

## **Facial Approximation**

### **1.0 Principle, Spirit and Intent**

This section presents recommendations for the production and assessment of facial approximations using skeletal remains. This endeavor represents a combination of varied methods of art and science that continue to evolve. Therefore, recommendations for specific techniques are premature and are not addressed. The methods should be employed with a spirit of scientific integrity: subjective interpretation should be limited, scientifically tested methods should be used, where possible, and method weaknesses and limitations should be communicated. Inclusion of information from surviving soft tissues should follow the same guiding principles addressed in this document.

### **2.0 Purpose and Scope**

The aims of facial approximation (sometimes referred to as facial reproduction, facial depiction, or facial reconstruction) are: to estimate the antemortem facial appearance of an individual from unknown skeletal remains; to suggest the identity of persons to whom the remains might belong; and to capture public attention regarding the case. Practitioners should implement these guidelines to the fullest extent as applicable, practical and appropriate. In the absence of specific guidelines or procedures or in the case of conflicting procedures, the principle, spirit and intent should be met.

For information regarding craniofacial superimposition, refer to the SWGANTH document on Personal Identification.

### **3.0 General Principles**

The production of facial approximations should be a joint effort among experts from the fields of anthropology, anatomy, and forensic art. Knowledge of human cranial variation and anatomy, as well as artistic ability, is essential for the production of useful facial images. Extensive training, education and experience in these fields are essential. Although some individuals may possess all of these skills, a team approach usually is necessary.

### **4.0 Best Practices**

The production of facial approximations should incorporate information about the individual from the recovery scene and as determined from skeletal analysis by a qualified forensic anthropologist.

Various methodologies (e.g., two-dimensional, three-dimensional, and computer-based) and techniques (e.g., sketch, clay) are accepted means of producing facial approximations. The scientific and anatomical soundness of these methods should be used to evaluate their effectiveness.

Facial approximation images should be carefully evaluated against the skeletal evidence by all relevant specialists before they are released for public use.

Morphologically accurate copies of skeletal material should be used as the base for sculpted approximations whenever possible.

## **5.0 Unacceptable Practices**

The following practices are considered unacceptable and should be avoided when producing facial approximations:

- Use of facial approximations beyond investigative purposes (i.e. as a means of personal identification).
- Undertaking facial approximations without the requisite input from anthropological analyses. Likewise, practitioners should not attempt facial approximations without requisite skill and training in forensic art.
- Any practice that unnecessarily jeopardizes the integrity of the evidence should be avoided.

## **6.0 Additional Considerations**

Facial approximations are not meant to represent the exact likeness of an individual. Given the difficulty in scientifically assessing the uniqueness of human faces, statements regarding the power and value of facial approximation methods should be carefully presented.

Tissue-depth measurements are not standardized and in most cases are averaged from many individuals. Additionally, there is error inherent in the collection of these measurements. The degree of individual variation combined with measurement error may result in considerable differences between actual tissue depths and those depicted in facial approximations.