PRIMA 2014
WEBINAR SERIES

Risk Reduction through Patrol-based Video Recording Systems

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Orange County Sheriff's Department

Types of Risk

- Risk of Design failure
- Litigation and Risk Management
- Policy Risk
- Financial Risk
- Stakeholder/User Risk (loss of confidence)
- Leadership support (perception)
- Goodwill Risk
  - Loss of trust from the public

Why use a patrol video system ?

- The PVS is designed to **assist** and **complement** the officer in the performance of his or her duties and supplements the officer's report.
- The PVS is helping the Department meet its goal of efficiently and effectively **serving** the community.
- Improving our department's **accountability.**
- Improving Community **relations** and Media **perceptions.**
- **Transparency** to constituents achieved

Why use a patrol video system ?

- Strengthening departmental **leadership.**
- Advancing criminal **prosecution** and case **resolution.**
- **Enhancing** deputy performance and professionalism.
- Increasing homeland **security.**
- Reducing our department's exposure to **liability.**
- Enhancing new recruit and in-service **training** (post-incident video review).

What are Patrol-based Video Systems?

- In-car video
- Body-worn cameras
- Surveillance cameras



AND

- The public!
  - 335 million devices (phones)

In-Car Operational Overview

SIMPLE OPERATION: "Stop" record is only required manual function.



Incident Class is Automatically stored and passed to the Server for Appropriate processing.

"No Citation"
"Citation Issued"
"DUI"

Auto-on with Ignition / Auto-off after Upload.
Auto-focus / Auto-Iris
Auto Pre-Event – up to 60 seconds
Auto-Trigger (Lights, Siren, Remote-VLP, Crash, etc.)
Automatic Transfer to Server
Auto-Clean of Memory

"Solid State"
Low Power Requirements 1.5 Amps







Nightwatch Camera for Superior Low Light Performance (1 Lux down to 0.03 Lux with Nightwatch)

VoiceLink Plus: 900 Mhz Digital Spread Spectrum with Remote Record Trigger

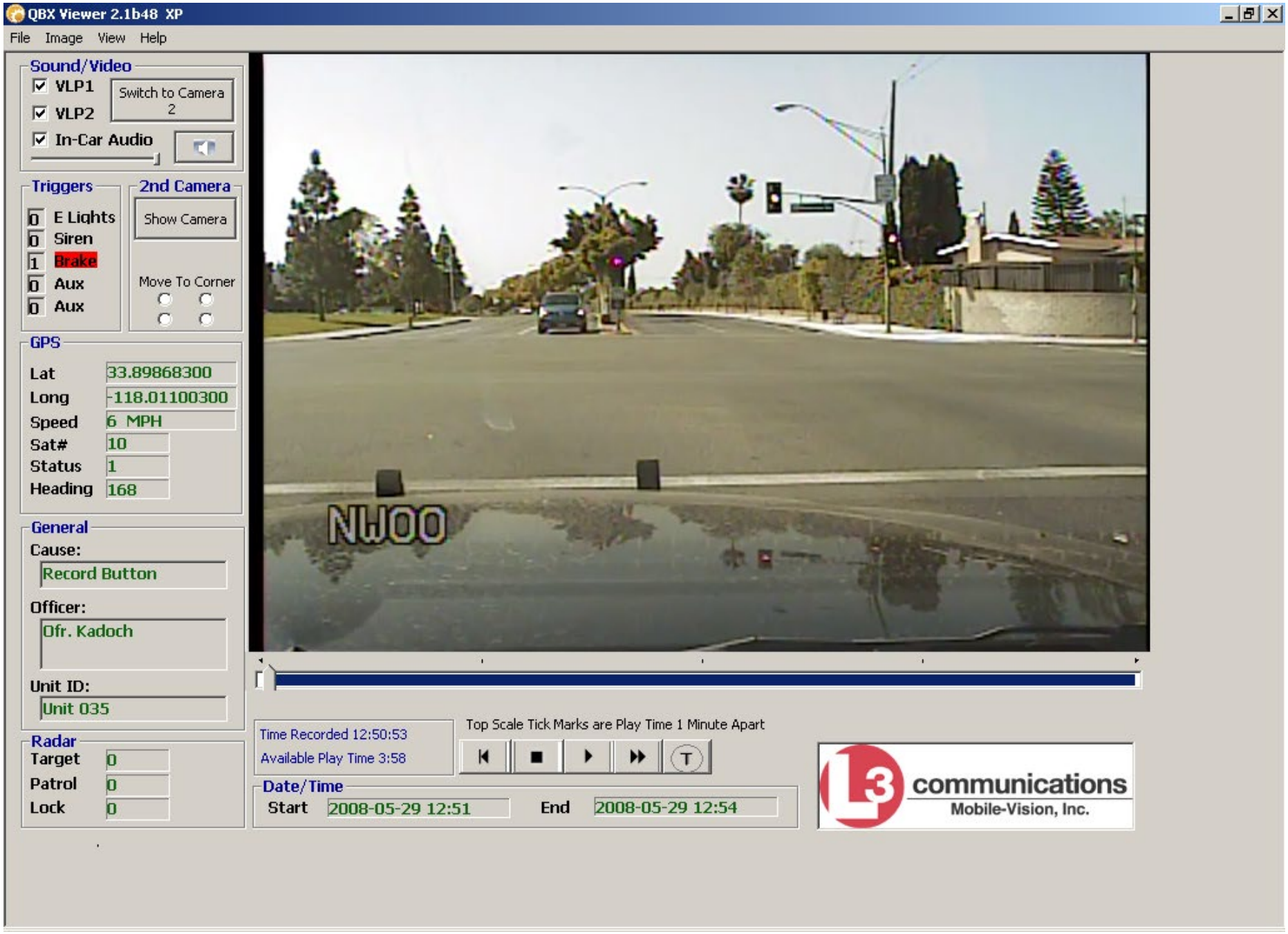
Other Key Features

- ✓Pre-Event Recording
- ✓Auto-Record Triggering
- ✓In Car "Incident Classification"
- ✓D1 Resolution (720 x 480) / 30 FPS (h.264)
- ✓GPS Location Tagging – Trace – Date Time Syncing
- ✓Simple In-Car Video Playback
- ✓IR Back Seat Camera w/Covert Microphone
- ✓Crash Sensor with Battery Backup

Nighttime Operation





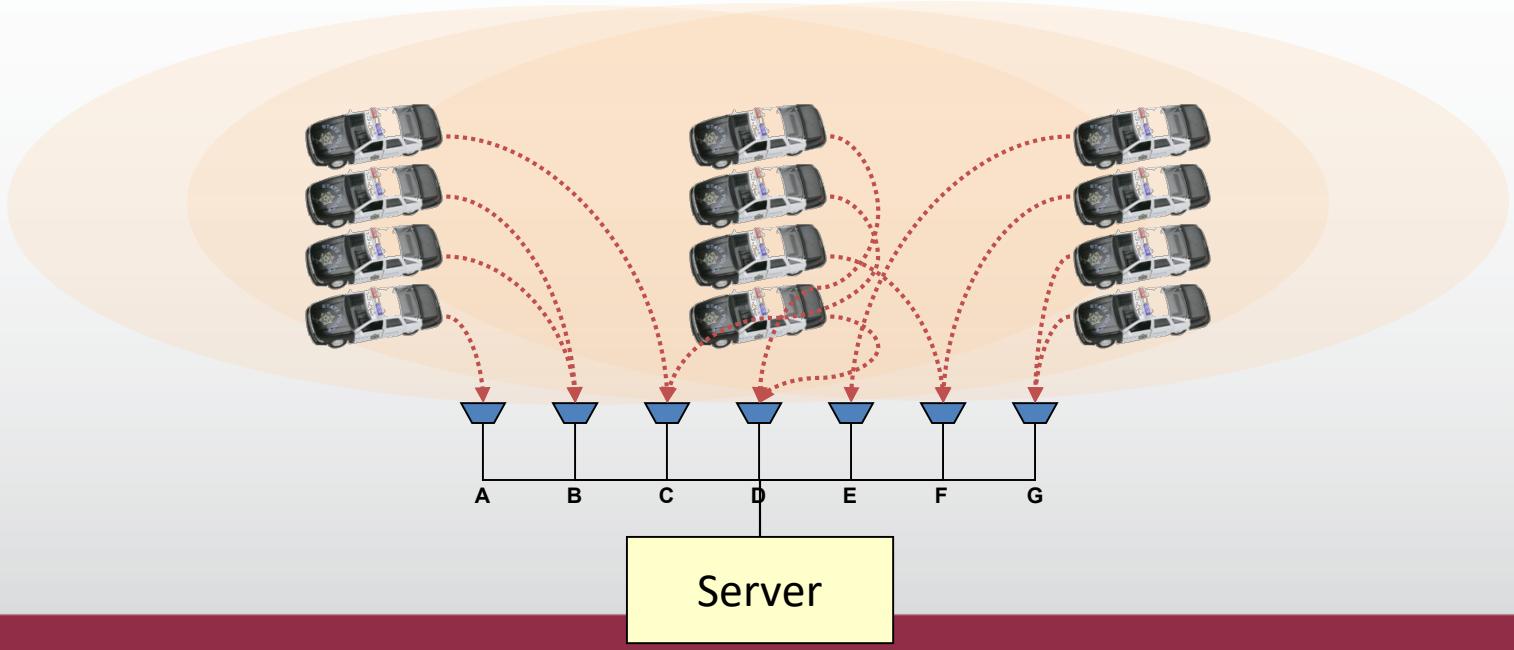

QBX Viewer 2.1b48 XP
File Image View Help
Sound/Video
VLP1
VLP2
In-Car Audio
Switch to Camera 2
Triggers
0 E Lights
0 Siren
1 Brake
0 Aux
0 Aux
2nd Camera
Show Camera
Move To Corner
GPS
Lat 33.89868300
Long -118.01100300
Speed 6 MPH
Sat# 10
Status 1
Heading 168
General
Cause:
Record Button
Officer:
Ofr. Kadoch
Unit ID:
Unit 035
Radar
Target 0
Patrol 0
Lock 0
NW00
Time Recorded 12:50:53
Available Play Time 3:58
Top Scale Tick Marks are Play Time 1 Minute Apart
T
Date/Time
Start 2008-05-29 12:51
End 2008-05-29 12:54
L3 communications
Mobile-Vision, Inc.

Wireless Download System

Simple, Secure, Labor Free, Procedurally Compliant
and Operates Uniquely Fast

System Load Balancing Design

Upon entering the parking area; Cars "tell the server" who they are, what content they have and how well they "see" each AP.



Do your research

- Don’t depend on any one vendor to tell you what you need.
- Attend trade shows
- Talk to other agencies
- The International Association of Chiefs of Police has done extensive research

How will the system be used?

- Where and how will the video be downloaded?
- Where will the system infrastructure reside?
- How will the video be viewed?
- If downloading and viewing will be at more than one location, are there existing data lines and will they have sufficient bandwidth?

How will the system be used?

- Who will have access to view and make copies of videos?
- Will the patrol car video system be connected to your department network?
- Who will maintain the systems?
- How will additional units be handled?

Design Considerations

- How many units do you want to have cameras in?
  - What about motors? Specialty units, volunteer vehicles or unmarked vehicles.
- The number of units will directly impact the amount of storage you will need.
  - Storage for video can be expensive and will impact system design.

Design Considerations

- How many units you have and where they report to at the end of shift will impact:
  - How the video is downloaded.
  - How long each download will take; and;
- When the unit can get back into the field.

Design Considerations

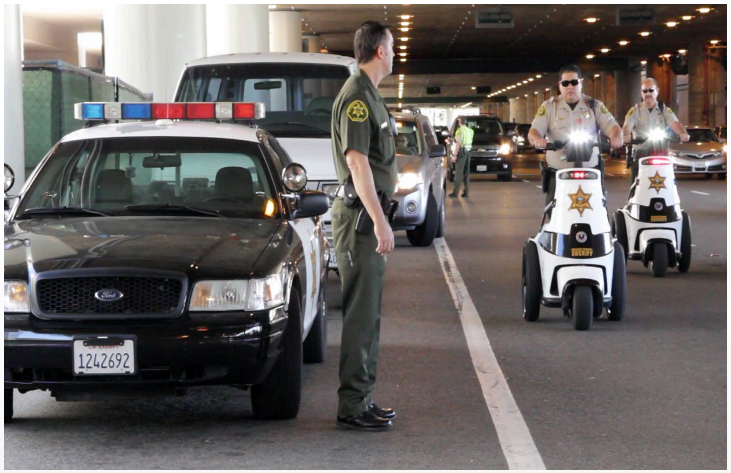
- How many cameras per unit?
  - Most systems can easily accommodate 6 cameras.
  - Many agencies use 2 cameras
    - One forward facing and one on the backseat.
  - Body worn cameras
    - Makes it 3 cameras per unit.

Design Considerations

- When will each camera be activated and how.
  - When a camera is activated, will there be a prerecord and if so how long.
  - What frame rate will each camera be recorded at.
  - What resolution and will they all be color
  - How will each camera be identified on the recordings

Design Considerations

- What information will be displayed on each camera
  - Unit number
  - Speed
  - Date/time



- Design the “Fantasy System”
- Determine the utility / service demand

Design Considerations

- Then prioritize
  - What can be postponed and addressed in a future phase when funding can be obtained.
  - Gives you the opportunity to look at lower cost options to accomplish certain functions or delete certain functions if need be.
  - Don’t cut before you see the whole picture.
    - There may be interdependencies that you won’t see until you have it all laid out.

User input

- User input is essential to system success.
- Your people have an idea of what patrol car video is
- Ideas vary based on individual experience
  - Solicit the “average officer’s” input
- Having users involved from the beginning
  - Gains user buy in and ultimately system success.

Stakeholders

- Patrol staff
  - Include all users
- In-house Technical Staff
- Fleet Management
- Administration

Stakeholders

- Risk Management
- Legal
- Financial
- Oversight / Citizen Panels

System Costs

- Varies depending on features
  - Example: 250 units, 2 cameras per unit, 6 download and storage locations = $2.6 million dollars.
  - Each additional unit after implementation is about $6,000
    - Includes in car equipment additional storage and replacement fund fees.

System Costs

- Maintenance costs
  - Technical staff in-house that maintains the equipment.
  - If you don’t have technical staff, routine maintenance should be factored into your contract.

Installation

- Plan on each unit being out of service for a full day for installation.
- Set a reasonable install schedule for your fleet.
- Have a staff member assigned to work with the vendor to make sure vehicles are readily available for installs.
  - Make sure that staff member has the authority to get the units to the vendor.
- Delays in installation may cost extra.

Lessons Learned



Do not change operational aspects of project midstream – Background Video



Took almost a year for L3 to fix the compression size of background video and improve quality



If a contract city has a newer patrol vehicle, everyone wants to drive that vehicle.



No such thing as enough hard drive storage



Several major vendors that submitted bids during RFP are no longer in business



Training was not very detailed in the RFP



SOP took years to be written.

Legal Issues

- Can only be used during criminal investigations and the apprehension of law breakers
- *Rattray v. National City*
  - Cannot record officers during administrative investigations

Policy Concerns

- When will recording be activated?
- When will recording end?
- Retention term?
  - Ensure adequate time for civil allegations
  - Government Code (§26202.6) pertains to retention/destruction of “routine video monitoring” and recordings of telephone and radio communications.

Policy Concerns

- Who will have access to view and make copies of videos?
- How and when will videos be released?
- What happens if recording isn't activated or is stopped prematurely?
- Insure consistency in all policy for audio/visual recording devices (i.e. PVS, digital recorders, etc.)

Policy Concerns

- Types of data - Ensure devices are storing appropriate types of data
- Storage - Clarify data stored as Evidence and/or civil liability
- Chain of Custody
  - Prevent tampering or allegations of misconduct

Video Review

- Whether you should allow an officer to view video *prior* to being interviewed or writing a report
  - Not the same as “huddling”.

Video Review

- Policy related issues to allowing to view
  - Do not include language within the policy where the officer views the video in "all" situations.
  - Allow for the department to have the flexibility to prevent the officer from viewing
    - Situations where the officer is alleged to have committed a crime

Dr. Bill Lewenski from ***Force Science***

- A "raw" statement without viewing any video of an incident may be a good record of "state of mind" but may not be a thorough factual representation of what happened.
- Video does not provide the officer's state of mind. The video, statement and/or report provide a complete perspective.

Dr. Bill Lewenski from ***Force Science***

- *"The most enriched, complete, and factually accurate version of a high-stress encounter is most likely to occur after a walk through and/or after the officer has had at least one opportunity to view an available video of the incident".*

Advantages for Litigation

- Saves considerable time when assessing a claim/lawsuit on the front end by determining the validity of allegations
- Improved technology allows for less cases where PVS is not available or did not work properly

Advantages for Litigation

- One or two cases where video has a negative effect on the case does not diminish the benefit on others
- Concern about potential foul language being used on PVS and/or body worn cameras because that negatively impacts even strong cases

Training

- The most common reason for system failure is inadequate training.
- Be sure extensive training is included in your project plan.
- You should include:
  - System Administrator training
  - Technical Staff training
  - User training.
- Have a long-term training strategy
  - Once the vendor is gone

Other Applications

- Boats
- Motorcycles
- Helicopter
  - HD/FLIR http://youtu.be/-tvT4CetTYA
  - Arrest http://youtu.be/VmFWTddisLs
- Special Events
- Critical Incidents
- Investigations

Recap of Digital Video Advantages

- Digital video automatically transfers, archives, and is readily available for viewing with no user intervention
- Digital video provides a pre-event recording, a powerful tool that clearly shows probable cause or counters objections to an event
- Digital video contains metadata that includes sensory information, location traces (drop points)GPS and timestamps
- Digital video is automatically backed up and archived for disaster recovery or offline use
- Digital video recorders are equipped with crash batteries to automatically trigger in the event of an accident. Together with pre-event recording clearly documents the police vehicle accident
- Digital video output for court/distribution purposes is automated and tracked through evidence. There is no manual replication of media.

Realized Outcomes

- Enhancing field officer safety
- Improving our agency's accountability
- Reducing our agency's exposure to liability
- Simplifying incident review
- Enhancing new recruit and in-service training (post-incident video review)

Realized Outcomes

- Improving community relations and media perceptions
- Strengthened departmental leadership
- Advancing criminal prosecution and case resolution
- Enhancing deputy performance and professionalism

Questions?

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