

Class title	Abstract	Presenter
A Concise Overview of H.265 / High Efficiency Video Coding	This presentation will provide a concise overview of H.265, also known as High Efficiency Video Coding (HEVC). H.265 is a video compression standard designed to substantially improve coding efficiency compared to its predecessor, H.264/AVC. This overview aims to provide attendees with a better understanding of H.265's capabilities and its potential impact on video evidence handling in law enforcement contexts.	Al Zlogar
Adobe Premiere Pro Forensic Media Techniques for Beginners	This intensive 3-hour workshop is designed to introduce participants to the essential tools and techniques of Adobe Premiere Pro for forensic media. Participants will learn how to set up their workspace, import and manage evidence, perform basic video and audio analysis and processing, and export their results while maintaining evidence integrity.	Angela Ellis
Advanced Techniques for Evidence Clarification and Emphasis in Adobe Premiere Pro	This intensive 3-hour workshop focuses on techniques for evidence clarification and emphasis in Adobe Premiere Pro through application of advanced masking techniques, sophisticated highlighting methods and effective annotating callouts.	Angela Ellis
AI for Image and Video Forensics: Mine of Information or Minefield?	In this session, we will discuss the potentials, challenges, and concerns related to the use of Artificial Intelligence (AI) while working on photo and video evidence. We will suggest some high-level guidelines for the potential use during investigations, and we will present a few applicative examples and related results, such as the enhancement of faces, the interpretation of low-quality license plates, and the detection of deepfakes. We will also discuss court cases and regulatory updates related to the use of AI on video evidence.	Martino Jerian

<p>An inside look into the creative visual mind of a learning machine</p>	<p>In this lecture, we will discuss the usage of Artificial Intelligence for the creation and processing of digital media evidence. Illegal activities associated to this new technology are a real burden for the criminal justice system. You will learn how deep fakes are created and understand the concepts beyond "text-to-image" stable diffusion. We will also discuss the delicate topic of image enlargement using trained neural networks. Above all, we will learn how to identify and fight the illegal usage of these new technologies.</p>	<p>Emi Polito</p>
<p>Case Studies in Forensic Video Analysis, 3D Modeling &amp; Animation, and Visual Storytelling</p>	<p>In this presentation, Brian Carney, Esq. will delve into three compelling case studies that highlight the critical role of video evidence in the pursuit of justice. This course is designed to provide forensic video analysts with valuable insights and practical lessons that can be applied to real-world scenarios. Through these case studies, participants will gain a deeper understanding of the methodologies and technologies that can make or break an investigation.</p>	<p>Brian Carney, Esq.</p>
<p>Decoding Deepfakes: Impact &amp; Challenges in Singapore</p>	<p>Deepfake technology has emerged as a significant challenge for law enforcement agencies and digital forensics experts worldwide. This presentation will delve into the impact and challenges posed by deepfake technology in Singapore and offer insights into the country's current efforts and future strategies in combating this growing threat.</p>	<p>Koh Ling Xin &amp; Leona Ang Qiao En</p>

<p>Deepfakes Demystified: Empowering Law Enforcement in the Digital Age</p>	<p>In an era where digital deception is increasingly sophisticated, law enforcement faces new challenges in discerning truth from fabrication. Deepfakes, hyper-realistic AI-manipulated media, pose a significant threat, capable of manipulating public opinion, undermining evidence, and even fueling criminal activity. This essential workshop will equip you with the knowledge and skills to navigate this complex landscape. Through researcher-led presentations and hands-on exercises, you will gain a deep understanding of deepfake technology, its potential implications, and the cutting-edge forensic methods used to detect them. Learn to identify telltale signs of manipulation, utilize specialized software tools, and stay one step ahead of those who seek to exploit this technology. "</p>	<p>Kelly Wu &amp; Saniat J. Sohrawardi</p>
<p>Finding Reliability in Video Timing Data</p>	<p>The timing of a video might seem like something simple and straightforward, however there are lots of considerations that should be taken into account to prevent misinterpretation of the data. This lecture will identify many different sources of video timing data, factors that affect that data, and how to determine what can be relied upon for analyses like speed estimation or use of force.</p>	<p>Melissa Kimbrell</p>
<p>Getting the Whole Picture in Proprietary Video Evidence</p>	<p>In this session we will review how a standard video container stores data, then compare this to proprietary video samples. Through real world proprietary examples, we can see how important it is to correctly identify and extract the necessary video elements and all available frames in order to facilitate viewing the file completely and accurately.</p>	<p>Melissa Kimbrell</p>

Introduction to Moving Camera Tracking for Video Analysts (Part II)	Following the lecture in photogrammetry, students will get a hands on introduction to SynthEyes; a program traditionally used in the visual effects industry. The hands on intro will allow students to gain an understanding of how camera tracking works, first hand, and how they may effectively use it in their case work when it comes to tracking moving cameras from body cams or dashcams.	Nishan Perera
Introduction to Photogrammetry for Video Analysts (Part I)	Photogrammetry is the science of extracting measurements from photographs. As part of the regular function of a forensic video analyst, it may be required to determine aspects of a person/object or vehicle's speed, height or geometric characteristics, or back calculate positions of people/objects or vehicles as they were captured through video. This presentation will cover an overview of the history of photogrammetry, its application and utility for a forensic video analyst and the basic concepts and methods used. It will also introduce the possibility of a future course with more in depth training with regard to the software used for the purposes of photogrammetry.	Nishan Perera

<p>It's not your grandmother's input, Ace</p>	<p>Axon Investigate is a robust workflow engine that offers a complete solution for video evidence processing, from the original source to the final report. It stands out with its impressive capabilities for reproducing most third-party videos, an easy-to-use interface, comprehensive features, and detailed reporting. Axon Investigate is the preferred video solution for new investigators and experienced video analysts. Integrated with Evidence.com, Axon Investigate enables users to download case evidence into the application for analysis and create compelling demonstrative exhibits, which can be easily uploaded back into Evidence.com as derivative evidence. For a chance to explore Axon Investigate's features, join this 3-hour hands-on workshop (please bring your own laptop). You will work through the latest updates and a case study on measuring exact distances from video using the overlay tool.</p>	<p>Mark Andrews</p>
<p>Mastering CrimeLines: Interactive Timeline Creation for Criminal Investigations</p>	<p>Unlock the full potential of your criminal investigations with our comprehensive course on using CrimeLines software. Designed by a former prosecutor for crime lab technicians, forensic video analysts, law enforcement professionals, and prosecutors, this course teaches you how to create customized legal timelines that clearly and convincingly communicate critical case details. Forensic Video Analysts constantly strive to create timelines, especially of video events. However, it can be frustrating that tools like Photoshop and PowerPoint are not specifically designed for creating and presenting timelines. This is why we built CrimeLines software: it is specifically dedicated to building simple, easy-to-use, and powerful chronological presentations of digital evidence.</p>	<p>Brian Carney, Esq.</p>
<p>Medex Product Update</p>		<p>Brandon Epstein</p>

<p>No Scanner – No Problem! Revisiting old school vehicle speed estimates.</p>	<p>3d scanning of crime scenes and collisions is all the rage. Some claim it is the only accurate method for performing a vehicle speed estimate from video footage. In a perfect world, we would all have the hardware and software to perform these types of analysis. But none of us live in that perfect world. Can the “old school” methods of vehicle speed estimation still be performed? Are they accurate? This case study involves a traffic fatality involving a vehicle which was estimated to be traveling almost 3 times the posted speed limit. We will discuss three analysis methods to include calibrated speed runs, straight-line photogrammetry, and reverse projection, which were all performed on this case and compare the results.</p>	<p>Christopher Andreacola &amp; Mike Holden</p>
<p>Presenting Demonstrative Evidence in Court</p>	<p>Join us for an exciting 4-hour hands-on class where you'll delve into real-world or simulated examples to create court-ready exhibits. Get ready to master the art of presenting video evidence using annotations, redactions, and compelling presentations with Amped FIVE, all while maintaining a solid and forensically sound workflow. To ensure everyone can participate, trial software and samples will be provided, so there's no need to have FIVE installed beforehand—just bring your computer. By the end of the session, you'll be creating illustrative and comparison exhibits, seamlessly combining video clips from different sources, and confidently redacting audio and video for public release. Gain valuable insights into Amped FIVE and enhance your skills for court or public domain presentations. Don't miss out on this invaluable opportunity to elevate your expertise!</p>	<p>John Barahona</p>

<p>Prove It! The Future of Synthetic Media (AI) Detection in Justice and Public Safety</p>	<p>Tom Cruise performing magic tricks on TikTok, foreign leaders declaring acts of war...the prevalence of high-quality synthetic media online has brought a new age of disinformation and distrust to society. How does this relate to evidence admissibility in criminal investigations and legal proceedings? What is the true threat to public safety? This session will address the real concerns with synthetic media as it pertains to law enforcement and forensic examiners who have to authenticate evidence for court. Reliable, explainable, and repeatable techniques for the examination and authentication of video evidence will be introduced.</p>	<p>Brandon Epstein &amp; Steve Gemperle</p>
<p>Surveillance Video – From Acquisition to Presentation (Magnet Witness Presentation)</p>	<p>Surveillance video is utilized in most investigations, but getting the most from the evidence you collect can be difficult. Depending on how it was collected, and what is required, you might be used to using multiple workflows or tools to acquire, process, and present the evidence. In this session, we'll demonstrate how you can use Magnet WITNESS to handle the entire workflow in a single tool. We will also discuss common considerations for your workflow needs and how small adjustments to your workflow can make a big difference in terms of efficiency.</p>	<p>Bart Wolczyk</p>

<p>Synced or Not Synced - That is the Question: When Video and Audio collide!</p>	<p>The course will begin with a short lecture on digital audio and its relationship with video files. After which students will work on four cases with issues relating to the syncing of audio and video files in an aggravated assault, and three officer involved shootings. The workshop will include synchronizing a gunshot (audio) from one DVR with a video recording from another DVR, determining the cause of missing audio (gunshot) from a video file, and determining the order of shots fired using speed of sound calculations. Students will need their own laptop with video and audio software. Recommended software to include, Audacity and/or Adobe Audition, Axon Investigate, and/or Amped FIVE as the instructor will use these.</p>	<p>Christopher Andreacola &amp; Mike Holden</p>
<p>The Amped Software Ecosystem, An Overview</p>	<p>Amped Software provides tools that can be used to resolve the issues of video examiners from the crime scene to the courtroom. Whether it be proprietary video conversion, quick viewing and correcting of video files, in-depth file analysis, enhancement, clarification, and restoration of video and still images, presentation, annotation, redaction, integrity and authentication verification, or forensic reporting, Amped Software has a solution for you. Come spend some time with the Amped Software team as we guide you through the progression of each of our tools and demonstrate how they can help satisfy the needs of your video investigation unit.</p>	<p>Emi Polito</p>



<p>Using Adobe Animate for Court Presentations Dog and Pony</p>	<p>In this class you will be shown how Adobe Animate can be leveraged as an alternative to PowerPoint for presenting high resolution images, any type of video, synchronized playback, animated 911 calls, and more. Many agencies already have the Adobe Creative Suite but Animate is elusive. You will be shown how you can create an executable file that can be opened on any PC or MAC with no additional software or license. This is not a class on how to program Animate but to highlight the strength of Animate and show just a few potential uses. Animate requires the use of ActionScript 3 (AS3) but it can be programmed without learning how to write code. The versatility of Flash/Animate continues. There are many courtroom tools on the market. Most require a license and cost up front as well as training for each user. Animate has the advantage of a single license that you can already be paying for.</p>	<p>Paul Hartzell</p>
<p>Vehicle Speed Analysis - Positioning</p>	<p>In any speed analysis it is necessary to establish the displacement of a subject vehicle between two positions. This session will introduce a series of techniques to assist in positioning a vehicle as such – from those rooted in rudimentary photogrammetry through to those using 3D modelling processes. Whilst this session will predominantly centre on vehicle speed analyses, these techniques can also be used to position any subject.</p>	<p>Mark Crouch &amp; Stephen Cash</p>

<p>Vehicle Speed Analysis - Time Determination</p>	<p>Having established the displacement of a vehicle between two images, in order to calculate the average speed of the subject it is then necessary to establish the time interval between the same. This session will centre on the manner in which video systems record, and techniques to assist the analyst in identifying not only the recording rate, but also the recording pattern if the recording rate is irregular.</p>	<p>Mark Crouch &amp; Stephen Cash</p>
<p>Voice Print Analysis: Fact or Fiction: Can people be identified through a recording of their voice?</p>	<p>As with many discoveries, In the 1940's Bell Laboratories was looking for ways to help the military identify individuals by their voice. In the 1960's this ideal moved to the criminal courts. It was accepted and used through the 1980's and into the 1990's and fell out of favor due to conflicting positions on its reliability. Well technology has clearly changed over the past 30 years. Has machine learning reached a place to reliably uniquely identify an individual by their voice as originally proposed in L.G. Krista's Voiceprint Identification article from Nature Journal on December 29, 1962? The course will review past research and demonstrate with real case examples two different speaker comparison software and evaluate their claims.</p>	<p>Christopher Andreacola</p>

<p>Working with Inter-Camera Time Offsets to establish an accurate timeline in surveillance video captured by DVR, NVR, and Cloud camera systems.</p>	<p>Surveillance video systems often have inaccurate date and time settings. Many older DVR systems use a single onboard clock to timestamp video recordings from multiple channels. In contrast, cloud and NVR camera systems typically rely on each camera's own recorded time. This introduces the challenge of tracking time across different channels. In this presentation, we will explore the accuracy of time synchronization between channels in DVR, NVR, and cloud camera systems, as well as measure time drift in real-world scenarios. We will also assess the possibility of recreating timing offsets during actual incidents and the reliability of establishing an accurate incident timeline.</p>	<p>Bart Wolczyk</p>
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