



A Powerful Vision

Science Serving Justice

An Interview with the Executive Director of the NFSTC, Kevin Lothridge

By Wayne Buttermore, Leica Microsystems Product Manager, Forensic Microscopy



Kevin Lothridge

Recently, Wayne Buttermore, Marketing Manager for Forensic Microscopy, Leica Microsystems, had the distinct honor of interviewing Kevin Lothridge, Executive Director of the National Forensic Science Technology Center (NFSTC) to hear his perspectives on continuing education in the forensic science community.

As the Executive Director of the NFSTC, Lothridge is responsible for overseeing governmental relations and new business opportunities. Lothridge has a BS in Forensic Science and an MS in Management, and he has held the positions of chief forensic chemist and laboratory director. His expertise includes the areas of drug chemistry, fire debris analysis, and detection dogs. Lothridge, a former President of the American Society of Crime Laboratory Directors (ASCLD), is also the former Acting Chief of the Investigative and Forensic Division of The National Institute of Justice (NIJ) and still works closely with NIJ to ensure that programs delivered by the NFSTC meet the needs of the forensic community.

Wayne Buttermore and Kevin Lothridge discuss the opportunities that exist in continuing education today and how the NFSTC uses its expertise to provide benefits and overcome challenges in continuing professional development among the forensic science community:

Buttermore: What are the challenges that the NFSTC faces with regard to the changing technologies of forensic science?

Lothridge: Every year technology changes and the people who are currently in the field performing forensic work need continuing pro-

fessional development. Many of the people we train are transitional, not necessarily new to science, but new to forensic technology. For example, a great environmental chemist who has been doing work on the fringe of forensic science might now decide to work in a laboratory that works for or supports the government in environmental forensic science. That person already has the scientific background, but needs further professional training in a specific discipline.

Buttermore: Many universities have an accreditation body. Is there an equivalent kind of body for professional development outside of academia?

Lothridge: Certification of forensic analysts is voluntary and not mandated, except for a few states. This is why there is no real Continuing Education Unit (CEU) approval body. Years ago, the NSFTC created a CEU program, but it never took off because law didn't require it. There is no license required, but this may soon change. However, this is not true of DNA analysis, which is the field where the largest number of new candidates is being hired. The U.S. has federally mandated legislation that requires DNA analysts to have at least eight hours of continued professional development each year. No other forensic discipline has such a mandate. For other scientific working groups such as drug identification specialists, eight hours of continual training is suggested, but not mandated.

Buttermore: How do organizations like the NFSTC bring benefits to the forensic community and how do these benefits relate to your mission statement?

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A Powerful Vision

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Lothridge: Our vision is “for the forensic science community and its users to have complete confidence in the quality of the science services provided to the justice community as it strives to ensure the public safety.” Our job is to provide technical assistance and training to support the public-funded crime laboratory, which in turn, supports the general public. Our mission states that, “we are dedicated to supporting the justice community in ensuring the public safety by assisting the forensic sciences in the achievement of the highest level of quality services.” Our goal is to help the bench worker to accurately do his or her job. I enjoy the feeling of providing support to the nation’s crime laboratories so they can better assist in ensuring public safety.

Buttmore: **Is there any other comparable organization to yours in the U.S. or in the world?**

Lothridge: The National Institute of Forensic Science in Australia is similar to the NSFTC. We are both government supported and non-profit. The NSFTC is the only organization in the United States, that I am aware of, that is comprised of members in the forensic community and academic institutions and led by a Board of Directors to guide and deliver training throughout the 50 United States and two territories. Most other forensic organizations in the U.S. are hosted by universities or are committed to their membership belonging to a particular state.

Buttmore: **What are the current trends in creating continuing professional development programs and how does that affect your organization both technically and through funding?**

Lothridge: Historically, there has been a high demand for training with a mentor/trainee structure, where an external person provided the training. However, there are simply not enough trainers to address the need. Furthermore, in many law enforcement agencies where crime laboratories reside, budget cuts occur. Training budgets are usually the first thing to be cut because training is costly. The NFSTC tries to address this issue with a variety of online training options.

We look at a blended methodology to handle this challenge. We train with the motto “teach once; use many.” We incorporate a variety of technology-based tools and develop training using podcasts and websites because the trainee’s ability to access training is significantly expanded when a variety of delivery options are available. The training can be delivered to people at their own workstations and

“I enjoy the feeling of providing support to the nation’s crime laboratories so they can better assist in ensuring public safety.”

– Kevin Lothridge, Executive Director of the NFSTC

then reviewed by their mentors. Trainees can link to a test bank, register, take a test, and the results can be delivered to their supervisors. We enhance the learning experience with a mixture of animation, video clips, and interactive tools, and structure the content to be suitable for initial training, review training, and ongoing competency training. The younger generation, who grew up with laptops and media players, wants information that is accessed via index map; they want information at their fingertips.

(See <http://projects.nfstc.org>)

Buttmore: **Do you use an online format to train larger groups of people?**

Lothridge: We have to be inventive in this technological age to ensure that we are meeting the needs of a broad group of stakeholders. Although it might not be exactly the same experience as a physical classroom, WebEx™ is one conference tool with the capability of displaying material online, allowing us to provide instruction to hundreds of people simultaneously. WebEx™ also permits participants to ask questions, which can then be answered by a moderator for display to the requester only or to all participants. The trainee can archive the sessions and play them again anytime. The material we can cover in a two-hour training session is equal to that of a full day of training. The trainee doesn’t lose a full day of work or travel time. We are big believers in collaborative tools that allow you to interact with the person and the instrumentation from a distance.

History of the NFSTC

The National Forensic Science Technology Center (NFSTC) is a 501(c)3 not-for-profit corporation established in 1995 by the American Society of Crime Laboratory Directors (ASCLD). The ASCLD board members envisioned a company that would be independent of their organization and able to provide quality systems support, training, and education to the forensic science community in the United States.

Leica Microsystems would like to express its appreciation to Kevin Lothridge for his insight on quality training and education for the forensic science professional.



Leica Geosystems Forensic 3D Laser Scanner Showcased in New A&E Real-Life Series "CRIME 360"

by Tony Grissim,
Public Safety & Forensic Account Manager, Leica Geosystems

The Leica Geosystems ScanStation, a state-of-the-art forensic 3D laser scanner that enables investigators to remotely measure, model, and diagram crime scenes with amazing detail is prominently featured in the new A&E Real-Life series, "Crime 360."



Leica ScanStation
by Leica Geosystems

"Crime 360," airing weekly on Thursdays at 10 PM on A&E, takes viewers inside actual investigations as they unfold using advanced cutting edge forensic technology including the Leica ScanStation.

The ScanStation makes millions of 3D measurements in just minutes, and by doing so preserves the crime scene exactly the way in which the first responder found it, forever. Long after the scene has been forensically examined and released, investigators can virtually return to the scene of the crime to make additional measurements or to verify what witnesses could have seen based upon the accurately mapped physical environment. The data can also be used to create compelling jury exhibits and animations which enable jurors to easily understand the layout of a crime scene. The technology has been adopted by leading law enforcement agencies such as the California Highway Patrol, the Albuquerque Police Department, and the Los Angeles County Sheriff's Department.

Through CRIME 360 a much broader audience will come to understand the value of Leica 3D laser scanning as an investigative tool for homicides, officer involved shootings, crash investigations, and even the prevention and protection against terrorism. Leica Geosystems recently launched its forensic and public safety web site and the response from the law enforcement community has been tremendous. The site link is www.leica-geosystems.us/forensic.

With close to 200 years of pioneering solutions to measure the world, Leica Geosystems products and services are trusted by professionals worldwide to help them capture, analyze, and present spatial information. Leica Geosystems is best known for its broad array of products that capture accurately, model quickly, analyze easily, and visualize and present spatial information.



Managing LED Illumination

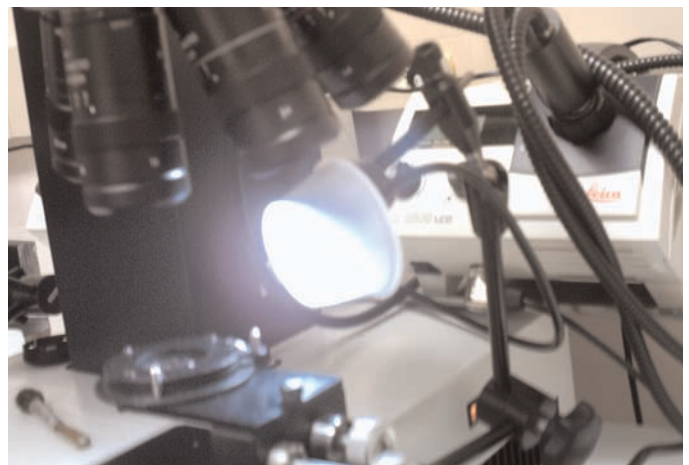
by Wayne Buttermore,
Leica Microsystems Product Manager, Forensic Microscopy

When viewing certain samples under LED illumination, there can be specular reflection because of the multiple LED elements focused on the specimen. One way of dealing with this problem is to place a diffuser over the front of the LED elements. One simple, inexpensive (free) way to do this is to use a Kimwipes® sheet (delicate wipers made by Kimberly-Clark) over the LED. The Kimwipe can be affixed with a rubber band or wire.

The second method is to use small frosted condiment cups (shown here: souffle cup 2.0 oz.) fixed over the front of the LED elements to diffuse the light. This quick-fix diffuses the multi-element spot illumination system and provides similar illumination to the fluorescent tube illuminators. Illumination intensity is not significantly changed, and the contrast improves by reducing the fully saturated specular reflection.



LED without diffuser



LED and diffuser



Industry News

The **2008 MAAFS Annual Meeting**, hosted by Marshall University, will be held at the Pullman Plaza in Huntington, WV, April 28–May 2, 2008.

More information: www.maafs.org

With today's explosion of television programs and media coverage of the latest advancements in the forensic sciences, students are fascinated with the work of the forensic scientist. Wishing to foster a stronger interest in science learning among our nation's young people, the **American Academy of Forensic Sciences** now co-sponsors Forensic Science Educational Conferences to increase science teachers' knowledge of the forensic sciences and to assist them as they enrich and/or develop challenging, innovative curricula. Thirteen conferences have been conducted thus far, and three more are planned for 2008:

Florida Gulf Coast University: May 2-4, 2008
Saint Louis University: July 21-23, 2008
Michigan State University: August 4-7, 2008

More information: www.aafs.org

AFTE's 39th Annual Training Seminar will be held May 18-23, 2008 in Honolulu. Oahu is the third largest island in Hawaii and is home to numerous historic landmarks, such as the Iolani Palace and the USS Arizona Memorial at Pearl Harbor, which shed light on the fascinating past of Hawaii. The newly renovated Ala Moana Hotel is just steps away from the Ala Moana Center, the largest open-air mall in America, and conveniently located near the Ala Moana Beach Park and Waikiki.

More information: www.afte.org

The McCrone Research Institute cordially invites you to participate in **Inter/Micro 2008**, an internationally recognized professional meeting dedicated to applied microscopy. The meeting will be held July 7-11, 2008 at the Millennium Knickerbocker Hotel in Chicago, IL.

More information: www.mcri.org

The **2008 ASQDE Meeting** will be held August 16-21, 2008 at the Renaissance Asheville Hotel in Asheville, NC. The Program Chair for this meeting is Grant Sperry, and the Site Chair is Charlotte Ware. The meeting will include presentations and workshops related to the field of forensic document examination. The meeting will also include an optional evening trip to the world-famous Biltmore Estate. Attendance is limited to members and invited guests.

More information: www.asqde.org

The **2008 Annual Meeting of the Southern Association of Forensic Scientists** will be held September 21-26, 2008 at Sam's Town in Shreveport, Louisiana. Sam's Town is located on the historic Red River in downtown Shreveport, just blocks from museums, Botanical Gardens, the IMAX Theater, and Festival Plaza.

More information: www.southernforensic.org

The **2008 Midwestern Association of Forensic Scientists 37th Annual Meeting** will be held September 28-October 3, 2008 at the Hotel Fort Des Moines in downtown Des Moines, IA, only a short distance to many restaurants and entertainment options.

More information: www.mafs.org



Nothing Remains Invisible!



Click below to enter the Leica Microsystems Photo Contest!

Send us your most beautiful application photo, taken with a Leica Microsystems microscope, and have the chance to win our quarterly prize!

www.leica-microsystems.com



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Note: We are interested in your comments and thoughts about the newsletter. Please feel free to email your comments to molly.baker@leica-microsystems.com.