

# BEK TEK LLC

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## Audio/Video Forensic Consultants

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### CURRICULUM VITAE OF STEVEN A. KILLION

#### Professional Positions and Work Experience

November, 1997-Present: BEK TEK LLC, Clifton Virginia. Private consultant and examiner. Conducts forensic examinations of audio and video tapes to authenticate recordings and to identify/classify voice and non-voice signals; evaluates forensic recording and analysis equipment; provides on-site evaluations of acoustical events and environments. Has conducted examinations in approximately 70 individual matters involving over 1,000 audio and video tape recordings.

Consultant to private industry on law enforcement applications of wireless/wireline telecommunications and information technology systems. Advises industry on telecommunication networks, investigative information processing techniques and other technologies that support law enforcement. Consultation work performed for companies such as Computer Sciences Corporation (CSC) and Science Applications International Corporation (SAIC).

October, 1997: Retired from the Federal Bureau of Investigation (FBI) as a Special Agent Supervisor in the Senior Executive Service.

January, 1996-October, 1997: Chief of the Operations Management Section, Information Resources Division, FBI. Managed a staff of 275 employees responsible for:

- Operation of the FBI Headquarters Mainframe Data Center and data communications.
- Design, installation and support of FBI Local Area and Wide Area Networks.
- Acquisition of workstations, peripherals and software.
- Mainframe software systems support.
- Acquisition and support of nationwide FBI telephone and data circuits, secure telephone (STU), fax, cellular, pager, and other commercial services.
- Design, acquisition, and support of the FBI land-mobile radio communications network.
- Appointed by then Secretary of Commerce Ronald H. Brown to serve as the FBI and Department of Justice representative to the Department of Commerce Spectrum Planning Advisory Committee.

## **Professional Positions and Work Experience (continued)**

November, 1993-January, 1996: Chief of the Engineering Section, Information Resources Division, FBI. Managed 300 employees and a technical and engineering facility located at Quantico, Virginia. This facility was and is currently responsible for:

- Providing law enforcement forensic services to the FBI, other federal, state and local law enforcement agencies involving audio and video signal analysis, authenticity, enhancement, speaker identification, and examination of electronic devices.
- Development, acquisition, deployment, training and support of technical equipment used in FBI investigations. Technical equipment included recording and communications interception equipment.
- Operation of a prototyping and fabrication laboratory, which employed the latest computer-aided design, engineering and manufacturing tools.

December, 1984-October, 1993: Assistant Section Chief, Engineering Section, Technical Services Division (Later Information Resources Division), FBI. Managed the day-to-day activities of the Engineering Section; performed personnel management, strategic and tactical planning, budget formulation and development of annual spending plans.

May, 1981-November, 1984: Chief of the Electronic Analysis Unit, Technical Services Division, FBI. Managed a staff of Special Agents, engineers and technicians responsible for performing: 1) vulnerability analyses of FBI physical space, communications systems, and telephone systems. 2) support of a national level Federal Government telephone security program and 3) forensic examinations of communications interception and other electronic devices.

Chief of the Radio Engineering Unit, Technical Services Division, FBI. Managed a staff of Special Agents, engineers and technicians responsible for engineering, development, installation, maintenance and support of the FBI land-mobile radio system.

June, 1980-May, 1981: Inspector's Aide assigned to the FBI Headquarters Inspection Division. Inspected the operations of 9 FBI Field Divisions and one FBI Headquarters Division.

March, 1978-May, 1980: Assistant Section Chief, Engineering Section, Technical Services Division, FBI. Managed the day-to-day activities of the Engineering Section; performed personnel management, strategic and tactical planning, budget formulation and development of annual spending plans.

## **Professional Positions and Work Experience (continued)**

February, 1977-February, 1978: Chief of the Signals Analysis Unit, Engineering Section, Laboratory Division (later the Technical Services Division). Managed a staff of Special Agent examiners, engineers, laboratory assistants and technicians responsible for providing forensic services to the FBI, other federal, state and local law enforcement agencies. Unit personnel conducted forensic examinations of audio tape recordings to determine authenticity, improve intelligibility, identify or classify voice and non-voice signals, compare voice samples for speaker identification and provide expert testimony. Provided training and direct supervision to unit personnel; supervised evaluation of recorder and laboratory analysis equipment; reviewed and approved all laboratory reports prepared by unit personnel. Provided training to Special Agent personnel in recording and signal enhancement techniques. Provided audio analysis training to visiting law enforcement personnel representing other federal, state and local law enforcement agencies.

July, 1971-February, 1977: Supervisory Special Agent, Laboratory Division, FBI. Conducted examinations of audio recordings produced by the FBI, other federal, state and local law enforcement agencies. Examinations included audio enhancement to improve intelligibility of recordings, authentication of recordings, identification and classification of voice and non-voice signals and other related forensic examinations. Conducted forensic examinations in approximately 195 individual matters involving an estimated 400 recordings. Performed test evaluations of recording devices submitted as evidence. Tested and evaluated professional level recording equipment and laboratory audio analysis /enhancement devices. Conducted research and development on new audio analysis techniques. Provided expert testimony in criminal trials. Provided training to FBI and other law enforcement personnel in forensic audio analysis. Provided instruction and training on voice identification and audiotape analysis techniques to law enforcement personnel at the Commonwealth of Virginia Forensic Academy. Provided lectures on speech analysis and speaker identification techniques at law enforcement conferences in Montana and Missouri.

September, 1969-July, 1971: Following training as a Special Agent, served as a Special Agent Investigator in three FBI offices. Performed investigations of violations of federal criminal statutes.

### **Testimony**

Testified as an expert in the field of audio signal analysis and other technical matters in approximately 9 judicial proceedings in California, New York, Nevada, Florida and Virginia.

## **Formal Education**

Bachelor of Science degree, University of Maryland- major of Physics.  
Masters degree, George Washington University, Washington, D.C.- major of Forensic Science.

## **Specialized Short Courses**

Forensic Audio Tape Filtering Course, presented by Digital Audio Corporation, Inc., Durham, North Carolina.

Narrowband Spectral Analysis, presented by Spectral Dynamics, San Diego, California.

Digital Speech Processing, presented by Technology Service Corporation, Santa Monica, California.

Speech Enhancement and Authenticity, presented by University of Utah, Salt Lake City, Utah.

Law Enforcement Instructor Development, presented by FBI Academy, Quantico, Virginia.

Mobile Cellular Telecommunications Systems, presented by George Washington University, Washington, D.C.

Computer Cryptography, presented by George Washington University, Washington, D. C.

Voice Identification, presented by Voice Identification, Inc. Manville, NJ.

The National Cryptologic School, National Communications Security Course, presented by the National Security Agency, Fort Meade, Maryland.

## **Professional Societies**

Member of the Audio Engineering Society.  
Member of the International Association for Identification.

## **Seminars**

Have attended numerous seminars and conventions of organizations including the Audio Engineering Society, the Institute of Electrical and Electronic Engineers and the National Technical Investigators Association.

## Publications

Koenig, Bruce E.; Lacey, Douglas S.; Killion, Steven A. A Digital System for Imaging Bitter Patterns. *Journal of Forensic Identification* **2008**, 58(2), pp 238-264; 58(3), pp 281-282.

Koenig, Bruce E.; Lacey, Douglas S.; Killion, Steven A. Forensic Enhancement of Digital Audio Recordings. *Journal of the Audio Engineering Society* **2007**, 55(5), pp 352-371.

Koenig, Bruce E.; Lacey, Douglas S.; Killion, Steven A. Analysis of the Radio Shack Micro-30 and the Olympus Pearlcor S950 Time Code. *Journal of Forensic Identification* **2004**, 54(4), pp 442-451. Authors' Response to Letter. *Journal of Forensic Identification* **2004**, 54(6), pp 629-632.

Contributor to the article "Enhancement of Forensic Audio Recordings" by Bruce E. Koenig, published in the *Journal of the Audio Engineering Society*, **1988** November.

Contributor to the article "Authentication of Forensic Audio Recordings" by Bruce E. Koenig, published in the *Journal of the Audio Engineering Society*, **1990** January/February.

When serving as Assistant Section Chief and Section Chief, Engineering Section, FBI, reviewed all technical articles submitted by forensic audio examiners for publication.

## Miscellaneous

Full-field, TOP SECRET clearance.

Served as the FBI representative on two Intelligence Community technology committees, and on an international law enforcement technology committee comprised of technical law enforcement personnel representing 14 nations.

6/25/2009