

## Intelligence at the edge: The evolution and future of video analytics and forensically searchable meta data

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Meta data, or data about data, has been in existence when dealing with imaging ever since someone first etched a date or name on the side of a daguerreotype in the 1800s. Meta data is a common product feature in many CCTV cameras, but there are no industry-wide standards. Typically once meta data is associated with or embedded into security footage it is static. Since 2006, Bosch Security Systems has been the industry pioneer with intelligent analytics inside the camera, or at the edge. While performing configurable intelligent video analytics the camera or encoder also generates meta data that encompasses the entire field of view. Combined with the unique ability to record directly to iSCSI in a block data format, the meta data is forensically searchable after it is recorded and is not dependent upon IVA triggers being set prior to an event. Recording searches are also independent of configured live triggers. With the advent of the IVA 5.6 feature of face detection, specific meta data can now be seamlessly parsed to third party applications or cloud storage. Besides normal exporting functionality, recorded video can also be mass exported in its original iSCSI block format for evidence extraction. Bosch is a founding member of ONVIF, the industry standard for interoperability. With the emergence of high definition cameras and H.264, Bosch has led the way in education on deployment standards as outlined by Johnson's criteria and the Scientific Workgroup Imaging Technology (SWGIT).

### Biography

David W. Brent has been in the Security Industry since 2001 and is currently the Technical Information Engineer for IT Systems Bosch North America. He holds a degree in Information Systems Technology and Networking as well as numerous industry certifications. He is currently finishing his Bachelors in Computer Forensics and Digital Investigations at Champlain College. Over the years he has assisted several agencies with video recovery and review, to include 9/11 video from Dulles Airport and the Pentagon. He has been published more than a dozen times in industry journals and magazines.

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