p. These cameras retain approximately 6 months of data.

To double the retention of the current system, NetTronics, the vendor for this system, has estimated the system upgrade to cost roughly \$30,000. This one-time cost would include labor, equipment, sales tax, and one year of support. The new system would continue to record at 720p, 10 frames per second.

Hayward Executive Airport:

The Hayward Airport currently operates 18 cameras, 15 of which are deployed throughout the airfield and 3 are located within the administrative building. The cameras record at a resolution of 1080p and frame rate of 6fps. The retention period for video is currently 60 days.

To achieve one year retention, the system would require 162TB of storage for the current configuration of cameras. Each server stores 48TB of video. Therefore, 4 servers would be required. RFI has quoted the approximate cost of the upgrade to be \$60,000 (4 - 48TB servers at \$14k each) plus an additional \$5,000 (\$150/hr. x 8 hrs. x 4 servers) for labor for a total estimated cost of \$65,000. The cost of equipment includes 3 years of support and the camera system would continue to record at 1080p and 6fps.

Streets Division: Illegal Dumping cameras:

The Streets Division of the Maintenance Services department currently operates 2 solar-powered cameras to monitor illegal dumping. Both cameras store video on a local memory card with a maximum capacity of 128GB which is equivalent to 4 days of recorded video. Although memory on the camera is limited, recordings are only activated by motion, and cameras can continue recording without the need to download video for approximately 2 weeks.

To achieve one year retention with continuous recording, the only option would be to mount the cameras permanently in a location with a power source. Although this would allow for network video recording and larger storage space for recordings, it would defeat the purpose of having the flexibility to move the cameras to various dump-site locations.

It is important to note that despite the memory capacity limit of 128GB, media is only retrieved and saved to a computer when an illegal dump has occurred. It would be possible to establish a policy with staff to retain these recordings on the existing computer system for one year with the use of external hard drives. With the use of space at 128GB for two weeks, retaining video for one year (3TB of data for each camera) would require the use of an external hard drive at a one-time cost of approximately \$200 (6-8TB External hard drive). As a note, no additional staff time is anticipated to retrieve video because downloading video is already a current routine task of Streets Division staff for this camera system.

PUBLIC SAFETY

Body Worn Cameras:

The Hayward Police Department's internal policies require retaining non-evidentiary video data for 90 days before deletion which complies with the requirements of retaining video at least 60 days per AB 69. Body worn camera video currently records at 480p which translates to 0.9GB of data per hour. The Police Department will be upgrading to the Axon Flex 2 or Axon Body 2 cameras, which capture video at 720p and 1080p. These are both at a higher framerate than the current versions of cameras deployed. These higher resolutions will more than double the Police Department's year-over-year data needs because video with these new deployments will record at a minimum of 720p, which translates to 2.4GB per hour. Short term, the storage space currently allocated towards the Hayward Police Department meets our storage needs. However, when the cameras are upgraded, our storage needs will likely need to be reassessed. The IT Department recommends transitioning to the unlimited data plan which eliminates space requirements and hedges against any future changes to video retention rules or regulations. The cost of moving to the unlimited data plan would add an additional \$30,000 annually to the City's annual evidence.com maintenance costs.

Police Department Campus and Internal Cameras:

The Police Department has a camera system which covers the external campus as well as its internal, secure locations. This system was recently upgraded to add storage space and currently maintains data for a one-year retention period. The cameras record at 320x240 resolution at 7 fps.

Public Safety Cameras:

The Police Department initially deployed public safety cameras in the City of Hayward for a pilot project to evaluate the feasibility and effectiveness of this camera technology. The pilot project was successful and the Police Department has purchased sixteen of these cameras, ten of them already in use. The remaining six cameras will not be deployed until more public engagement occurs regarding the policy for placement of public safety security cameras. Video data for this solution is stored at D1 resolution (720x480) and the contract agreement provides a rolling one-year video retention schedule for this video data, thus no adjustments will need to be made. The data storage is an externally hosted, cloud-based solution.

FISCAL IMPACT

To evaluate the fiscal impact of a one-year retention, both initial costs and ongoing annual maintenance costs were considered. In summary, the estimated initial costs are \$110,950.80 and the body worn camera program will add an annual maintenance cost of \$30,000 to the City's current maintenance to achieve a one-year data retention. The IT team expects future maintenance on the initial upgrades and will address those concerns in future budget discussions for FY2023 or beyond. The table below breaks out the costs. These estimates are not accounted for in FY2018 budget planning and would need to be addressed mid-year or in FY2019.

LOCATION	COST TYPE	COST
City Hall, Watkins/Mission Garage, and the Main Library	One-time	\$9,550.80
Corporation Yard	One-time	\$6,400.00
WPCF Water Treatment Plant	One-time	\$30,000.00
Hayward Executive Airport	One-time	\$65,000.00
<u>Total Estimated One-time Cost:</u>		<u>110,950.80</u>
Body Worn Cameras	Annual	\$30,000.00
<u>Total Estimated Ongoing Maintenance Cost:</u>		<u>\$30,000.00</u>

NEXT STEPS

Staff recommends that CTAC review and discuss the cost analysis and fiscal implications of extending the retention period of city camera video data.

Prepared by: Marc Andres, IT Technician II

Recommended by: Adam Kostrzak, IT Director/CIO

Approved by:



Kelly McAdoo, City Manager

City Hall, Mission/Watkins Garage/Main Library Server Upgrade Quote



On Target Electronics

Contractor Lic. # 912437

Quote	
2/13/17	22188
JOB TYPE	CCTV
P.O. No.	
PROJECT	City Hall
CONTACT	Liz Sanchez

CUSTOMER / BILL TO

City of Hayward
777 B St.
Hayward, CA 94541

SHIP TO / INSTALL SITE

City of Hayward
777 B St.
Hayward, CA 94541

Item	SERVICE / ITEM DESCRIPTION	Qty	Cost	Total
HD-ST10VX4	Seagate Skyhawk Surveillance 10TB HD, 256MB, 6GB, SATA 3. The above drives are configured as RAID 6 with minimum of 4 drives and a two drive fault tolerance. NOTES All labor and sales tax are included on the price of the server. There are 12 10TB drives being charged to the City. There are 44 cameras that are currently being recorded on the server. Each camera will take 2TB of space on the drives. The software will be changed with new and improved one. The same software will exist at City Hall, Garage, Library, Corporation Yard and partially at animal shelter	12	795.90	9,550.80T
WRNTY3Y	All products listed, are covered by a 3 year parts and labor warranty.		0.00	0.00

PAYMENT TERMS	*	Subtotal	\$9,550.80
Your signature constitutes your acceptance of the terms above and serves as your purchase order for the equipment and services listed.		Sales Tax (0.0%)	\$0.00
Accepted by:		Total	\$9,550.80

NAME DATE

Corporation Yard Server Quote



On Target Electronics

2812 Winthrop Ave.
 San Ramon, CA 94583
 866-683-0444 info@otecctv.com

Quote

3/13/17

22192

JOB TYPE	CCTV
P.O. No.	
PROJECT	
CONTACT	Teresa Stubs

CUSTOMER / BILL TO

City of Hayward
 777 B St.
 Hayward, CA 94541

SHIP TO / INSTALL SITE

Maintenance Services Dept.
 24505 Soto Rd.
 Hayward, CA 94544
 USA

Item	SERVICE / ITEM DESCRIPTION	Qty	Cost	Total
NS-W7R-1000	NAS server with Windows 7 Pro,64bit, 4U Rack mount case, 10 TB storage, Asus PRIME B250M-A LGA1151/ Quad rossFireX/ Intel B250/ DDR4/A&GbE/ MicroATX Motherboard, 120GB SSD, DVD writer.	1	3,278.00	3,278.00T
	Sales tax is included in purchase price			
L2M	LABOR Installation of server included in price.			
	The included server does not offer RAID. Other servers are available with these capabilities. It should record close to a year. But since that depends on the amount of data being recorded with motion. If that is not achieved, additional hard drive(s) can be installed without loss of previousdata.			
WRNTY3Y	All products listed, are covered by a 3 year parts and labor warranty.		0.00	0.00

PAYMENT TERMS

*

Your signature constitutes your acceptance of the terms above and serves as your purchase order for the equipment and services listed.

Accepted by:

NAME

DATE

Subtotal \$3,278.00

Sales Tax (0.0%) \$0.00

Total \$3,278.00