

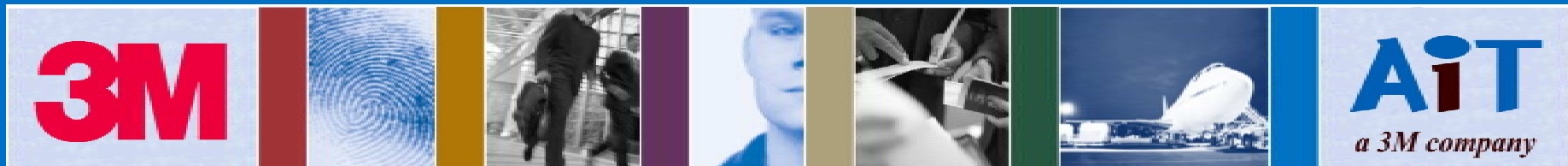
# Using Biometrics to Enhance the Security of Identity Document Issuance

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3M-AiT, Ltd.

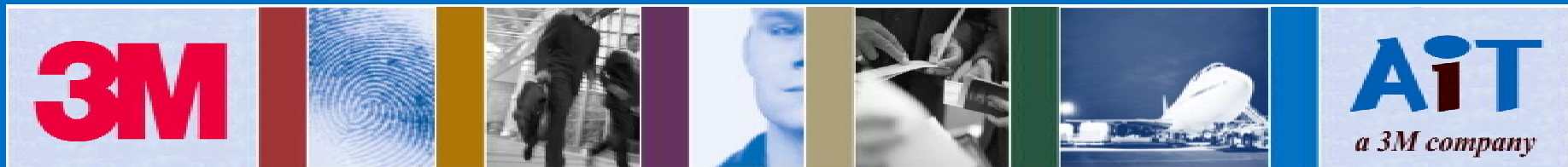
Biometric Consortium Conference

September 2002



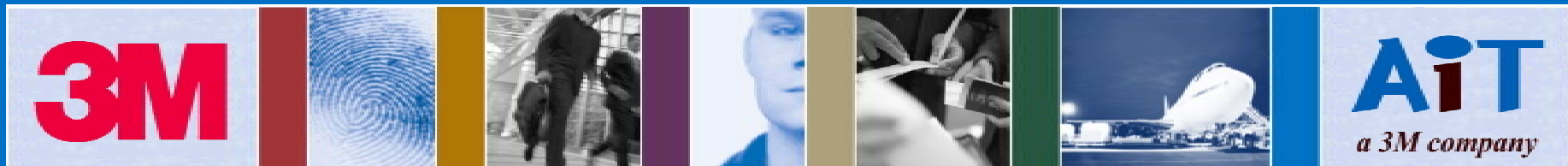
# The New Security Reality

- verifying traveler identity is critical
- trusted identity documents must enable verification of traveler ID
  - **authenticate the document**
    - “this is a real document”
  - **authenticate the bearer**
    - “you are who you say you are”



# Authenticating the Document

- physical security
  - secure laminates
  - intaglio printing
  - fluorescent inks
  - other features of materials & inks

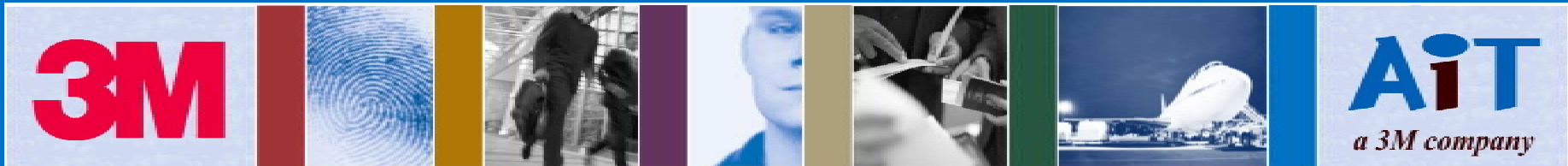


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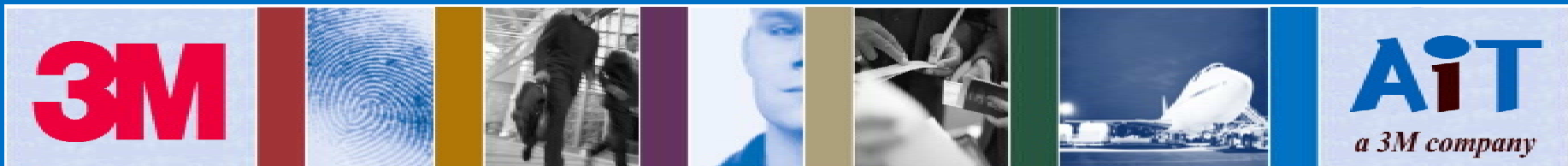
# Authenticating the Bearer

- use of biometrics on documents has evolved
  - from pasted on photo
  - to stored biometric template
    - face, finger, iris

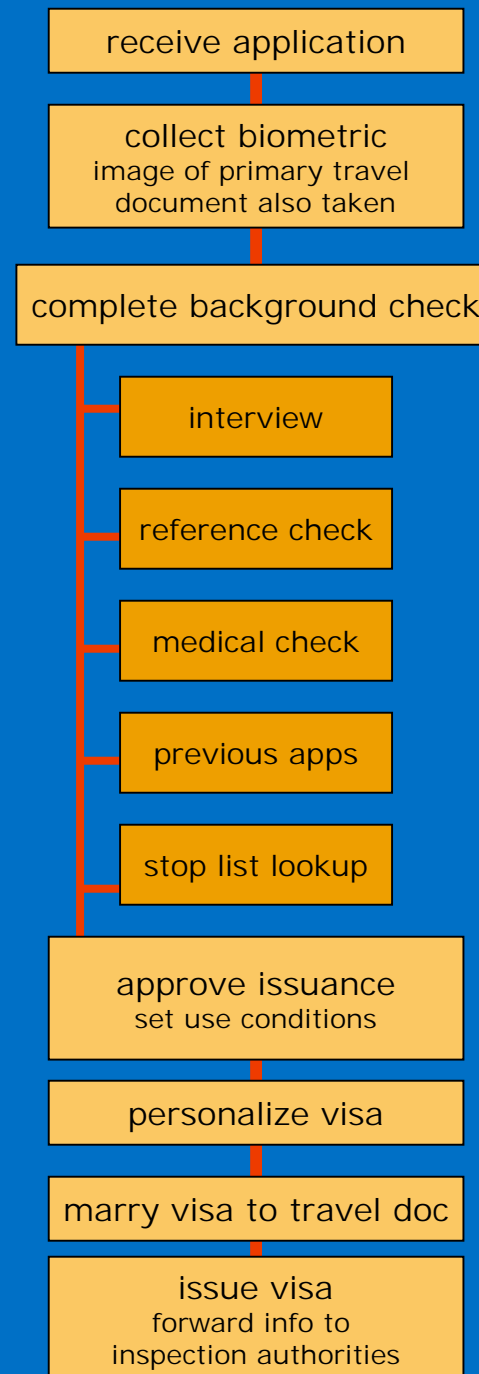


# The Problem: Securing the Issuance System

- integrity of a document is compromised when the issuance system enables a document to be issued
  1. to a person who is not entitled
  2. to a person who has established multiple ID's
  3. by an insider who falsely issues documents

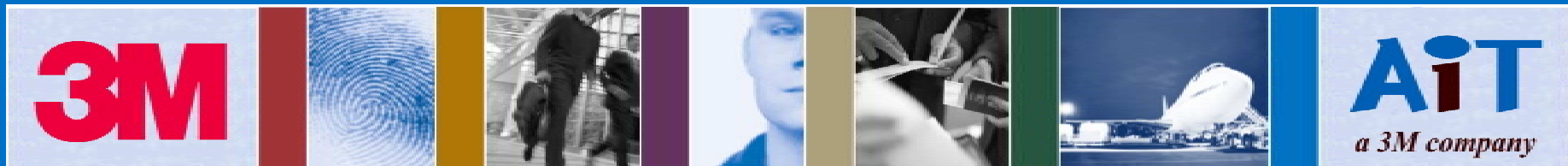


# Example: Visa Issuance System

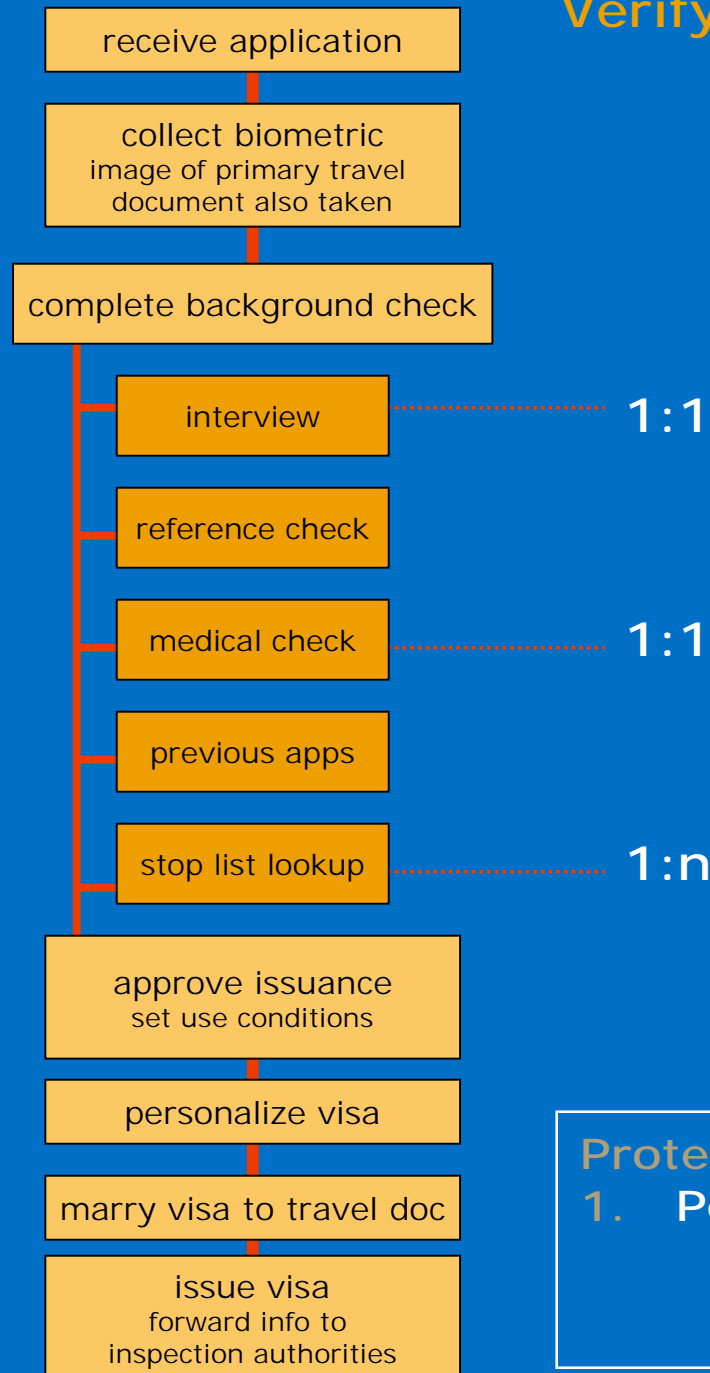


# Using Biometrics to Enhance Issuance System Security

- prevent a document from being issued to a person who is not entitled
  - ensure the applicant is the same person who is interviewed
  - ensure the applicant is the same person who completes the medical exam
  - ensure the applicant is not on a stop list



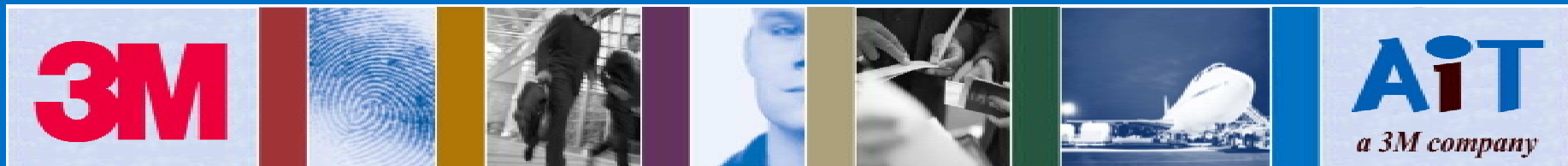
# Verifying the applicant



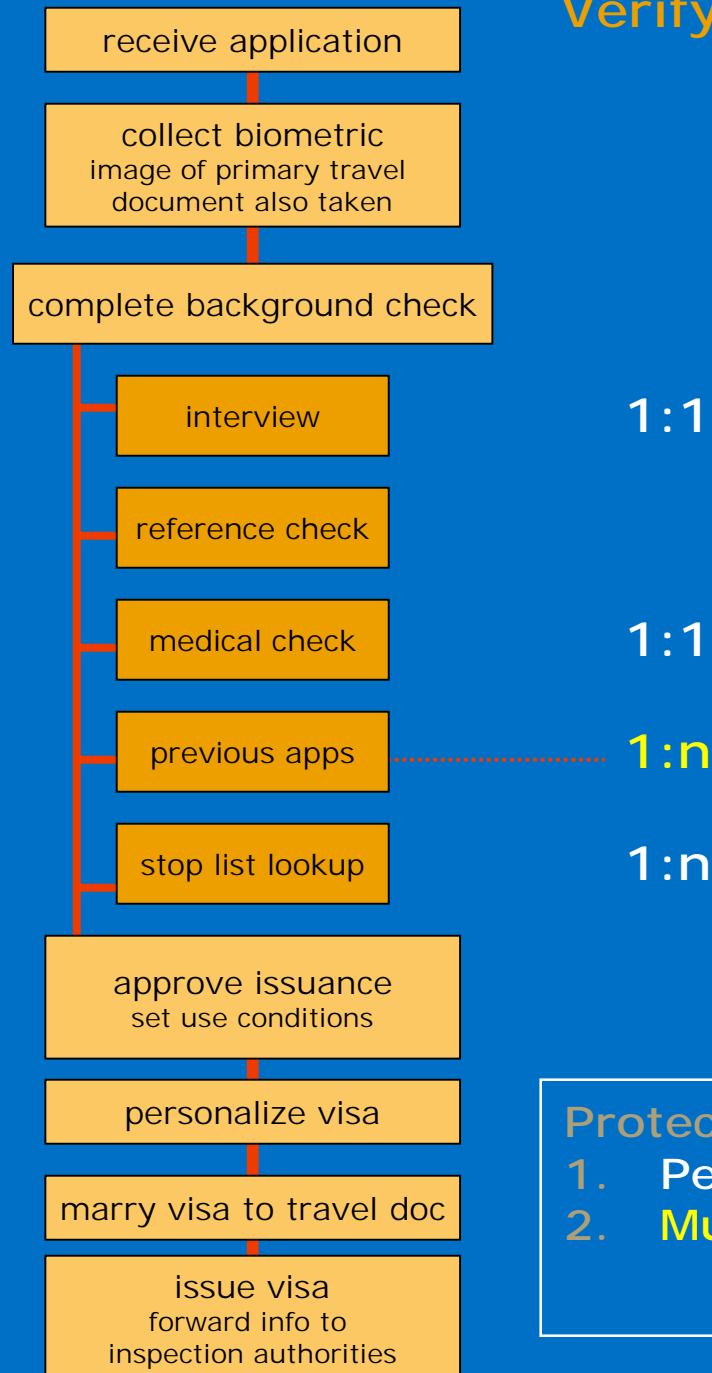
Protect against:  
1. Person not entitled

# Using Biometrics to Enhance Issuance System Security

- prevent a document from being issued to a person who has established multiple identities
  - ensure the applicant has not previously applied for a document using a different identity



# Verifying the applicant

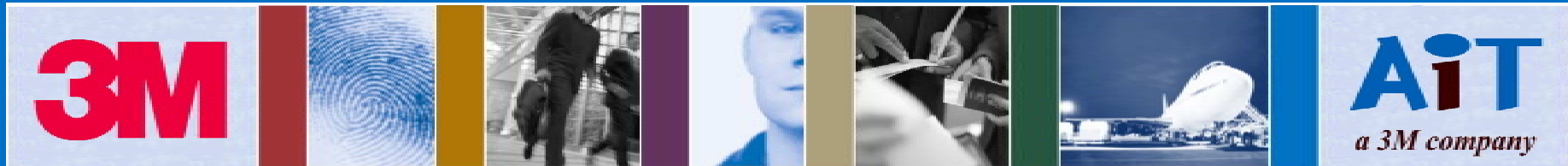


## Protect against:

1. Person not entitled
2. **Multiple ID**

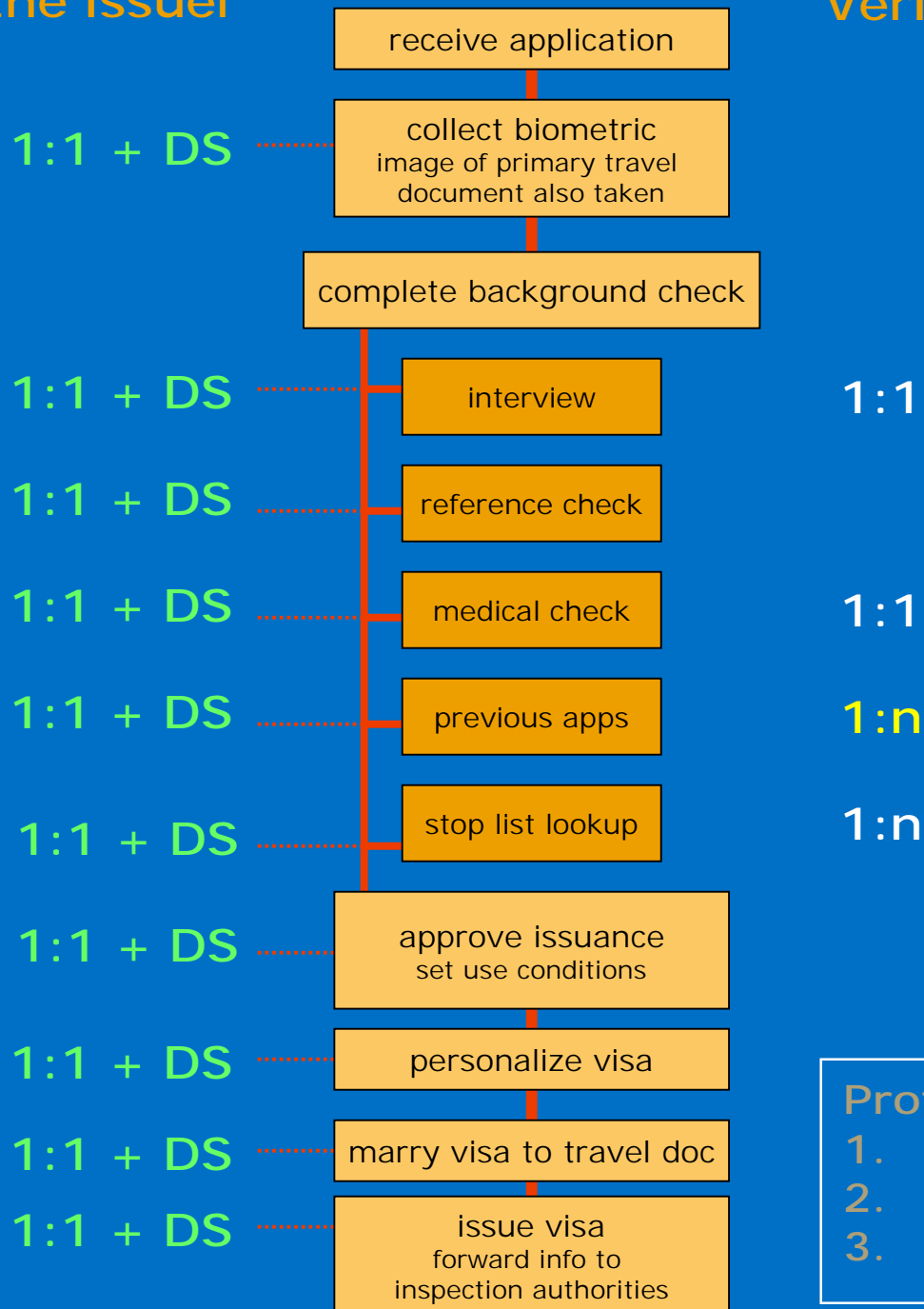
# Using Biometrics to Enhance Issuance System Security

- issuer authentication
  - two-factor: 1:1 biometric + digital signature
- prevent an insider from falsely completing steps in the issuance process
  - digitally signed audit trail at each stage
  - protected access to the issuance database



# Verifying the issuer

# Verifying the applicant

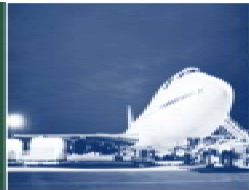
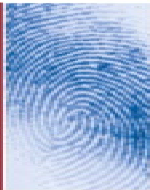


## Protect against:

1. Person not entitled
2. **Multiple ID**
3. **Wrongful issuer**

[www.3M.com/security](http://www.3M.com/security)

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