

BOOK REVIEW

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Review of: *Automated Fingerprint Identification Systems (AFIS)*

REFERENCE: Komarinkski P. *Automated fingerprint identification systems (AFIS)*, Elsevier Academic Press, Burlington, MA, 2005, 295 pp.

The proliferation of automated fingerprint identification systems (AFIS) during the past 20 years has arguably been the greatest boon to criminal investigation thus far devised. However, as the author notes during the introduction, very little has been written specifically about these systems other than brief, often overly simplified, references in texts devoted to the more general area of fingerprints. This glaring omission has been thankfully remedied by one of the most comprehensive and enlightening explanations of a fascinating process imaginable, and done so with a marvelously cohesive and highly readable style. One's only regret is that this book had not been written a decade or more ago and offered as a newly revised edition.

The book is divided into ten chapters and three appendices. Two of the chapters, and part of a third, are contributions from other authors, yet the transition from one author to another is seamless, just one example of the care taken to maintain the book's direction and its fidelity to the intended audience. The task was deliberately arduous, for the subject can be dry and overly technical and the audience can be limited. That is not the case with this volume, for the result is a brilliantly successful book that explains simply without being simplistic and should be a must read for any law enforcement investigator, fingerprint expert, criminal justice administrator, governmental bureaucrat, politician and even an interested layperson. None will be disappointed.

Chapter 1 is far more than the introduction as titled, for the author sets the tone that is followed throughout, a clear, lucid and thorough description of a process involving machines, people and approach. Chapter 2 provides the evolution of fingerprint identification from manual operations to semi-automatic innovations that led to the development of the first AFIS. This is not merely a listing of chronological events, but a concise accounting of paradigm shifts that remains ongoing. The chapter ends with the advent of the Integrated Automatic Identification System (IAFIS), written by the director of IAFIS, Peter T. Higgins, and how this technological advance has altered the process once again. Typically, the accounting is a thoughtful blend of factual information and philosophical

approach in which the reader is constantly reminded there is a large forest surrounding these AFIS trees.

Chapter 3 examines fingerprints uniqueness from an AFIS perspective that may be a little disappointing to latent print experts, but the arguments presented are convincing. The author does direct the reader to other excellent sources for more information, such as onin.com and David Ashbaugh's book. Chapter 4 explains how an AFIS works by providing a comprehensible overview while Chapter 5 takes the reader through the process in a step-by-step form that includes the many functions AFIS provides. Of particular and endearing praise is the emphasis the author gives to the importance of quality images to maximize AFIS effectiveness regardless of capture medium, a stronger version of the garbage in-garbage out axiom. Chapter 6 alone is worthy of attention by the entire criminal justice community, for this part deals with current issues. AFIS is analyzed for strengths, weaknesses, opportunities and threats related to both current applications and future use, particularly as an important role in the increasing need for security. The SWOT analysis is balanced and the potential is staggering as AFIS progresses from a forensic tool to an ever increasing part of civilian life.

Chapter 7, contributed by Peter T. Higgins and Kathleen M. Higgins, is an invaluable primer on how to plan and prepare for an AFIS purchase or upgrade and what goes on during the process. Funding from the Office of Homeland Security is available and this chapter provides a superb resource for any agency considering AFIS acquisition or improvement. Chapter 8 explores the matter of interoperability by discussing the standards in place and those that are sorely needed. Chapter 9, contributed by Senior Attorney Lisa K. Fox, addresses the legal concerns of AFIS purchase to ensure the buyer understands what is needed and the vendor supplies what meets that need. A thorough review of this before purchase can prevent disappointments and headaches.

Chapter 10 should be required reading for anyone involved in AFIS operations. In what was a presentation to the International Association for Identification in 2002, reiterates a persistent theme throughout the book that successful AFIS performance is a combination of equipment, training and maintenance. With concerted effort and what the author describes as "political will," AFIS effectiveness can be improved, sometimes

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dramatically. The arguments presented are impressive and full of common sense.

Appendix A is a most welcomed glossary in a field full of frequently used acronyms. Appendix B is the 1998 IAI AFIS Committee Report on Cross-Jurisdictional Use of AFIS Systems, an important document for present and future planning. The last appendix presents the funding distribution from the National Criminal History Improvement Project from 1998 to 2003.

In a relatively short time, AFIS has revolutionized the area of personal identification in both criminal and civilian applications,

yet the amazing ability of this tool is poorly understood and, sadly, unevenly managed. This book goes a long way to rectify that situation, and does so in a superlative manner. The subject is explored and explained without bias or exaggeration, for only an objective understanding of the entire operation will extract the full potential of these systems. If viewed simply as a text about everything anyone wanted to know about AFIS and didn't know what to ask, the book is exceptional. For those with vision, the author gives insight into creating an effective process dedicated to improved justice, and that makes this book a treasure.