Summary of the BioTrusT Project: April 1999 – March 2002

Demonstration platform for more than 12 biometric systems (Stargate at FH[1] Giessen-Friedberg)
- More than 400 users, used over 75.000 times
- Model for positioning sensors and user guidance to be used also by handicapped people

Test of 8 biometric systems at 4 locations[2] for access control in open system environments with volunteers (> 200 users)
- Recommendations for biometric systems implementation and usage by a state's privacy officer and a consumer advocate
- General recommendations
  - User guidance strongly recommended
  - Quality of first enrollment is critical to achieve later high recognition rates; quality of enrollment systems and procedures are key
- Other significant findings
  - With any single system some persons could not be enrolled with sufficient quality
  - During the tests enrolled persons were sporadically not recognized by almost every system (caused almost equally by either, environmental or behavioral modifications)
  - Alternate equivalent biometric systems are needed for larger groups of people – not at least due to individual preferences of specific systems
  - Standard interfaces are required to allow for different biometric systems and to protect the investment of an operator
  - Findings and usage recommendations have been implemented by project members (system providers)

Development and test of a standard interface for biometric systems
- Adaptation and first of a kind implementation of the international industry standard BioAPI 1.0/1.1 in applications (e. g. screen saver[3], log-in[4], browser-plug-in[4], HBCI-home banking[5]) and biometric systems[6] on Windows 95, 98, 2K and NT
- Decentralized test at up to 12 sites distributed over Germany with templates placed at
  - PC/Server
  - Chip Card (ITSEC E4 high, template controlled by its user)
- Development and test of a common feedback capture and analysis system by close cooperation of research, privacy officer and consumer advocate
- Findings
  - Complexity of BioAPI standard is high, integration with chip card needs significant effort
  - Decentralized implementation of biometrics requires significant organizational effort
  - Integration in different environments (single PCs, company networks) requires substantial effort by both, system providers (Biometric, Chip Card) and operators (system integration, administration)
  - Significant larger pilot implementations are needed (where the use of biometric systems is mandatory) before a massive implementation of biometric systems can be evaluated and recommended

Analysis of biometrics for potential use at automated teller machines
- International and other complex regulations prevent effortless pilot implementations
- Organizational and technical efforts are considered very high, as biometrics may only be used alternate to the PIN (liability aspects are more important than convenience offerings)
- Consequent: It seems difficult to establish a business case for the next few years

Germany
- Unique interdisciplinary project with over 30 project members, strong international interest
- First comprehensive biometric survey of the general public
- Providers/products from many countries: Germany, Austria, Sweden, Israel and U.S.A.
- International conference participation: e.g. Barcelona, Berlin, Brussels, Budapest, The Hague, Frankfurt, Hamburg, Munic, New York, Qatar, San Francisco, Stuttgart
- Unique skills building and improvements for project members
- Contributions to international standardization: BioAPI, CBEFF (DIN, NIST, IEEE)
- Numerous publications and books
- Public workshops (Muenster 2000, Friedberg 2001, Berlin 2002)
- Workshop presentations and additional information available at the BioTrusT website biotrust.de

Summary of the BioTrusT Project: April 1999 – March 2002

Notes

[1] FH Giessen Friedberg – university for applied science Giessen-Friedberg

[2] Muenster, Friedberg (2), Stuttgart

[3] Omnikey AG

[4] Utimaco AG

[5] Sparkassen Informatik: Home Banking Computer Interface

[6] BioID, Dermalog, Ikendi, Iridian, Softpro, Wondernet/Dr. Fehr