

Technology and communication

Technology



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The most essential part of everyday life is communication, this allows people to express information to each other. Within world, technology has changed the communication techniques with new advances that have evolved. This statement is true within the personal lives of the people and at their workplaces. The new technology wealth the criminal Justice system has modified the communication capabilities with specializes databases. The Automated Fingerprint Identification System, also know has the IFS will discuss with the Facial Recognition and both databases will be compared.

The positive and negative effect of both databases will explored and the use of both databases and the reason why they used within the criminal justice system. Automated Fingerprint Identification System and Facial Recognition The characteristics of fingerprints and facial features can help to provide an exceptional means to help identify people. Everyone has distinguishing characteristics within their fingers and facial features that makes everyone different.

Comparing and contrasting the characteristics of fingerprints and facial features manually can be overwhelming because there all kinds of different mints that need to be compared. Within the criminal Justice system one of valuable commodity can be time. The amount of time that is used can within the criminal justice system can make a difference In cases, this can mean life or death in some of cases. Automated Fingerprint Identification System (IFS) Fingerprints Images that are collected by the IFS are stored within an electronic database.

There are two different types of sources that technicians collect samples of blueprints from, some of the sources are known sources, and some are unknown sources. Some of the known sources that technicians can obtain samples from can be convicted felons, military personnel, and teachers. These samples can be collected when someone could be hired or to help to run a background check. The samples collected from unknown sources are usually collected at the crime scene, but are later to compare with the known source samples.

These are commonly referred to as latent prints. That type of samples need a technician to enter them into a database, the technician will look at the print, the different identifying patterns and all the different characteristics within the print. According to Ridges and Furrows (2001) sets of 'ten print' flattering records, after being examined by a trained technician, are stored on IFS. Each fingerprint image is 'filed' based on its pattern type, its core-delta distance and (Para. 3).

This allows the technicians to compare the prints faster because they can eliminate the prints that do not have the same pattern as the sample does. Here is an example, when the technician is looking at the print and the print has loops, the technician can eliminate all the prints that have whorls within them. If the search can be done faster there can be a faster chance that the person can be identified. Once there is a match that could be a potential match, the technician must still compare it manually to help to see if the samples are alike or to see if they have the similar pattern.

If the match is a positive match, the information can be used to help to identify the person. Facial Recognition The database of biometrics is used in facial recognition. According to Woodward, J. D. , Horn, C. , Gateau, J. , & Thomas, A. (2003), the definition of biometrics is automatic recognition of a person using distinguishing features (Discussion of Biometrics, Para. 1). Within the biometric, the computer uses facial photographs to compare the characteristics of the face and successively tries to make a potential match.

There are five steps to help to accomplish the facial recognition, step one is to acquire an image of the face, step two is to employ the software to detect the location of many facial images within the acquired photograph, step three is to obtain the features to generate templates, step four is to compare the facial templates that were generated in step three with all the faces within the database, step five is to determine whether the templates in step four are good enough to make a match (Discussion of Biometrics, page 8-9).

Facial recognition works the best when there is some form of distinguishing marks on the face or in the bone structure. Some of the distinguishing marks that would be considered can be the person's bone structure, scars, moles or any other markings on the face that cannot be changed. Just like fingerprints, the technician has to compare manually any matches to help ensure the accuracy of the match. Positive Effects Due to New Technology There are many positive effects within these technologies. The most positive effect within these databases is that they can save time.

The technicians can reduce the time to compare many images because there are many images that are stored in one location and all of those images can be

search by a computer with specific features. By using the computer to search can reduce human error significantly. Another positive effect of using these databases is the reduction of human error. With the suspect of a crime, the people who are trying to hide their identity and with deceased people and the people who cannot be identified can be identified by using these databases. Negative Effects Due to New Technology There many negative effects within these technologies.

To load the images manually by the technician into the databases can take some substantial time to do, where this time can be used somewhere else. The cost to maintain and the operation of the databases can be high. There got be skilled technicians to run the databases. There is a considerable amount of electricity to run the computers and their servers that can cost a lot. The computers and the servers have maintained a certain temperature to run properly. If the databases fail to run properly, this can ender the investigation part of a crime scene.

According to National Institute of Justice Both of the efficiency and effectiveness designs suffer from the typical threats to validity associated with pre-experimental approaches? C,-1? 0 (What strengths and weaknesses do the designs have, Para. 1). Which Database Might be used One of the better options between the two databases is the IFS database. The reason for this that people can alter their facial feature and structure with plastic surgery. The bone structure of a person face can alter as well; they can do this by surgical procedure.

By having extreme body modifications done can alter the person facial feature to a large extent so there cannot be any scarring, but it does not erase the whole print of the finger. There have been attempts made by people trying to erase their fingerprints, but in most of cases have been unsuccessful. The analysis of the fingerprints has been around much longer than facial recognition. So, fingerprinting has a much better reputation for the accuracy. The technology around the IFS and facial recognition will continue to evolve. These types of databases can give the investigators considerable of amount of information.

Continuing training and education can help ensure the information that goes into the database and what comes out of the database is the right information. All the information within the database must be entered manually and the matches got are check for their validity. The odds of two people having the same features, the database cannot guarantee the results are going be perfect. Even though the databases can highly accurate, it is important that people know the information that within the database may not be 100 % accurate so they need to make sure the alteration is done.