

# Biometrics Vulnerability Assessment Service (BVAS)



## Background

Biometric verification of an individual's identity can help control the risks associated with misidentification. However, biometric verification can itself be compromised through vulnerabilities in the system. This can occur through deliberate attempts to breach security and the integrity of the biometric process. To address this risk the Biometrics Institute Technical Committee intends to establish the BVAS.

## Aim of the Biometrics Vulnerability Assessment Service (BVAS)

The Biometrics Institute has developed a framework to assess the vulnerabilities in a biometrics system and derive useful metrics for the likelihood of an attack succeeding. This likelihood depends on the type of attack, the particular technology being used, and the knowledge of the attacker. Based on this methodology it is now offering a Biometrics Vulnerability Assessment Service (BVAS).

The aim of the BVAS is to allow those implementing biometric systems to understand which risks need to be mitigated and to provide developers with a target for improving vulnerability to attack.

Whilst this is important for all biometrics, we currently can test vulnerabilities for **face** and **fingerprint** biometrics and as of mid-2009 **voice**. Other biometrics will be considered later on.

The service has been designed to ensure that the evaluation is cost effective and leads to practical outputs that can be used as part of the risk analysis process for any system using biometrics. It is also hoped that it will spur developments in techniques and procedures that can be used to mitigate biometric vulnerabilities.

The existence of BVAS increases the integrity of biometric-based identity management systems, lessening the likelihood of successful imposter attacks on such systems. It also provides a mechanism for continuous improvement of biometric system vulnerability.

As far as we are aware there exist no similar services in this area. Whilst some results have been reported there seems to be no principled approach to Biometric vulnerability research.

All research has been carried out in Australia by a consortium led by the Biometrics Institute, and has generated a new Science & Technology capability for the benefit of Australian organisations.

Our collaborators include University Departments and several companies with longstanding experience in the Biometrics Industry. Skills include research and development into biometrics algorithms and systems, the selection, measurement and assessment of such systems and their integration into larger systems. The consortium has mature expertise in most types of biometric technologies, including face, finger, iris and voice.

The Biometrics Institute has released a White Paper on "Biometric Vulnerability: A Principled Assessment Methodology" which is available via email upon request. Please also refer to our website for more details at: <http://www.biometricsinstitute.org>.

## For more information contact:

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### Request Information:

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