WHITE PAPER
Managing Video: From Car to Courtroom

Apollo Video Technology

Current digital technology has allowed Law Enforcement agencies to make audio and video recording an essential tool for protection against false and malicious claims, for prosecuting defendants, and for training. The technology offers obvious benefits over VCR tape based recording systems in quality, storage and a variety of options such as multiple cameras, search ability, and almost maintenance-free operation.

In some respects, recording video in a mobile environment is the easy part. It can certainly be the least expensive part! To be useful for evidentiary and training purposes, recorded video from a patrol car must be readily available to authorized personnel, and must also be efficiently transferred from the car for storage by the department. While security of the video is critical and must always be maintained, different law enforcement agencies have different requirements for the management, administration, and term of storage.

There are a variety of scenarios for the practical use of in-car video, but each method must be secure, simple to understand and implement, and fail-safe. Chain-of-evidence must be preserved, while providing easy access to the video for authorized parties.

Apollo Video Technology's Roadrunner incorporates a number of straightforward, reliable features for archiving in-car video:

• Removable Hard Drives
• Free software
• Compatibility with MDT's and in-car laptops
• Optional USB adapters for use with departmental computers
• Minibank Player

These features tremendously simplify the video storage process, by eliminating steps, reducing cost, complexity and downtime, and lessening the chance of errors. Virtually any other type of data transfer involves very complex infrastructure, reduced video quality, and requires high levels of user-intervention, not to mention great expense.

Apollo Video's Roadrunner offers very practical alternatives to costly and complex mass-transfer systems. Depending on departmental preferences, one of the following solutions (or more likely, a mix of them) can make in-car video a useful, practical and affordable everyday tool for law enforcement, without draining the departments budget for other important items or technology:

• The Officer as Video-Administrator
In this scenario, the officer is responsible for archiving video, pursuant to department regulations and recommendations concerning what particular video to archive. It provides the simplest, most cost effective solution. It requires the department to establish straightforward guidelines for the officer to follow so that at appropriate intervals they simply preserve the video clips themselves and store them in an approved manner.

• Shift Supervisor or Administrative Assistants (Video Archivists)
Specified personnel other than the officer are designated to deal with the video recordings from each patrol car, possibly after the officer has offloaded the clips they themselves wish to preserve. This can involve as little as one or two hours each day, depending on the number of officers, cars, shifts, etc. Again, keep in mind that this function is not eliminated with mass-transfer systems.

• Black Box Scenario (Hands-off)
This scenario requires no involvement from the officer. The DVR is programmed to operate independently, and at designated intervals the video is offloaded and archived without the officer having input to what is saved for long-term storage. Alternatively, the entire drive may be allowed to record until full, then stop (which might take weeks or months) then replaced in the car and the original stored as a complete record of that car's entire time on patrol.

With many mobile video recording systems, the actual in-car equipment itself is only a small part of the overall system requirement and expense. As an alternative, the Roadrunner offers highly quality video, an easier to use system, and more efficient transfer to secure storage.

> • **Removable Hard Drives**
> Given Roadrunner's superior compression and large capacity hard drives (currently up to 400 Gb), it is entirely possible to simply record everything the cameras see until the drive is full, then remove it for long term storage, slide another drive into the car and send it out on patrol with virtually no down time. If Event-Only recording with a single forward-facing camera, the on-board storage capacity can approach a full year. And a single drive can contain video equivalent to hundreds, or even thousands of VHS tapes. As a further security measure, the hard drive itself is key-locked into the Roadrunner and has two levels of password protection.
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> • **Free software**
> Apollo Video feels that a customer should not have to pay for the software required to operate the mobile video equipment. Our Remote Access Software is License-free, meaning there is never a charge for any number of copies or updates. The RAS software is fully compatible with MS Windows 98/2000/XP operating systems.
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> • **Compatibility with MDT's and in-car laptops.**
> The Roadrunner has built-in ports for connecting to existing data terminals. Though a certain level of performance of the data terminal is required, it is important to note that the actual "work" is done by the DVR, and the MTD or laptop is used only for viewing and offloading the video. Once the video clips are saved as a file on the computer, they can very easily be offloaded to an external storage device such as a so-called "thumb drive" or burned to a CD or DVD.
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> • **Optional USB adapters for use with departmental computers.**
> The optional Hard Disk Player adapter and software makes it very simple to do the archiving away from the car by simply removing the drive from the car, and offloading the video either using an existing PC or a dedicated workstation. Also, if another drive is placed in the car, there is absolutely no downtime.
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> • **Minibank Player**
> Apollo Video's proprietary *Minibank* video player archives video clips in a secure, encrypted format that embeds the actual player as part of the executable file. This means that no software is required for playback, and it is compatible with MS Windows 98/2000/XP operating systems. The clip employs high-level encryption to make editing impossible, completely preserving chain-of evidence regardless of the number of copies of the original recording.

It should be noted that even if a successful automated video transfer system can be implemented (which has yet to be demonstrated in a meaningful way), most of the steps described above are not eliminated… They are simply added to the transfer archiving chores, increasing the complexity of the process and multiplying the risks of errors and video loss.

Contrast these options with a massive network infrastructure requiring specialized storage servers, expensive back-end software, and highly trained (and highly paid) personnel and the Roadrunner becomes an attractive, efficient and affordable option.

> *(For an in-depth examination of large-scale video transfer, please see the Apollo Video White Paper: "Wireless video transmission and Storage by the numbers",* available at: www.avt-usa.com
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> *The complete White Paper is available from our web site:* www.avt-usa.com

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