avulsion. What was strikingly unique was the presence of two bony impacted teeth found distal to the m and molar and third m class.

Recognizing the importance of this information, the New York forensic odontologist notified the New York Investigating Office. A file containing the x-ray of the decedent's panoramic x-ray and other dental records was sent to the odontologist, and the New York State Dental Licensing Board was notified. The New York State Dental Society was also notified by email of the description of the dental inform ad to their list of dentists. The New Jersey odontologist, who had been recently working in the New Jersey central database, informed the New Jersey State Police Forensic Anthropologist and the New York Investigating Office. A tentative identification was made by examining an emailed photograph of the decedent's dental record. The local New Jersey law enforcement agency was notified and the identification was confirmed after the original dental film was brought to the Medical Examiner’s Office.

Utilizing trained forensic odontologists in mising person's cases will allow m more m potential for positive identifications when compared with unidentified remains.

Forensic Odontology, N.C.I.C., Missing Persons

F33 Blame Canada: Making Sense of Cross-Border Missing Persons/Found Human Remains Comparison Algorithms and Data Entry Forms

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The goal of this presentation is to demonstrate a computerized 3-D forensic craniofacial reconstruction tool. This forensic application is based on a large scale database of facial soft tissue details of Caucasian adults and allometric models of face shape used in computerized three-dimensional (3-D) craniofacial reconstruction actions.

This presentation w ill in p act the forensic community by presenting a large scale database of facial soft tissue depths into a 3-D forensic craniofacial reconstruction tool which allows for more objective 3-D facial soft tissue estimation actions. In this presentation the application of the in vivo estimation of soft tissue thickness described by DeGraef et al. (2006) into a flexible statistical model of face shape developed by Claes et al. (2006) is demonstrated.

De Graef et al perform in vivo facial soft tissue depth measurements on 967 adult Caucasian using a user-friendly, fast, flexible, mobile, and well validated ultrasounds measuring device. Data of both

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assess, varying in age and body mass index (BMI): were collected at 52 m annually indicated facial landmarks. The “A-cam” Industrial ultrasound device was selected to perform the tissue depth assessment because of its low weight, compactness, facile transport, and its ability to connect a 6-MHz diaphragm. 10 MHz ultrasound transducer which can easily be pointed to the landmarks during analysis. The reproducibility of the ultrasound measurements was tested on a subset of 33 volunteers and their accuracy reviewed after con-pairing the ultrasound m easurements and the soft-tissue thickness calculated from total head CT-scans on twelve patients.

The computer-based combined flexible statistical m odel for craniofacial reconstruction established by Claes et al. requires the achievement of a skin surface and tissue depth database, a statistical face and soft-tissue depth model and a statistical model fitting procedure. The skin surface shape of approximately 350 individuals was captured with a mobile 3D photographic device, after measuring thickness and marking the 52 soft tissue landmarks and registering age, gender, and BM I of all the individuals. The constructed statistical facial surface and soft-tissue depth tissue model consists of a geometrically averaged facial template plate together with a corresponding ranked set of models of principal variations or face-specific deformations that capture the major changes or differences between facial outlooks and their skull-based landmarks in the database. The created elastic mask is subsequently fitted to the external surface of the individual craniofacial skeleton such that all the 52 landmarks on the mask fit the corresponding target skull-landmarks and the esthetic fit of the nose tip.

Multiple reconstructions of the same skull but with different combinations of age, gender, and BMI can be made within a few seconds. One specific facial soft tissue changes during aging can be imitated. The authors adjust the mask on the model varying in age, gender, and BMI. This will be demonstrated in our presentation. The repeated fitting of the mask leads to the corresponding target skull-landmarks and the esthetic fit of the nose tip.

F35 Hidden in Plain Sight and Who’s Your Daddy: Cases of Interest to the Forensic Odontologist

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A fact attending this presentation, attendees will be familiarized with some unusual death circum-stances requiring the services of the forensic odontologist. Some useful tips for securing antem mortem dental records will also be provided.

This presentation will impart the forensic dental community at large as an example of record keeping that could challenge an investigation. The use of DNA analysis will also be examined.

Occasionally, investigators have only half of the information needed to complete an investigation. For exam ple, an individual claim to have comntained a minor and hidden the body of his victim. Police may change the individual’s actions, but until the victim’s body is uncovered and scientifically identified, it may be impossible to prove that the crime has actually occurred. It could be on the scene only until all the pieces of the case are brought together for proper resolution.

A further example could be a minor lying in a room where there is no evidence of foul play. It is difficult to investigate a person who is not to be found. One may be well concealed by circum-stances of death.

Human Identification, Facial Soft Tissue Data Base, Forensic Facial Reconstruction

The two cases described in this presentation let illustrate the role of the odontologist in the identification of persons who have died in unusual circumstances.

The first case involves a 19-year-old man who either fell over or was pushed to his death and his body left undetected for some months even though thorough search of his neighborhood revealed nothing. The ultimate discovery of his remains was not by investigators, but rather some citizen looking for some clothing. He was found in the usual location, five years after his disappearance. This individual was listed with NCIC and featured on America’s Most Wanted.

The second case involves an alleged criminal involved in a family dispute. An abandoned live baby was the first clue to the disappearance of a young woman, yet no remains were discovered until months later. Through extensive searches and investigative work, the remains were found. A very bizarre family situation had emerged after the investigation of this suspicious death. This case is particularly interesting because of the difficulty in obtaining antem mortem dental records in spite of postmortem evidence of extensive dental treatment. The delay in securing adequate antem mortem dental records is a common problem in forensic investigations. The difficulties with the antem mortem dental record search and the unusual source of records associated with this case will be discussed.

Dental Records, Dental Identification, Digital Radiography

F36 The Identification of The Victims of Flight 5191: Keeping It Simple

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A fact attending this session, attendees will see the benefits of using simple techniques along with a focused and organized approach to victim identification in a mass disaster.

This presentation will impact the forensic community by demonstrating the advantages of simplifying the odontology process in order to expedite identification of a mass disaster victim.

On the morning of August 27, 2006, Comair Flight 5191 crashed on takeoff from Lexington, Kentucky bound for Atlanta, Georgia, killing 49 of 50 individuals on board. Only one co-pilot survived. The Chief Medical Examiner of Kentucky activated the mass fatality team of coroners, pathologists, anthropologists, and dentists.

Five local forensic dentists and a dental hygienist assembled at the Medical Examiner’s facility in Frankfort, Kentucky, which served as the tem posy site. The Comair Flight 5191 crashed on land, and the victims were quickly moved to the State Medical Examiner’s facility. The Medical Examiner’s facility was not equipped to handle the large number of patients.

Each mass disaster presents unique challenges that necessitate modifications in the management of the identification effort.

The identification process was conducted in the following manner:

The labeled, partly charred bodies were autopsied, then in asybyline manner. The dental postmortem section was performed. Periapical x-rays were ordered as a clean-handed scribe, taking notes regarding the status of each body and recording findings noted during jaw examination. The x-rays were placed in labeled bags and transmitted to two dentists for