



UK Government Biometrics Security Assessment Programme

Philip Statham
CESG Biometrics Programme Manager

philip.statham@cesg.gsi.gov.uk

Spoofting Biometric Systems



Published Ad-hoc “Evaluations”

- Six biometric devices point their finger at security
 - Network computing – Jun 1998
 - Fingerprint
- Biometrics security
 - PC magazine – Feb 1999
 - Fingerprint / face / voice
- Fingerprint recognition–don’t get your fingers burned
 - Van der Putte, Keuning, Jan 2000
- Impact of artificial “gummy” fingers
 - Matsumoto, Jan 2002
- Biometric access devices & programs put to the test
 - c’t magazine, may 2002
 - Fingerprint / face / iris

CESG Programme

- Develop security evaluation methodology
 - Augment Common Criteria BEM
 - SEAP evaluations
- Build risk assessment model and metrics for biometric vulnerabilities
- Relate risk model/metrics to external models e.g.
 - Common Criteria
 - UK IS1
 - SEAP

Methodology Overview

- Generic vulnerabilities e.g.
 - weak enrolments/templates
 - Spoofing
 - capture/replay
 - template integrity/confidentiality
 - environmental
 - procedural/configuration
- Technology specific manifestations e.g.
 - latent images, gummy fingers (fingerprint)
 - contact lenses, glass eyes, spectacles (iris)
 - photographs, masks, mannequins (face)
- Product specific vulnerabilities



Biometric Security Assessment Programme

Programme Plan

- Develop partnerships - NPL, FCO, Cabinet Office, & companies
- Survey, acquire and install biometric devices
- Develop draft methodology
- Investigate vulnerabilities
- Refine methodology
- Target - deliver draft methodology, first report by end 2003

Status

- Lab network in-place
- Some Biometric devices in-place / on order (more to follow)
- Methodology
 - Initial drafts available (from several sources)
 - Not yet in desired form
 - Lots more to do
- Some early assessment work done

**Thank you for your
attention**



Questions?



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