



Fusion in a system

September 2004



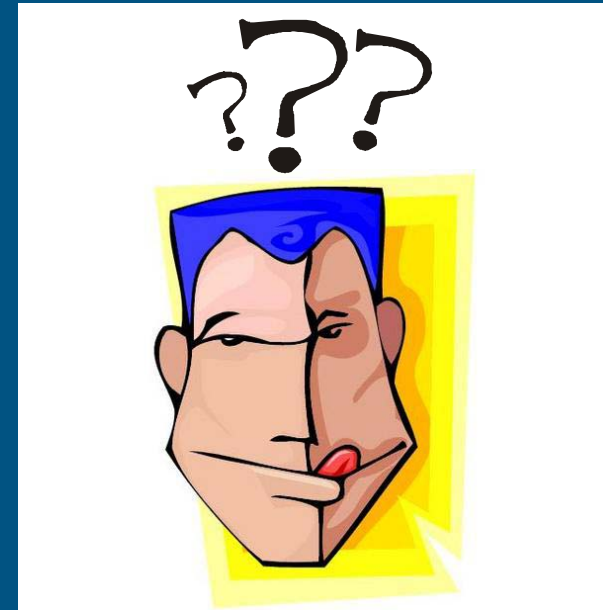
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Turning Theory into Practice

- What do those symbols represent?
- 3 pages of calculations????
- What happened to pie-charts?
- What language is that???



BioCom



Single Biometric Systems

Users



Thresholds



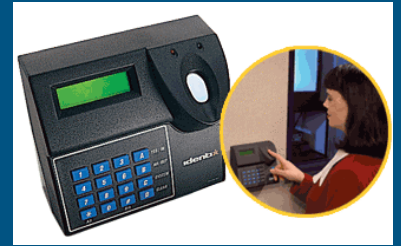
Per-device thresholds common

Devices

Single Biometric Systems

Users

Thresholds

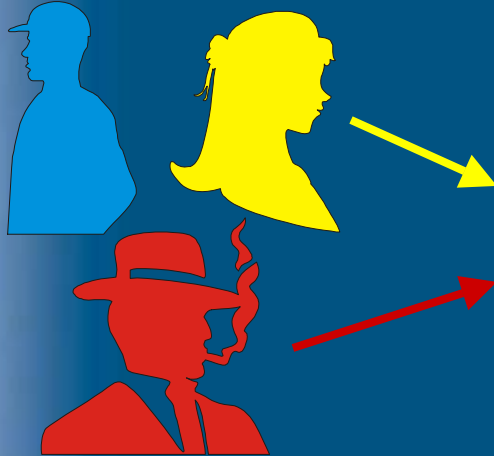


Per user and per-device thresholds ideal.

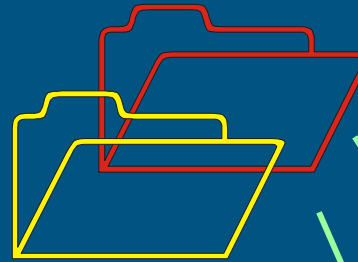
Devices

Single Biometric Systems And Dynamic Threshold Modeling

Users



Threshold
Models



Risk Level
Exception occurrence
Throughput requirements
Etc...

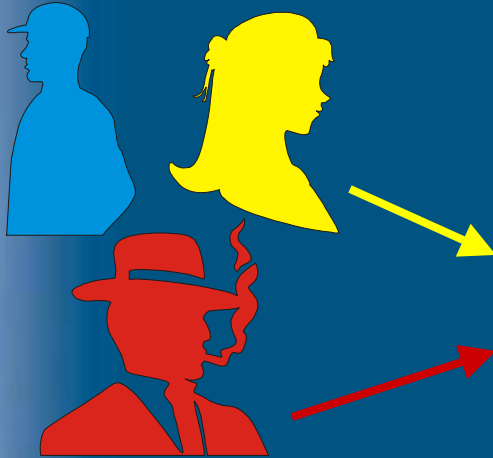
Threshold Models require
additional Data.



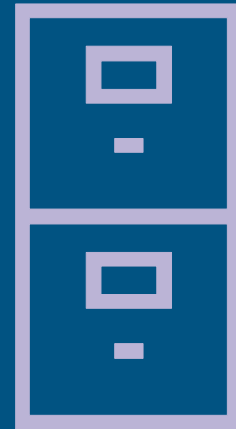
Devices

Multiple Biometric Systems

Users



Fusion Rule Sets



Biographical Data
Vendor Data
Performance Data
Etc...



Fusion Rule Sets require lots of additional data.

Devices

Multiple Biometric Systems E.g Passport Control



User Data:

- ID
- Nationality
- Race
- Gender
- Exception Model
- Etc.



Device Data:

- ID
- Vendors
- Available Fusion Models
- Etc.

Fusion Rule Sets:

- Threat Level
- Political Interests
- Processing times
- Etc.

Multiple Biometric Systems Fusion Models in the Business Process

If Multi-Biometric Systems are here to stay:

- Fusion Models and Fusion Rule Sets should be designed to allow for dynamic loading and unloading on a per-transaction basis.
- Fusion Models could become commodities.
- Performance testing becomes even more important since this data is the foundation for the decision process.
- Input Data relevant to the transaction is crucial.

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