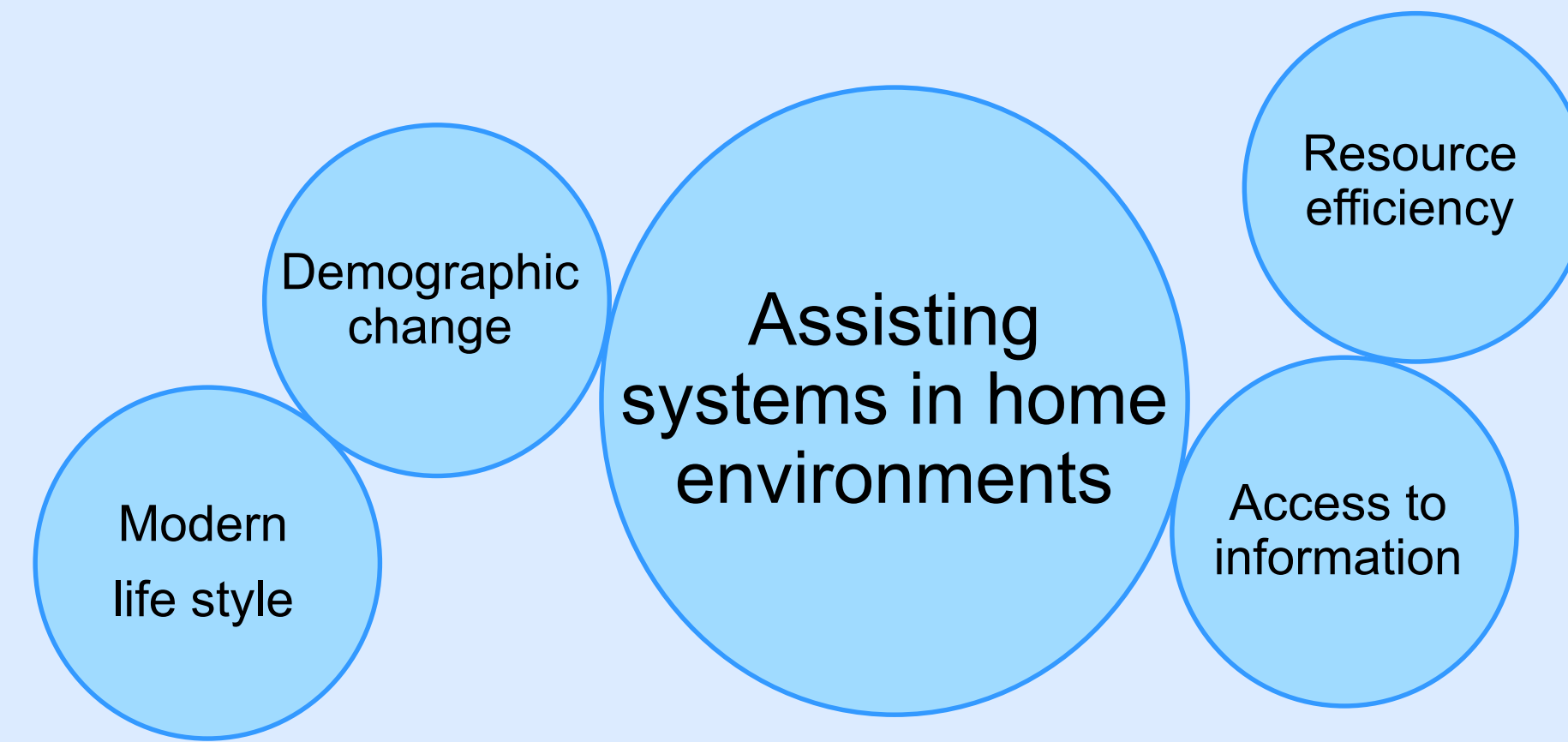# Privacy Aware Person-specific Assisting System for Home Environment

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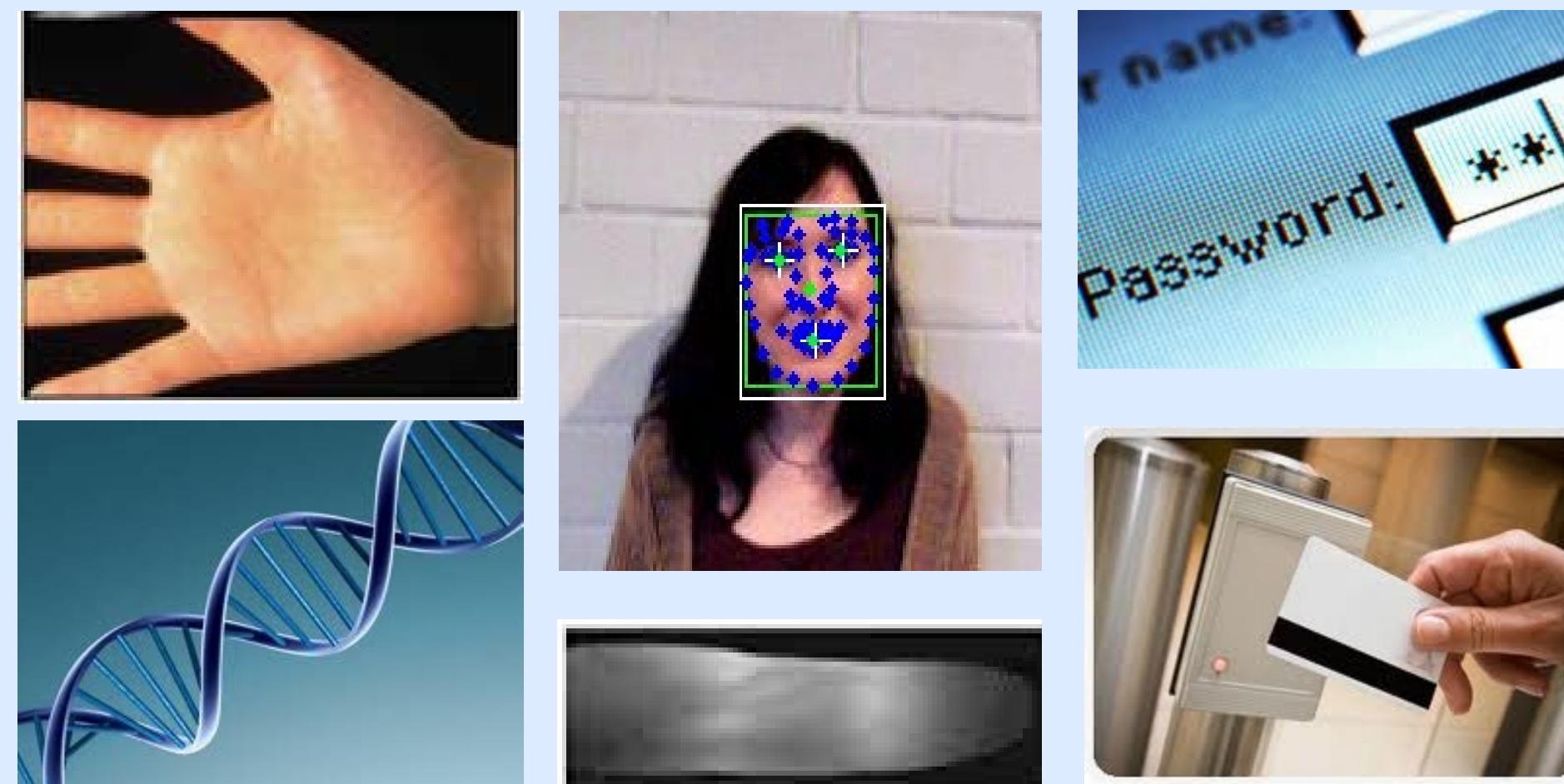
1. Research Focus

- **Realization of an Assisting System**
  - **Serve multiple Persons**
  - **Sustain the Privacy**
  - **Personalized**
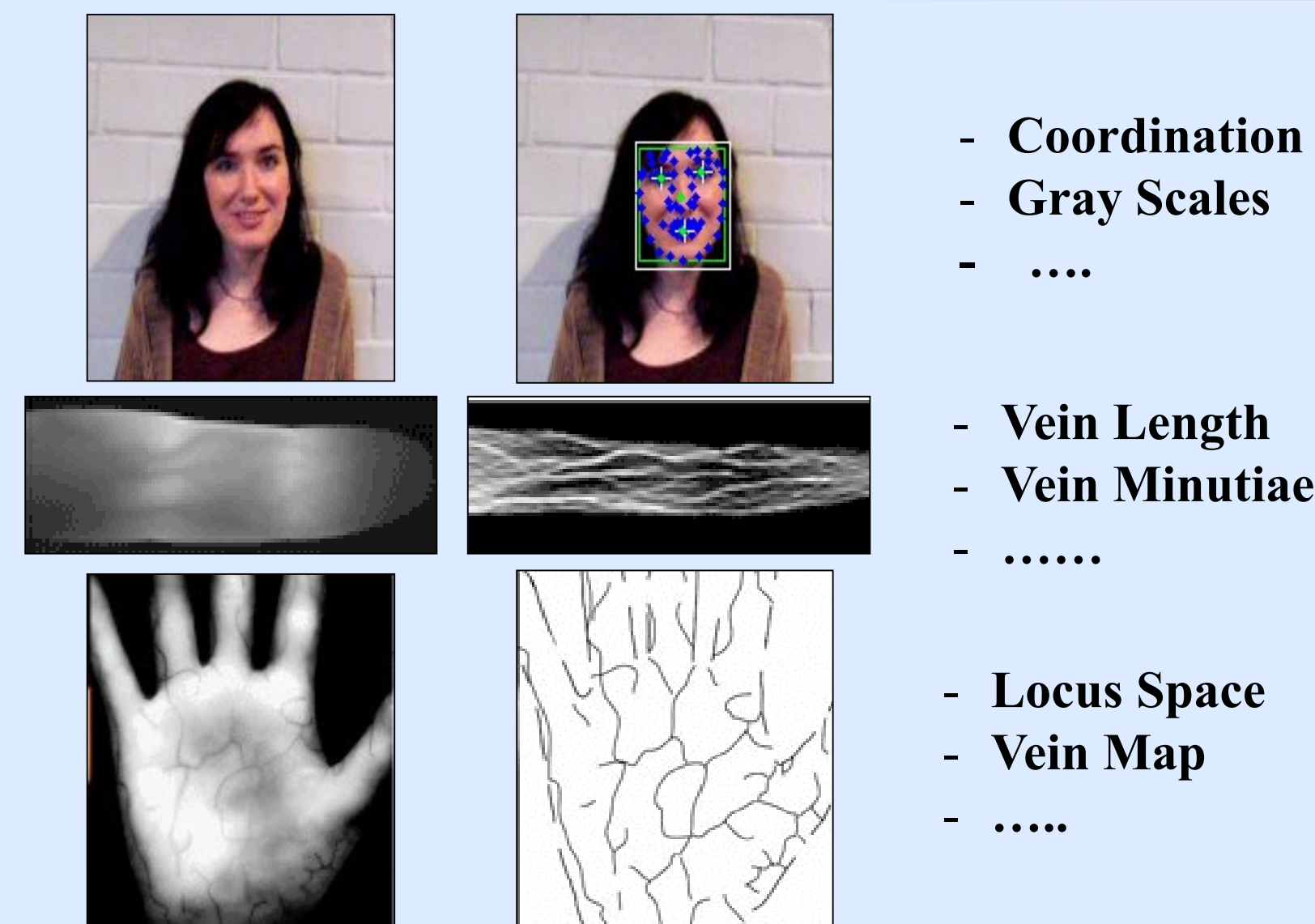 - **Touch-less**
  - **Accidentally**

2. Biometric Cues to identify People

- **Posibilities:**
  - **Visual: Face, Iris, Fingerprint, Finger and Hand Palm**
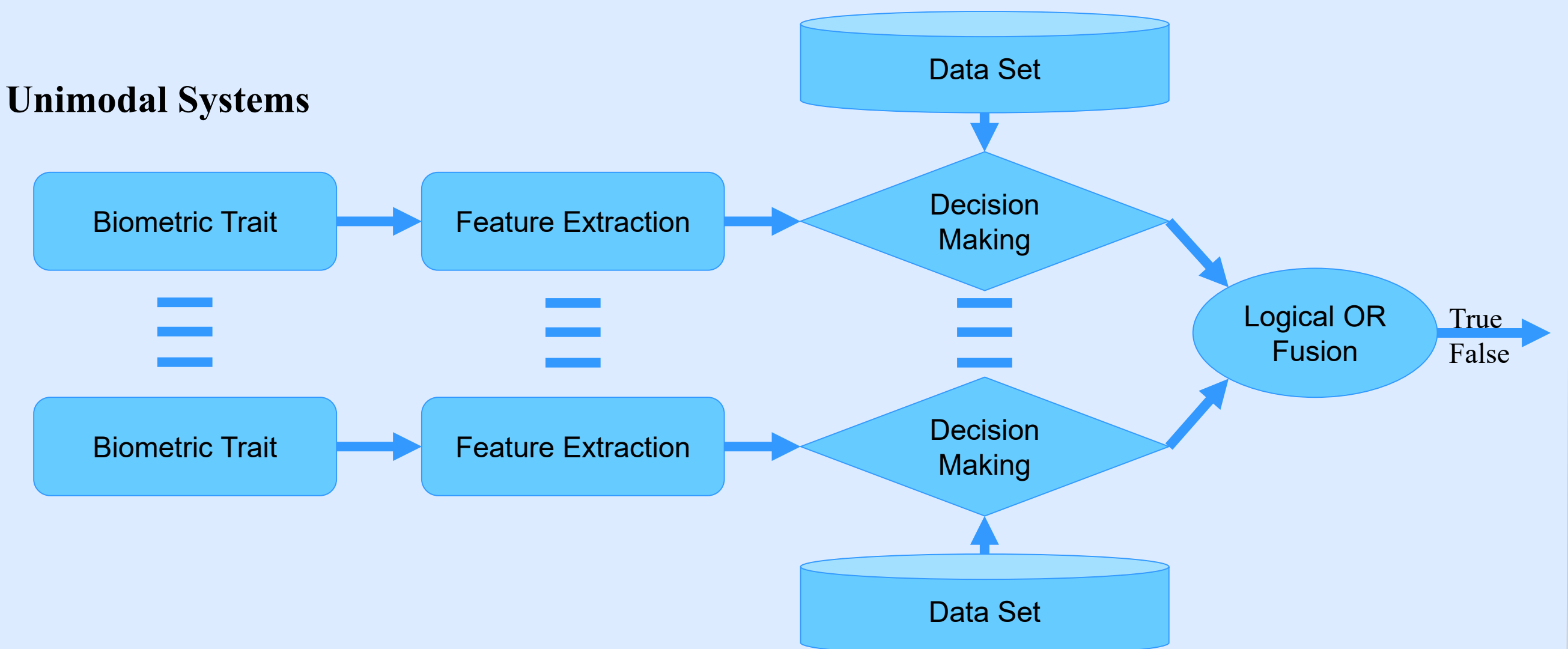 - **Acoustic: Speech Signal**
  - **Others: DNA, Passwords, Signature, …**

3. Used Biometric Traits

- **Touch-less**
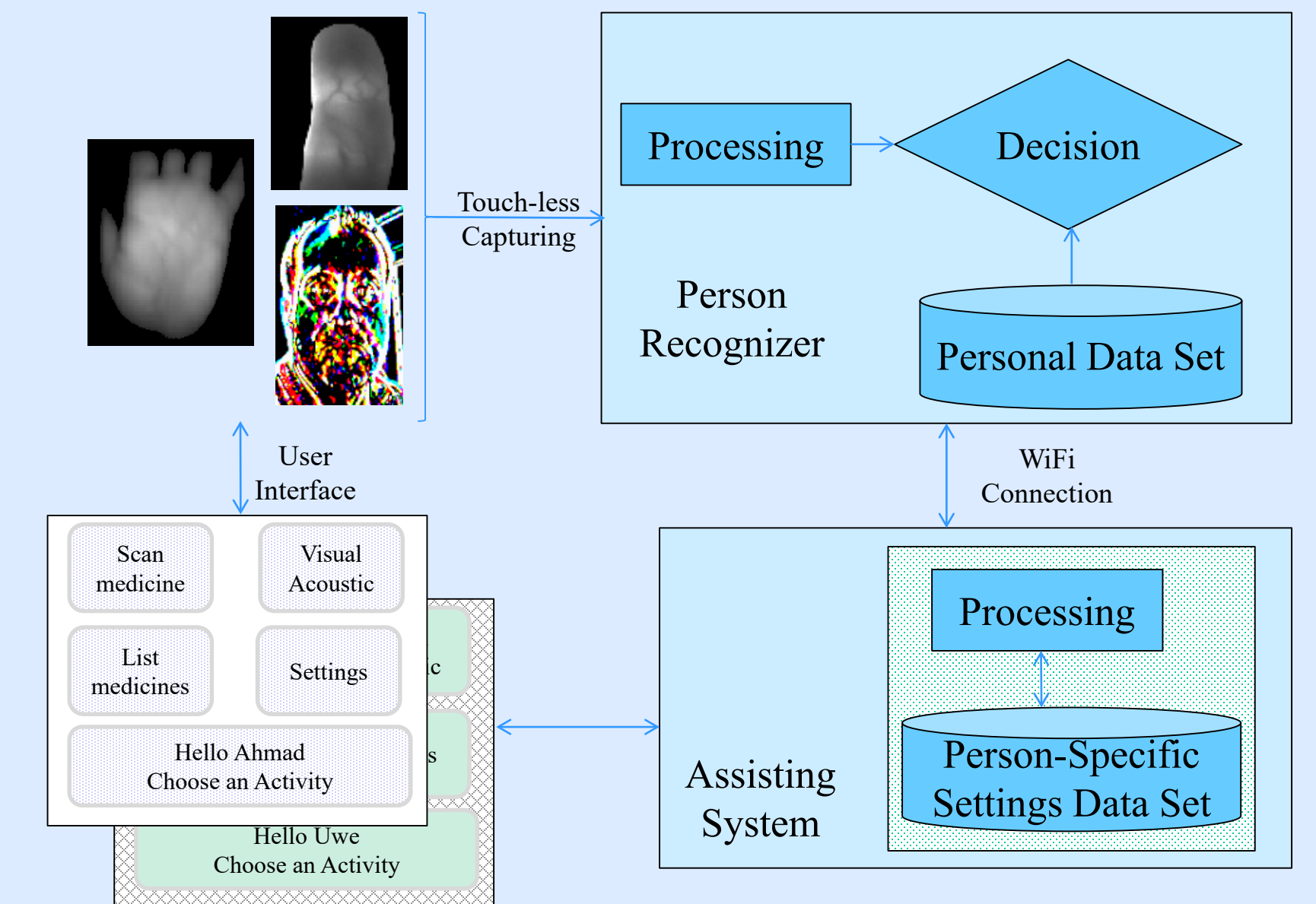- **Accidentally**
- **Integration Simplicity**

- Coordination
- Gray Scales
- ….
- Vein Length
- Vein Minutiae
- ……
- Locus Space
- Vein Map
- …..

4. Decision Level Multimodal Biometrics

- **Robust**
- **Outperform Unimodal Systems**
- **Reliable**

Data Set

Biometric Trait → Feature Extraction → Decision Making → Logical OR Fusion → True False

Biometric Trait → Feature Extraction → Decision Making

Data Set

5. System Architecture

- **Accidentally Capturing**
- **Privacy Sustaining**
  - **Assigning IDs to Potable Devices**
- **Wi-Fi: Wide Reachability, Flexibility**
- **Person-specific User Interface**
- **Assisting of Multiple Persons**

Touch-less Capturing

Person Recognizer — Processing → Decision → Personal Data Set

WiFi Connection

User Interface

Scan medicine | Visual Acoustic
List medicines | Settings
Hello Ahmad Choose an Activity
Hello Uwe Choose an Activity

Assisting System — Processing → Person-Specific Settings Data Set

6. Scenario

- **Capturing of Biometric Data → Identifying the Interaction Partner**
- **Privacy: Assigning ID to Specified Portable Device**
- **User Interface: Adapting According to User's Need**
- **Environment: Setting Environmental Conditions According User's Profile**
- **Social: Person-Specific Listing of Arrangements, Appointments, Contacts, Activities, …**
- **Health: Medicinal Assisting, Announcing Medicine Taking Times, Medicine Dosages, …**

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INSTITUT **INFORMATIK**

ICPRAM 2015
10 - 12 January, 2015
Lisbon, Portugal
4th International Conference on Pattern Recognition Applications and Methods

Paper Number: 54

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