



FORAY
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focus

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Body-worn cameras integrate with Foray ADAMS software to store wide range digital evidence

Body-worn cameras are trending hot now, and eventually may become standard equipment. But body-worn cameras must integrate with software that can store and organize a wide range of digital evidence. These can include lab images, crime scene photos, patrol photos, audio notes, in-car videos, interview videos, security videos, and any other form of digital evidence. Efficient search and access to these assets can be key for use in both open cases and those that may be reopened later.

Foray ADAMS secures, tracks, manages and controls access to body-worn camera videos plus all other digital evidence. Of course, a natural question that we keep getting pertains to the huge number and size of body-worn video files and how to store them efficiently and for rapid access. Foray addresses this in two ways: the Foray ADAMS Transient Repository and Active Repository.

The **Transient Repository** manages high-volume digital evidence that may or may not be retained permanently. It can accept files such as body-worn camera videos and in-car



videos for temporary, separate, low-cost storage. Files placed in the Transient Repository are retained for a configurable time span. If during this time they are flagged for permanent retention, they are moved to the Active Repository. If the files have not been retained when the storage period expires, they are automatically purged. This approach reduces storage costs and clutter.

The second part to handling a high volume of large files involves long-term storage – in the **Active Repository**. Foray recommends either of two

approaches for long-term storage. Agencies can use a traditional approach of keeping all files at the agency, in active storage, backup, and archival storage. Or, they can use a hybrid “cloud” approach. This allows an agency to store new and active data locally for fast access, then use the cloud as an unlimited backup and archive solution. Foray can help your agency determine which of these two file storage methods is optimal. Just give us a call and we'll guide you through these options.



Highway Patrol has tighter control of digital images, work flows with ADAMS software

Until 2015, the Missouri State Highway Patrol (MSHP) Firearms /Toolmarks Section battled with a system of handling digital evidence images that proved time consuming and cumbersome. However, the problem was so severe that there was risk of some images becoming corrupted during constant exporting and importing.

The state patrol oversees eight different forensic labs, all of which communicate with each other about evidence via a LIMS built in-house. Two of these labs handle firearm and toolmark related evidence.

The LIMS enables evidence to be moved and shared among the MSHP's labs. The Firearms/Toolmarks Section, which works with digital images for footwear as well as tire tread impressions, wanted more functionality for moving digital evidence than the LIMS could



Darian Stinson, with the Missouri State Highway Patrol Crime Laboratory, examining suspect shoes for comparisons to an unknown footwear impression

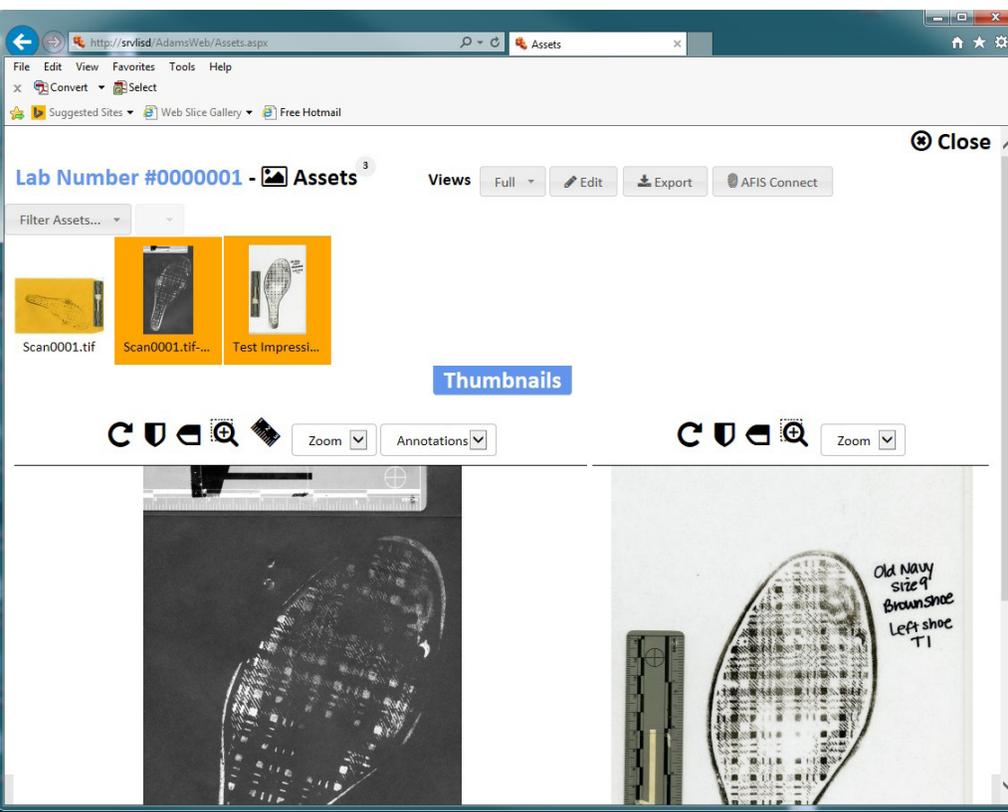
provide. Previously, “We had to track everything ourselves, and manage the whole chain of custody,” reveals Jason Crafton, the section’s Criminalist 3. In addition, he continued, “We had to create history logs within Photoshop

separately to show what we did with the actual image.”

Last year, the Firearms/Toolmarks Section acquired Foray ADAMS Software to connect the state patrol’s labs together, maintain consistent and comprehensive chain of custody, and use Photoshop without incessantly exporting and importing evidence items. “In the firearms section, we now store a lot of PDF’s and Excel spreadsheets and other documents in ADAMS,” Crafton said. “We wanted to be able to open these other file types, through ADAMS, and work with them in their native programs.

Prior to purchasing ADAMS, Crafton recalls how evidence files containing changes would be exported out of Microsoft Media Platform Content Manager and back into it. “After a while, a file might become corrupted during that export and import phase, and it was really time consuming,” Crafton added.

So, how is Crafton’s section using ADAMS? During the import or



New ADAMS upgrade boosts productivity, adds work flows

Foray Technologies released ADAMS Version 5 in January 2016. This version offers a new user interface with a crisp, new look, and easier functionality that is more accessible rather than hidden in menus. This new version includes:

1

A major overhaul of ADAMS Web, improving usability and productivity.

2

Support for multiple languages: Arabic, French, German, Greek, and Spanish.

3

ADAMS now supports Windows 10, SQL Server 2014, Photoshop 2015.5, and Visio 2016.

4

20+ built-in workflows with everything from call logging to video examination. Now it is easy for your agency to automate its internal processes and ensure adherence to your SOPs.

5

AFIS Connect within ADAMS Web. If your agency is using AFIS Connect, it has been added to ADAMS Web. Included is rotation, clip selection, and support for multiple profiles. To use this new functionality, please contact Foray support since concurrent user licenses will need to be transferred to your agency's server.

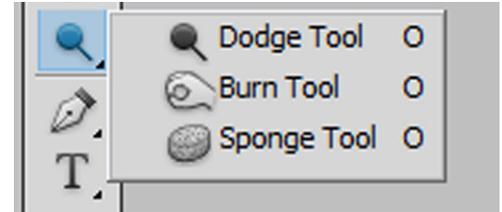
Online support ticketing system

To help customers with inquiries about their Foray ADAMS software, we provide an on-line maintenance support ticketing and escalation service. When a support ticket is created on Foray's support website at support.foray.com, or if an e-mail about a software issue is sent to support@foray.com, an acknowledgment e-mail is automatically generated and sent to the ticket creator (the Foray customer) with their ticket reference number. The status and escalation of the support issue is automatically tracked and all correspondence between the agency (ticket creator) and the Foray representative can be viewed by the agency.



Photoshop 'dodge and burn' process now safer, easier to use

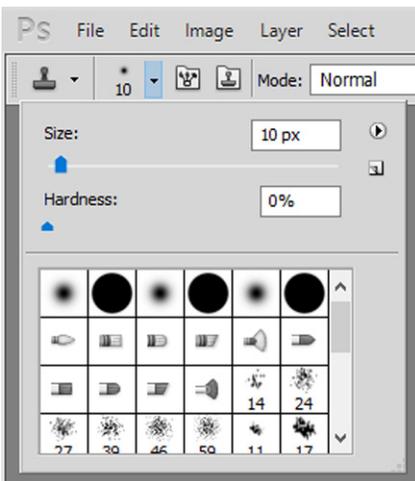
Photoshop is a great tool for use with evidence images. Earlier versions of this tool were not easy to use and gave mixed results, especially for the Dodge and Burn process. Adobe updated Dodge and Burn to make lightening and darkening different parts of your images safer and easier.



HERE ARE SOME GUIDELINES:

[1]

Always choose a soft (feathered), round brush.



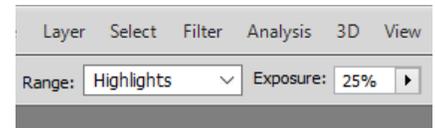
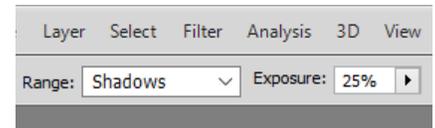
[2]

Specify the size of the brush by either: a) sliding the size slider button, or b) typing the desired number of pixels for the brush in the Size text. After adjusting the brush size, move your cursor onto the image. The cursor should appear as a large circle. Count the number of ridges to ensure that there is a minimum of eight (8) to ten (10) ridges visible inside the circle. You can use a larger brush size, but it should not be any smaller than eight (8) ridges in diameter.

Caution: In addition to using the Brush settings window to adjust Brush size, you can use the left and right bracket keys ([) (]) to increase or decrease, respectively, the size of the brush. However, you should not use these shortcuts to adjust brush sizes since changes made using these shortcuts are not recorded in the History Log!

[3]

When using the Burn tool, choose Shadows for the Range. For the Dodge tool, choose Highlights. (Note: The Range list box appears at the right of the Brush settings on the Brush options toolbar, which is located directly below the menu bar.) Depending whether or not other enhancement processes have been performed on the image, it may be necessary to reduce Exposure. Typically, the Exposure should be set to a range between 25% (if other enhancement processes have been performed on the image) and 50% if no other enhancements have been made on the image. It is fine to go below 25%, but going above 50% will more likely make the burn or dodge functions stand show more prominently in the image. The goal is to boost contrast without making individual enhancements noticeable.



[4]

For best results when using Burn and Dodge in a "click-and-drag" method, you can drag the brush across the ridge flow, not with it. When applying this method with the brush tool, the brush continuously samples the pixel values as the brush moves over the pixels and adjusts tonal range using prior sample values and current sample values. This may create the appearance of a trail across the image. Alternatively, for optimum results, position the cursor at a single location, then click and release the mouse button one or more times to capture the desired contrast. This technique will raise contrast for the specific area based on the values of that area.





Several factors to consider for local storage vs. cloud storage of your digital evidence

If you've heard the term "Local Storage vs. Cloud Storage Continuum" and are not sure what this involves, it is the spectrum of decisions and choices to be made about whether to store your digital evidence locally or in the "Cloud" and when digital evidence moves between these two storage options.

The "cloud" is an invaluable tool for storing data since it is internet based. The actual geographic storage location is typically unknown to the user and may vary over time.

Digital evidence is precious and must be handled carefully. Therefore, it should be stored in redundant locations, with at least three locations used at all times.

Foray provides cloud connectors to the three major cloud storage suppliers: Amazon, Google, and Microsoft. These connectors allow the cloud to be used as off-site digital evidence storage.

There are three types of data repositories for digital storage:

- 1) Transient Repository
- 2) Active Repository
- 3) Archive Repository

A transient repository is designed to temporarily store large files of evidence that may or may not be needed to resolve a criminal or civil case. It is a temporary holding place until it can be determined whether or not the digital evidence will be needed. The large files are typically video files that are stored in the transient repository for a specific time frame. If these files are requested for a case, they are moved to the Active

Repository. If the files are not accessed after a certain configurable time period, the video files are deleted. Typical evidence filtered through a Transient Repository includes in-car/dash cam videos and body-worn camera videos.

An active repository is a permanent evidence storage location for cases

Digital evidence is precious and must be handled carefully

in progress and is structured for fast access by those authorized to view or analyze the evidence. All digital evidence for active cases is stored in this repository, and may include digital images, audio, video, cell phone data, seized hard drive data, etc.

Storage of digital evidence for inactive or closed case files occurs within an archive repository.

Where does the cloud fit among

these different repositories? The cloud can be used as an archive repository, but also can be used as a backup for the active repository. The choices for implementing a Foray cloud solution depend on which of these two repositories, or both, need to have cloud implementation.

Foray's Active Repository is mirrored to the cloud as a backup. Also, all versions of files are permanently kept in case roll-back to a prior file version is necessary. Instances where restoring from previous file versions may include: errors made during evidence processing, file system loss or damage, disaster recovery, and malfeasance.

Foray's Archive Repository provides an interface and rules-based workflow engine to determine when files or entire cases should be archived off-site (to the cloud). The files are then moved to the cloud and the case thumbnails remain in the system.





Darian Stinson, with the Missouri State Highway Patrol Crime Laboratory, using a transparency overlay technique for direct comparison of footwear impressions

Highway Patrol has tighter control of digital images, work flows with ADAMS Software

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acquisition stage, when images go into ADAMS, the Firearms/Toolmarks Section types in the lab number matching with the case related to these images. "ADAMS has now become integrated with our LIMS. When we acquire images into ADAMS, all of the acquisition data is automatically brought into ADAMS via the LIMS Connect Kit. "It's all tied back to our LIMS. Once the asset is in ADAMS, we can start working on that particular image within Photoshop," Crafton said.

The section's goal in using ADAMS is storage of all computer files and images pertaining to evidence. Benefits of the software are time savings, efficiency, and the security of a particular file. These benefits are immediately evident because an image is processed by ADAMS so quickly and securely. Work flows are smoother, too.

"The ability to work on an image that is brought into ADAMS and to realize the image is in a secure storage repository is huge," Crafton emphasized. "With this capability, the software allows us to automatically track the chain of custody and manage the Photoshop history log," Crafton added. Finally, ADAMS makes it easy to export a digital evidence file for court purposes. "These capabilities are all centralized in one location and application," Crafton said. "Consequently, we gain faster and stronger functionality through using the software."

FORAY ADDS NEW ADAMS CUSTOMERS

Foray Technologies has added several new users of the ADAMS Software to its roster of customers. These include:

- Hellenic Police (National Police Service of Greece)
- Ontario Provincial Police
- Texas Department of Public Safety Crime Lab (Lubbock, TX)
- San Luis Obispo County, California, Sheriff's Office
- Washington State Patrol – Seattle, Tacoma, Marysville, and Vancouver
- St. Louis, Missouri, Metro Police Department
- Mississippi State Crime Lab – Pearl, Gulf Coast, Meridian, and Batesville



Upcoming conferences slated for Foray to exhibit, present

Here is a list of upcoming conferences where you can join us as we exhibit and present our software solutions:

OCTOBER

- 23-27 – Florida DIAI, Miami, FL
- 25-28 – Texas Association of Property and Evidence Inventory Technicians, San Antonio, TX

NOVEMBER

- 14-16 – New England Division-IAI, Dedham, MA

Also look for Foray at these 2017 conferences:

- American Academy of Forensic Sciences
- American Society of Crime Lab Directors
- International Association for Identification
- California State Division of the IAI
- Texas Division of the IAI
- Florida Division of the IAI

More 2017 upcoming conferences will be announced later.



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