

# *Biometric Consortium 2004 Conference*

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**Topic:** Biometrics and Forensics: Similarities and Differences

**Abstract:** It often happens that people confuse biometrics and forensics. After all, television and movies make it look like automated biometrics databases can be used to identify and convict people all the time. Isn't that what forensics is all about? Unfortunately, this can have an adverse affect on the development of forensic tools which utilize biometric features, because those in position to make funding decisions may not understand the distinction between the two. This presentation will attempt to provide the audience with a better understanding of the relationship between biometrics and forensics from the standpoint of a forensic scientist.

Advances in the field of biometrics offers great potential for the field of forensics. Biometric databases offer the promise of enabling law enforcement and the intelligence community to rapidly identify questioned individuals if they are present in the queried database. However, obtaining a "hit" in a biometric database is a far cry from an identification in the world of forensic science. The standard of proof to which forensic scientists in the United States are held is "beyond a reasonable doubt". That "reasonable doubt" criteria, coupled with standards for scientific and technical evidence elucidated in the "Daubert" and "Kumho Tire" cases, require that conclusions offered by forensic scientists be supported at beyond that offered by current biometric systems, particularly in the field of facial recognition.

This presentation will discuss the standards identified above and also address specific challenges o developing facial recognition applications which can be applied in a forensic environment.

**Biography:** Richard W. Vorder Bruegge has a Ph.D. in Geological Sciences from Brown University, as well as an engineering degree from Brown. Prior to joining the FBI he worked as a contractor for NASA , where helped plan robotic spacecraft missions such as Mars Pathfinder. During that time he also helped plan and operate the DOD's Clementine mission, which acquired the first complete digital map of the lunar surface. Since joining the FBI in 1995, Dr. Vorder Bruegge has worked on hundreds of cases involving forensic photographic comparisons, photogrammetry, and image authentication. He has testified over 30 times in federal, state, and municipal courts as an expert witness, and he currently serves as the Chair of the Scientific Working Group on Imaging Technology (SWGIT), an organization whose mission is to develop guidelines and recommendations for the use of imaging technologies in the criminal justice system.