

Current Status of the Forensic Footwear and Tire Tread Examination Discipline

SWGTTREAD Committee

The Scientific Working Group on Shoeprint and Tire Tread Evidence (SWGTTREAD) was created by the Federal Bureau of Investigation to serve as a professional forum in which experts in the forensic analysis of footwear and tire tread evidence share, discuss and evaluate methods, techniques and protocols, quality assurance, education and research related to footwear and tire tread evidence. The committee is comprised of examiners from Federal, State and Local laboratories as well as private practice.

Scope of Footwear and Tire Tread Evidence

The examination of footwear and tire tread evidence is one of the oldest forensic disciplines and is used worldwide. The use of this evidence includes identification or elimination of footwear and tire impressions from crime scenes with shoes and tires of known origin. This evidence also aids in determining the possible number of perpetrators, presence at a crime scene, path of travel through and from the scene, relevant footwear or tire information and in corroborating or refuting witness or suspect statements.

Research and Validation of the Physical Comparison Process for Footwear and Tire Impression Evidence

Numerous published books and articles address the various aspects relating to footwear and tire tread examinations and comparisons. These include class characteristics, mold characteristics, wear, individual and identifying characteristics as well as best practices and techniques for preserving impressions, making test impressions for comparison and the examination process. This extensive published research supports and validates the established methodologies used to conduct footwear and tire tread examinations and the accepted range of conclusions.

Applied Methodology in the Physical Comparison Process

A training program was developed through the International Association for Identification (IAI) by the Science and Practices Subcommittee for Footwear and Tire Tread Evidence. This program was developed to provide a standard for training within the discipline. The first edition was published in 1995 and an updated second edition was published in 2006.

Certification in footwear examinations is available through the IAI and the Canadian Identification Society (CIS) for practitioners in the field who meet specified requirements. These requirements include that each applicant be sufficiently trained, experienced and professionally recommended. Additionally, applicants must successfully complete a written test and three practical case exercises. To maintain certification practitioners must demonstrate sufficient

continuing education credits, casework experience and satisfactorily pass a practical exercise every five years.

SWGTHREAD produces and publishes standard guides covering aspects of collection, examination, comparison, conclusions and reporting of footwear and tire impression evidence. These guides are produced by recognized experts in the field and are publicly peer-reviewed.

Laboratory accreditation requires proficiency testing of examiners as part of their quality assurance program. The continual testing of examiners tests reliability of methodology, repeatability of conclusions and the competency of the examiner.

Professional Forums and Peer-Review Process

Numerous professional forensic associations such as The International Association for Identification, The American Academy of Forensic Sciences, The Forensic Science Society, The Canadian Identification Society and the International Association of Forensic Science coordinate educational conferences and forums that facilitate regular exchange of technical information and research. The subject of footwear and tire tread evidence is also extensively covered throughout the world in numerous professional peer-reviewed journals some of which include the *Journal of Forensic Identification*, the *Journal of Forensic Science*, *Forensic Science International*, *Science and Justice*, *Identification Canada* and *Kriminalistik*.

Forensic Application of Footwear and Tire Tread Evidence

Footwear impression evidence has been accepted in courts worldwide since the 1800's. Footwear and tire impression experts derive conclusions by applying the established methodologies to the science of physical comparisons. These conclusions are based on objective and verifiable features which can be clearly explained and demonstrated to the judge and jury by an expert in this discipline. This evidence has been repeatedly tested in the U.S. adversarial system and found to provide reliable information to the trier of fact.