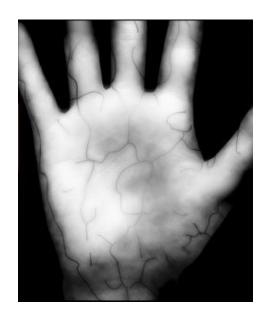




# Palm Vein Biometrics





Contactless, Hygienic, Accurate.



#### **Accuracy Comparison**

|     | Palm Vein | Iris    | Back Hand Vein | Fingerprint | Hand Geometry | Facial | Signature | Voice |
|-----|-----------|---------|----------------|-------------|---------------|--------|-----------|-------|
| FRR | 0.01%     | 0.01%   | 0.1%           | 0.1%        | 0.8%          | 2.6%   | 1.0%      | 3.0%  |
| FAR | 0.00008%  | 0.0001% | 0.0001%        | 0.001%      | 0.07%         | 1.3%   | 1.0%      | 3.0%  |

False Rejection Rate (FRR): Rejection Rate for Authorized Personnel

Palm Vein ==>> **0.01%** = 1 failure in **10,000** attempts

Fingerprint ==>> **0.1%** = 1 failure in **1,000** attempts

False Acceptance Rate (FAR): Acceptance Rate for Unauthorized Personnel

Palm Vein ==>> **0.00008%** = 1 failure in **1,250,000** attempts

Fingerprint ==>> **0.001%** = 1 failure in **100,000** attempts



## Other Comparison

| Туре        | Characteristics                              | Weaknesses   | Accuracy  | Sensor Type | Cost |
|-------------|--|--|-----------|-------------|------|
| Voice       | Suitable for voice activation system.        | Affected by noise, health conditions, etc.   | Low       | Contactless | Low  |
| Face        | Remote authentication, no special operation. | Sensitive to<br>lighting/posture, cannot<br>recognize with eyeglasses,<br>facial hair, cosmetics,<br>twins, etc. | Low       | Contactless | Low  |
| Signature   | Natural Operation.                           | Difficult for even the same person to sign the same way all the time.  | Low       | Contact     | Low  |
| Fingerprint | Small Sensor.                                | Affected by nature of skin,<br>too dry/wet skin, abrasion,<br>dirt on sensor surface, etc.                       | High      | Contact     | Low  |
| Iris        | High accuracy.                               | Affected by size of eyes, and reflection of eyeglasses.  | Very High | Contactless | High |
| Palm Vein   | No forgery, forget.                          | Sensitive to direct rays of the sun and other strong lightings.  | Very High | Contactless | Low  |

#### Features Highlights





#### Features:

- Robust Performance
- 100% Enrolment
- Hygienic Handling
- Extremely High Accuracy
- Stand-alone or network
- Embedded Web Server
- Web Reports / Admin
- WiFi Networking\*
- Battery Back-up\*
- Voice Prompts\*
- SMS Alerts\*
- Export to HR/Payroll\*
- Integration API\*

### **Applications**





#### Ready Made:

- Time Attendance
- Access Control

#### **Customizations:**

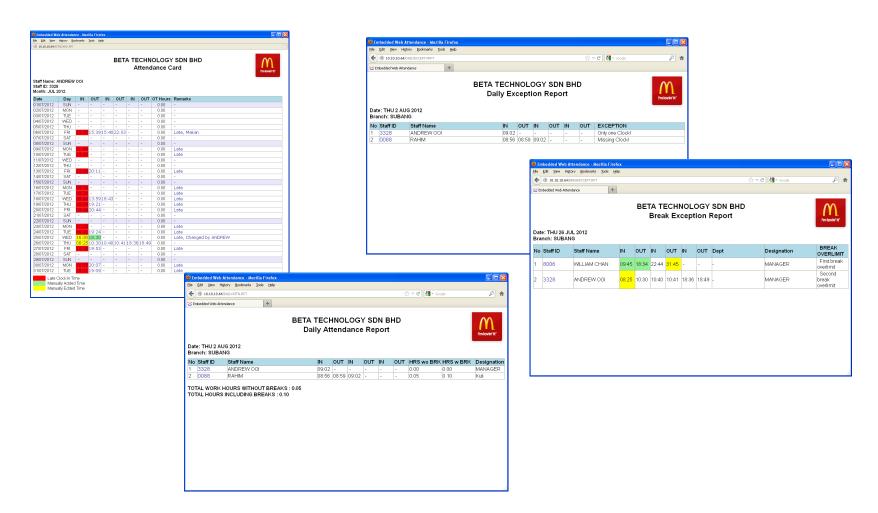
- Subsidy Management
- Staff Compliance System
- Disciplinary Management
- Visitor Management
- Loyalty/Rewards Programs

#### Others:

Any kind of biometric identification requirements.

#### Web Reporting – Time Attendance / Access Control





## Customized Project: Nestle Canteen Subsidy Management System





#### Features:

- Biometric Identification
- Once-A-Day Meal Subsidy
- Realtime Authentication Display
- Last Subsidy Date/Time Display
- Staff Profiling
- Daily and Monthly Reports
- Summary and Detail Reports (Individual and Department)

## Customized Project: Panasonic Solar Human Entrance Barrier Gate





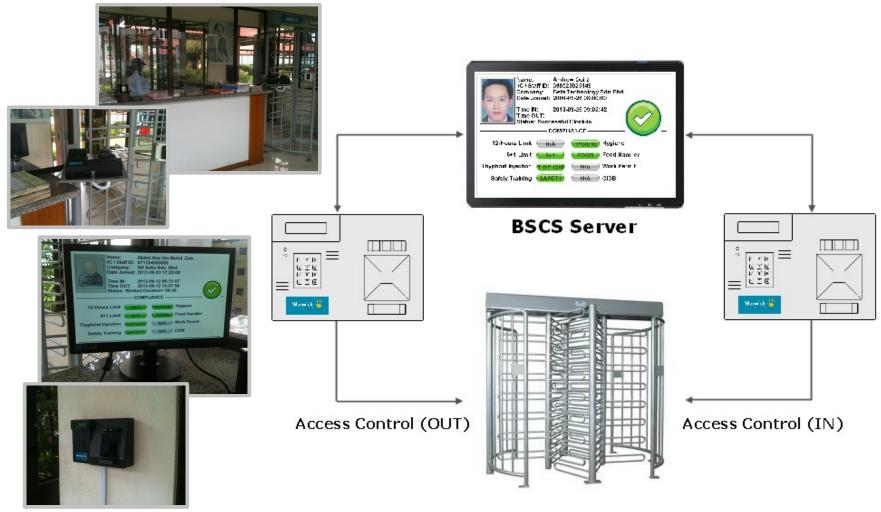




2-layers Security ==>> Staff Card + Staff's Palm

## Customized Project: Nestle Biometric Staff Compliance System





## BIO-KIOSK: Nestle Annual Dinner Biometric Registration System













#### Some of Our Users

































Japan International Cooperation Agency









## Thank You