F28　#Datastories

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Learning Overview: After attending this presentation, attendees will understand the increased challenges of digital evidence and hear an alternative approach to meet the challenge.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an alternative approach to meet the increasing challenge of digital evidence as new technologies and applications become available in the consumer and business marketplaces.

As the volume of forensic data continues to grow, alternative approaches to assessing and interpreting the data are required. One alternative is presented that attendees may wish to adopt.

A different approach to looking at data is required. All forensic information is data, no matter from where it is derived. The most obvious is digital evidence obtained from data storage devices; however, in many investigations, this now includes network and internet logs. But what are we to make of DNA, or images of latent fingerprints, or those related to firearms? How does one consider financial transaction records? Gone are the days of the digital forensics and other experts looking at the data in isolation. A different approach is the use of multidisciplinary teams looking at the whole of digital evidence, but also interpreting other forensic data when available. Teams comprising expert individuals who bring a range of skills and knowledge to bear on the question(s) at hand, who can read and interpret different forms of data from multiple sources. In collaboration, the data story can be revealed.

Every person has a unique digital identity and, as technology evolves, this identity will become more specific and more informative. Historically, the challenge has been about getting hold of the data. Where is it located? Is it encrypted? Is it hidden? Can we look at all of it?

It is no longer just the phone and computer. Now, as the Internet of Things becomes ubiquitous, every individual is part of the digital mesh, permanently integrated into the system 24 hours per day, 7 days per week. An individual's every thought, behavior, relationship, decision, and action is captured digitally. Now, there is too much to look at all of it, and it is all in different formats, from different sources, different devices, and generated for different purposes.

4G telecommunications brought innovations that were unanticipated. Initial marketing was for more reliable phone calls and faster data transfers. What was not expected was the explosion in social media; Netflix®, Hulu®, and other streaming services; the beginning of autonomous vehicles. Although not directly related to 4G, technological evolution has resulted in the appearance of deep fakes and the weaponization of social media has real-world impacts. Is the data real?

As 5G telecommunications with increased speed (download a high-definition movie in less than five seconds), improved latency to almost assure autonomous vehicle safety, and improved reliability, what will be the challenges for those of us who are looking at digital evidence to ascertain the course of events and the person involved in an incident. New applications that can be anticipated will include telemedicine with implanted devices and monitors, building access and control management, public transport management, and motor vehicle monitoring and management. The total volume of data will continue to grow incrementally as 5G is rolled out, the infrastructure is upgraded and new, yet to be conceived, applications are developed and marketed. To illustrate the point, BEBO was the largest social networking site in the United Kingdom with 10.7 million users and sold to AOL® for $850 million in 2008. In 2010, AOL® decided to either sell it or close it down as it was losing users to Facebook®. That was just ten years ago. This was around the same time as the advent of 4G.

#datastories, #digitalevidence, #forensicdata

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