

Introduction use of fingerprints as a mechanism



Introduction

As Barnes ((n. d), pp. 2-3) argues, using fingerprints is one of the most dependable ways of identifying different individuals, as every individual has a unique pattern of fingerprints.

Therefore, because of their uniqueness among different individuals' fingerprints, the use of fingerprints as a mechanism of identifying individuals finds wide application in many scientific fields, for example, criminology. Fingerprints are marks left behind by the friction ridges of the skin once individuals holds or gets in contact with any surface. During identification, for examiners to determine the owner of the left behind friction skin ridge impressions, examiners must evaluate a number of factors between known fingerprints and the fingerprints in question. Such factors include the arch, loop, and whorl patterns and the minutia characteristics, for example, ridge ending s and bifurcation.

History of Fingerprints

Unlike other human characteristics, which change with time, the fingerprint ridge pattern remains the same as one grows older hence, making fingerprints the most dependable identification method. Historically, as dating experiments show, the first human fingerprints were left behind more than 4, 000 years ago by builders of the Egyptian pyramids. In addition to such discoveries in Egypt, the use of fingerprints was also a common practice among Chinese traders in the 3rd century B.

C, as this was the most dependable method of proving that certain business transactions took place. Although the use of fingerprints was a common

practice, individuals had no interests in the uniqueness of fingerprints until 1684, when an academician named Nehemiah published the first anatomical paper on fingerprints. This publication was followed by more scientific tests and publications on the uniqueness of fingerprints by scholars such as Marcello, J C Mayer, and Purkinje. Because of such discoveries, in 1858, the use of fingerprint for contractual purposes became an official practice in some countries, for example, India. The use of fingerprints for identification purposes took a turn in the late 19th century with the discovery by Henry Faulds that fingerprints remained the same even after an injury. This discovery gave birth to more discoveries, some of them widely applied presently, for example, the use of printer's ink to reproduce latent prints on surfaces (Barnes, (n. d), pp. 3-14)

Fingerprint identification

This involves the process of matching questioned fingerprints with some known fingerprints, as a methodology of authenticating the identity of the questioned fingerprints.

Fingerprint identification (latent print identification) is of great significance in solving most crime cases as it provides one of the most dependable methods of identifying the identity of those involved in certain criminal activity.

Currently, examiners combine chemical, electronic, and physical processing methods to accurately match any questionable fingerprints regardless of their nature. To match questionable prints with known prints, it necessitates for one to have the required expertise, as most fingerprint identification results are crucial evidenced in courts of laws. Their work entails dusting for fingerprints and collecting of tangible evidences, which can be used to

<https://assignbuster.com/introduction-use-of-fingerprints-as-a-mechanism/>

identify the crime perpetrator. Examiners are also of significance in the immigration department, in controlling the flow of both foreigners and locals into and out of the country.

On the other hand, it is the duty of the fingerprint examiner to cross-match the collected fingerprint hence, their significance in providing evidence in criminal cases (Prabhakar, Jain, Maio, & Maltoni, 2009, pp. 7-43).

History of Fingerprint Identification

Until mid 1800's, most governments used daguerreotyping and the Bertillon system as a mechanism of identifying criminals. Although such an application lasted for a while, the 1903 Leavenworth, Kansas identification failure, led to the birth of fingerprint identification method. Prior to this, individuals used fingerprints for only legal documents. The early discoveries by Marcello Malpighi, Nehemiah Grew, Purkinje, Herschel, and Fauld opened avenues for more discoveries on better methods of identifying criminals, as most early methodologies had many flaws. In the United States, the use of fingerprints first appeared in 1882, as a forgery prevention mechanism.

Later on in 1892, detective Juan Vucetich made the first application of fingerprint evidence in solving a murder case in South America;. Juan's method received more applause as year went by, as most countries adopted his method to solve criminal cases. The completion of Sir Edward Henry work on how to use different fingerprint characteristics in criminology in 1896, opened more insights into the significance of fingerprints in identifying criminals. Subsequent years marked more development into the system, as this method became more common in prisons and state security

departments, for example, the New York State Army, and Navy. Because of the expanding application of fingerprints in identifying criminals among state departments, through coordination of inspector Harry Caldwell, the need for formation of an examiner's accreditation body rose, leading to the formation of the International Association for Criminal Identification in 1915. Its name changed in 1918 with the adoption of its first charter hence, its current name the International Association for Identification.

More development trickled in 1977, with its adoption of an accreditation program called the " Latent Print Certification Program". Since then IAI has developed other certification programs for example, Blood stain patten analysis, the Foot wear and Tiretrack analysis, Forensic Photography, forensic art, and tenprint certification. More developments came in with the development of the computerized Criminal Fingerprint File of 1980, by the Federal Bureau Department and later on the developing of the National Crime information center in 1983 (Skopitz, 2002, pp. 1).

Requirements and Certifications for Fingerprint Examiners

Depending on the location and country of origin, the educational specification and qualification of a latent fingerprint examination varies.

In the United States, for individuals to be examiners, they have to receive the required accreditation from the International Association of Identification, it being the primary provider of standards recognized globally. Although an individual may apply and qualify for the IAI training, in most cases one has to have some prior training. Before the IAI accepts one into their training or gives one the required certification one has to have some science training

background, for example, a degree in chemistry, biology, or forensic science. After this, one must go through a latent finger examiner course, offered by police departments, colleges, and crime technical laboratories. On completing the course, individuals must go through an IAI three-part Latent Finger Print assessment. In addition to this training, after a time span of five years every certified fingerprint examiner must pass an exam, offered by IAI, failure of which leads to suspension of ones license (International Association for Identification p.

1).

Reference List

Barnes, J. G. (n.

d). History. Retrieved September 9, 2010, from < <http://www.ncjrs.gov/pdffiles1/nij/225321.pdf>> International Association of Identification. Training, certification, and disciplines. IAI.

Retrieved September 9, 2010, from < <http://www.theiai.org/>> Prabhakar, S.

, Jain, A. K., Maio, D., Maltoni, D. (2009). Handbook of fingerprint recognition. New York: Springer Publishing.

Retrieved September 9, 2010, from

(2002). History of fingerprints. Essortment. Retrieved September 9, 2010, from < http://www.essortment.com/all/fingerprinthist_rmmv.htm>

<https://assignbuster.com/introduction-use-of-fingerprints-as-a-mechanism/>