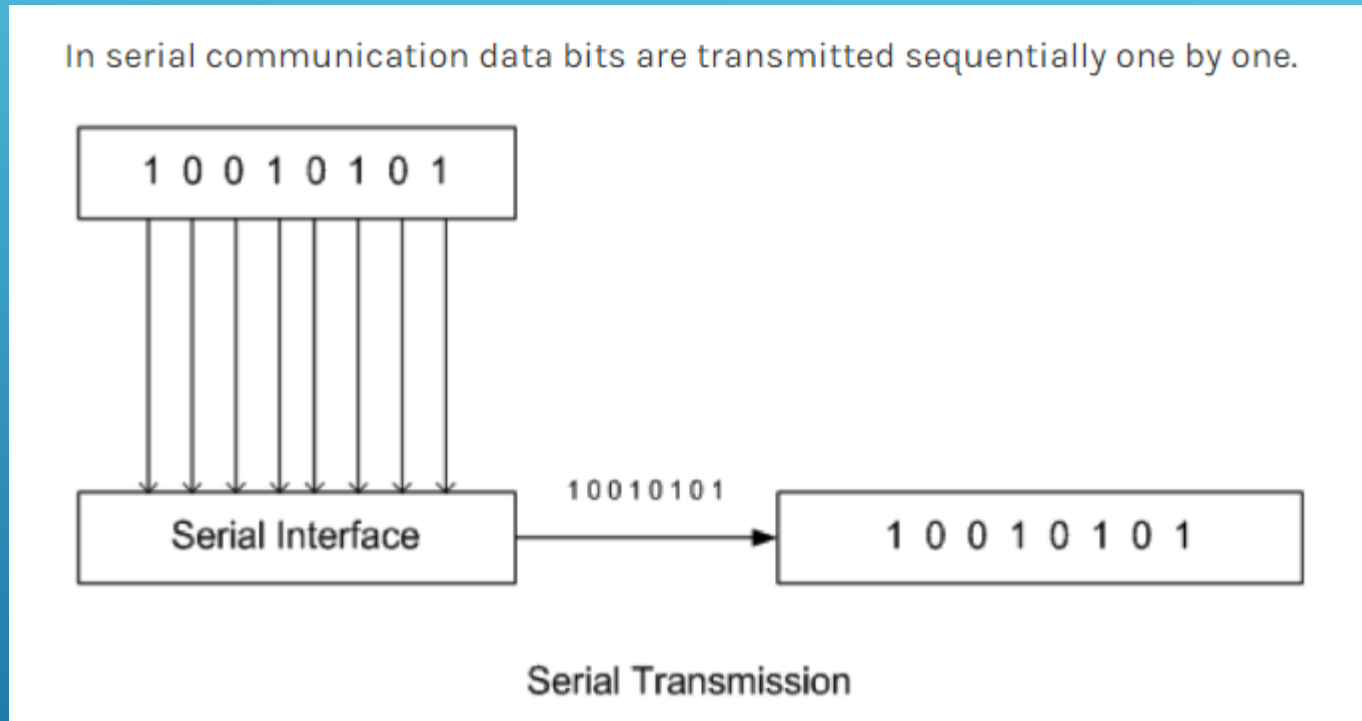


CLOCK AND DATA CONFIGURATION



TO WORK WITH ALL SIGMA READERS

ACRONYMS

MWC=MORPHO WAVE COMPACT

UP=USER POLICY

BDP=BIOMETRIC DEVICE PROFILE

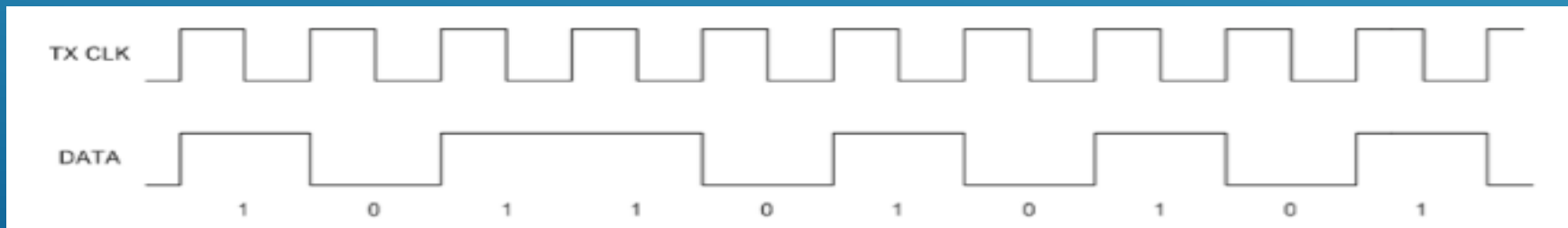
MM=MORPHO MANAGER

ACP=ACCESS CONTROL PANEL

CSN=CARD SERIAL NUMBER

WHAT IS CLOCK AND DATA

UTILIZING TWO WIRES, CALLED "CLOCK" AND "DATA". THE DATA LINE IS USED TO SEND ALL THE BINARY DATA TO THE PANEL. THIS IS ACCOMPLISHED BY CHANGING THE STATE OF THE VOLTAGE ON THE LINE.



MORPHOMANAGER DEFAULT LOG IN

USERNAME-ADMINISTRATOR

PASSWORD-PASSWORD

ADD AN BIOMETRIC DEVICE

Administration>Biometric Device

Biometric devices from three different hardware families can be added here; the MA 100, MA J, MA 500, and MA VP family, the MA Sigma, MA Sigma Lite And MA Sigma Lite + MA Sigma Extreme, the Morpho 3D Face, the MorphoWave Tower, MorphoWave Compact, and the Morpho Tablet Terminal.

ADD THE DEVICE AS THE EXAMPLE BELOW

 Operator

 Key Policy

 Biometric Device Profile

 Biometric Device

Enter the details for this Biometric Device

Name:

Description:

Location:

Asset ID:

Export Value:

Time Zone:

Hardware Family:

Serial Number:

Hostname \IP Address:

Port:

Biometric Device Profile:


Include in Time & Attendance Exports:

Change User Onsite / Offsite Status:

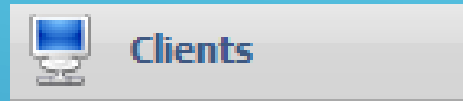
Onsite Key:

Offsite Key:



Finish 

CLIENTS



Path Administration>Clients

Clients are computers that have the MorphoManager Client software installed and communicate with a MorphoManager server

Next pages is if you do not own a MSO for capturing fingerprints



ADD YOUR SIGMA TO YOUR CLIENT

Operator

Key Policy

Biometric Device Profile

Biometric Device

Wiegand Profiles

User Policy

Access Schedules

User Distribution Group

User Authentication Mode

Operator Role

Notifications

Clients

Enter the details for this client

Name:

Description:

Location:

Click Next 3 Times

USE A SIGMA TO CAPTURE FINGERPRINTS

Enrollment Devices

3D Face Enrollment

Morpho 3D Face enrollment:

Morpho 3D Face enrollment biometric device:

Contact Enrollment

Morpho Finger biometric enrollment:

Morpho Finger enrollment MorphoAccess:

Contactless Enrollment

Morpho Contactless Finger biometric enrollment:

Morpho Contactless Finger enrollment MorphoAccess:

Smartcard Encoding

Morpho Smartcard encoding:

Morpho Smartcard encoding PC/SC device:

Morpho Smartcard encoding MorphoAccess:

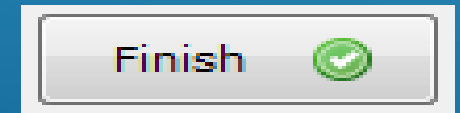
Keys

Key Policy:

DROP DOWN
SELECTED
MORPHOACCESS

SEARCH FOR THE
READER

****IF YOU HAVE A MSO NO CHANGES
NEED TO TAKE PLACE**

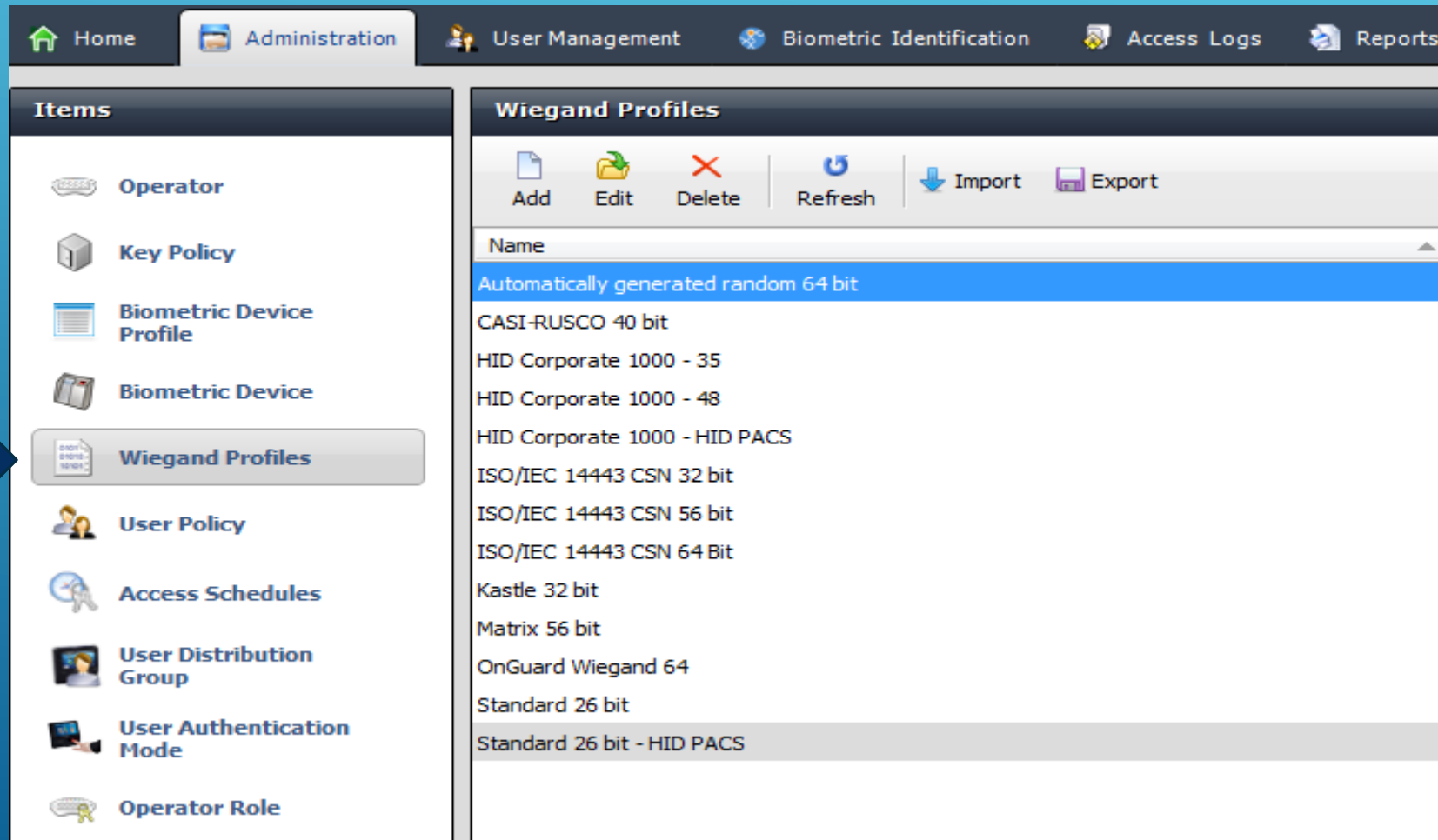


CREATION FOR CLOCK AND DATA

Path Administration>Wiegand Profile

This section allows you to view, add, edit & delete Wiegand Profiles in MorphoManager. Wiegand Profiles define what information is output over the Wiegand Out interface of the Morpho Biometric Devices when a user is identified. This is most typically used in conjunction with an Access Control System.

CREATE CLOCK AND DATA FORMAT



The screenshot displays a web application interface with a navigation menu at the top and a main content area. The navigation menu includes: Home, Administration, User Management, Biometric Identification, Access Logs, and Reports. The main content area is divided into two sections: 'Items' on the left and 'Wiegand Profiles' on the right. The 'Items' section lists various system components, with 'Wiegand Profiles' highlighted and a blue arrow pointing to it. The 'Wiegand Profiles' section shows a list of profiles with a toolbar above it containing 'Add', 'Edit', 'Delete', 'Refresh', 'Import', and 'Export' buttons. The list includes profiles such as 'Automatically generated random 64 bit', 'CASI-RUSCO 40 bit', 'HID Corporate 1000 - 35', 'HID Corporate 1000 - 48', 'HID Corporate 1000 - HID PACS', 'ISO/IEC 14443 CSN 32 bit', 'ISO/IEC 14443 CSN 56 bit', 'ISO/IEC 14443 CSN 64 Bit', 'Kastle 32 bit', 'Matrix 56 bit', 'OnGuard Wiegand 64', 'Standard 26 bit', and 'Standard 26 bit - HID PACS'.

Navigation Menu: Home, Administration, User Management, Biometric Identification, Access Logs, Reports

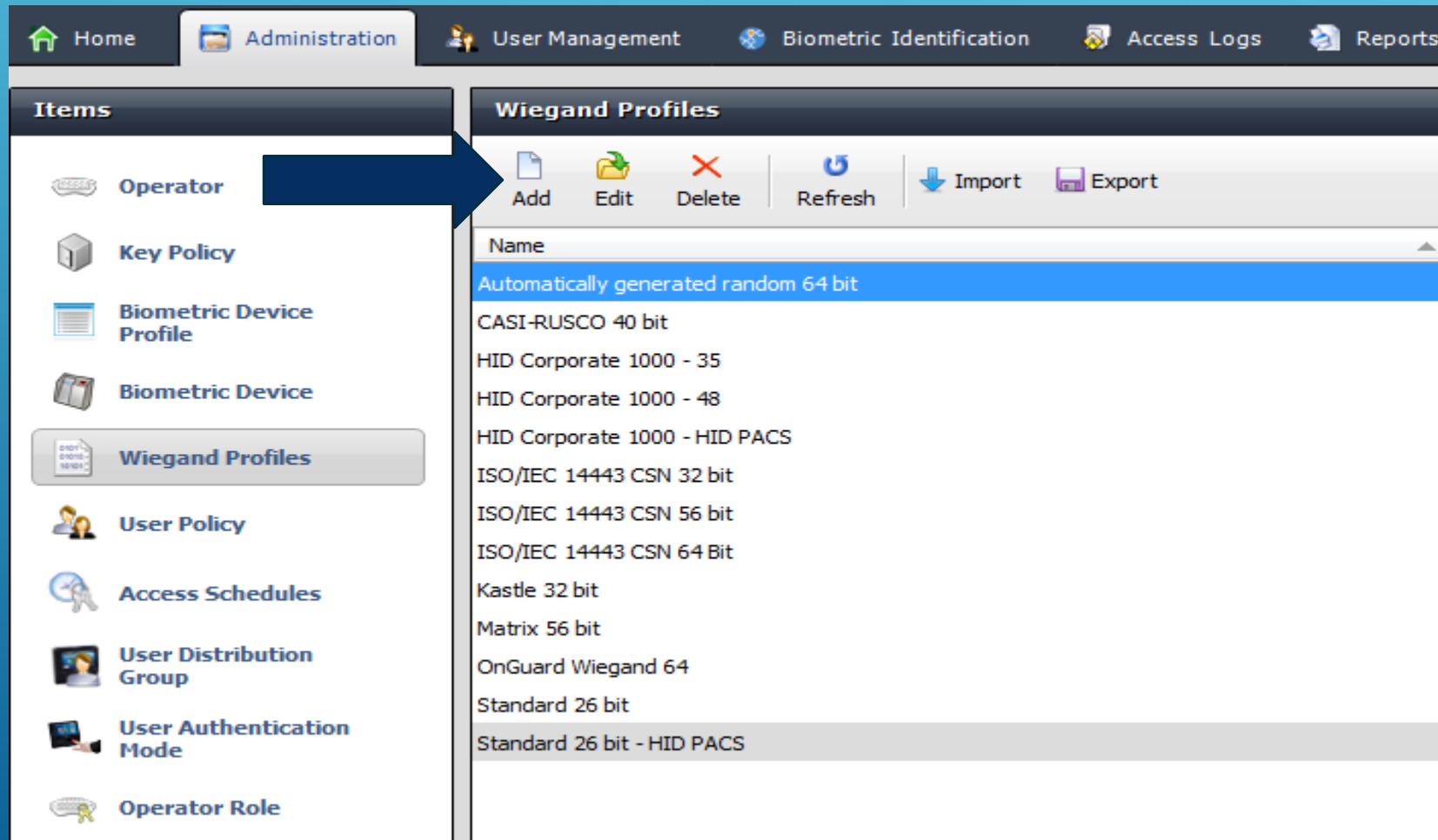
Items: Operator, Key Policy, Biometric Device Profile, Biometric Device, **Wiegand Profiles**, User Policy, Access Schedules, User Distribution Group, User Authentication Mode, Operator Role

Wiegand Profiles:

Toolbar: Add, Edit, Delete, Refresh, Import, Export

| Name |
|---------------------------------------|
| Automatically generated random 64 bit |
| CASI-RUSCO 40 bit |
| HID Corporate 1000 - 35 |
| HID Corporate 1000 - 48 |
| HID Corporate 1000 - HID PACS |
| ISO/IEC 14443 CSN 32 bit |
| ISO/IEC 14443 CSN 56 bit |
| ISO/IEC 14443 CSN 64 Bit |
| Kastle 32 bit |
| Matrix 56 bit |
| OnGuard Wiegand 64 |
| Standard 26 bit |
| Standard 26 bit - HID PACS |

CLICK ADD



The screenshot displays a web application interface with a navigation bar at the top containing links for Home, Administration, User Management, Biometric Identification, Access Logs, and Reports. The main content area is divided into two sections: a left sidebar labeled 'Items' and a right main panel labeled 'Wiegand Profiles'.

The 'Items' sidebar lists several categories: Operator, Key Policy, Biometric Device Profile, Biometric Device, Wiegand Profiles (highlighted), User Policy, Access Schedules, User Distribution Group, User Authentication Mode, and Operator Role.

The 'Wiegand Profiles' panel features a toolbar with icons for Add, Edit, Delete, Refresh, Import, and Export. Below the toolbar is a table listing various profile names. A blue arrow points from the 'Operator' item in the sidebar to the 'Add' button in the toolbar.

| Name |
|---------------------------------------|
| Automatically generated random 64 bit |
| CASI-RUSCO 40 bit |
| HID Corporate 1000 - 35 |
| HID Corporate 1000 - 48 |
| HID Corporate 1000 - HID PACS |
| ISO/IEC 14443 CSN 32 bit |
| ISO/IEC 14443 CSN 56 bit |
| ISO/IEC 14443 CSN 64 Bit |
| Kastle 32 bit |
| Matrix 56 bit |
| OnGuard Wiegand 64 |
| Standard 26 bit |
| Standard 26 bit - HID PACS |

NAME IT, PUT IN THE BIT LENGTH CLICK NEXT

Enter details for this Wiegand profile

Name:

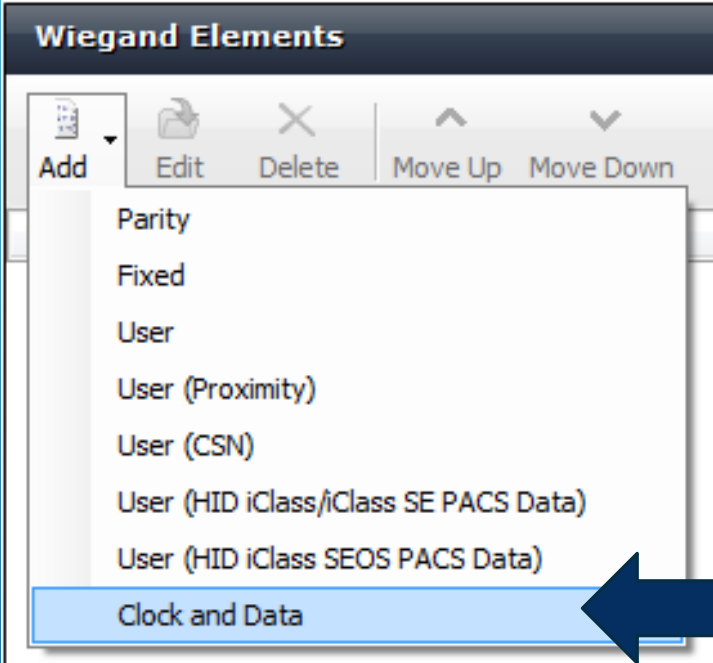
Description:

Bit Length:




Next

CLICK ADD AND SELECT CLOCK AND DATA



The screenshot shows the 'Wiegand Elements' software interface. A dark blue arrow points to the 'Add' button in the top toolbar. A dropdown menu is open, listing several options: Parity, Fixed, User, User (Proximity), User (CSN), User (HID iClass/iClass SE PACS Data), User (HID iClass SEOS PACS Data), and 'Clock and Data'. A second dark blue arrow points to the 'Clock and Data' option, which is highlighted with a blue background. To the right of the interface, a vertical dark blue arrow points down to a 'Next' button with a right-pointing double arrow icon.

NAME IT AND PUT IN YOUR LENGTH



Clock and Data details


Name:

Allow Random:

Automatically generated:

Hide value:

Length:



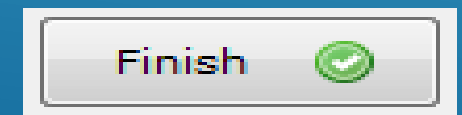
ONCE COMPLETE HIT FINISH

Add Wiegand profile elements

Wiegand Elements

Add Edit Delete Move Up Move Down

| Type | Name | Length | Bits |
|----------------|---------|--------|------|
| Clock and Data | User ID | 26 | 0-25 |



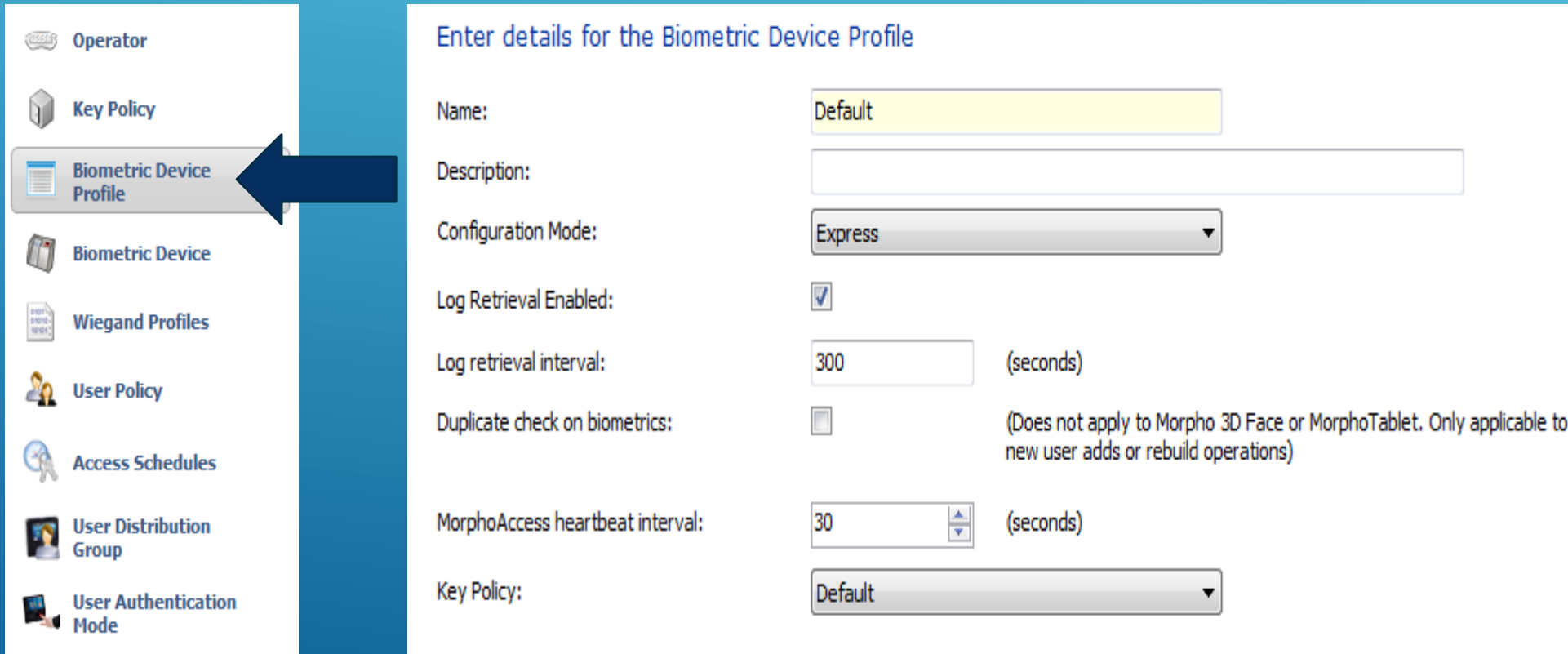
BIOMETRIC DEVICE PROFILE

Path Administration>Biometric Device Profile

The Biometric Device Profile will define common settings and parameters for one or more biometric devices. This profile can be applied when adding units into the system from the Biometric Device section of Administration

BIOMETRIC DEVICE PROFILE

CREATE OR EDIT THE BIOMETRIC DEVICE PROFILE



Operator

Key Policy

Biometric Device Profile

Biometric Device

Wiegand Profiles

User Policy

Access Schedules

User Distribution Group

User Authentication Mode

Enter details for the Biometric Device Profile

Name:

Description:

Configuration Mode:

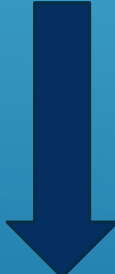
Log Retrieval Enabled:

Log retrieval interval: (seconds)

Duplicate check on biometrics: (Does not apply to Morpho 3D Face or MorphoTablet. Only applicable to new user adds or rebuild operations)

MorphoAccess heartbeat interval: (seconds)

Key Policy:



Next



BIOMETRIC DEVICE PROFILE

Biometric Device Settings

General Settings

Wiegand Profile:

Language:

Realtime logging enabled:

Biometric Threshold Settings


Biometric Threshold:

MorphoAccess Vein Print Mode:


MorphoAccess Fingerprint Threshold:

Morpho 3D Face Identification Threshold:

Morpho 3D Face Verification Threshold:

 It is recommended the mode set in User Policy for enrollment should be the same mode or a more restrictive mode than the mode set in Biometric Device Profile. Using a less restrictive mode in User Policy than in Biometric Device Profile is likely to increase the False Rejection Rate (FRR) of biometric devices.



Next 

WIEGAND PROFILE: YOU MUST PICK THE CLOCK AND DATA FORMAT YOU CREATED EARLIER

BIOMETRIC DEVICE PROFILE

Multi-Factor Mode Settings

Multi-Factor Mode:

Contactless Smart Card Mode:

Morpho 3D Face Multi-Factor Mode

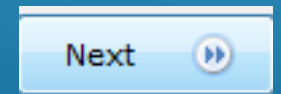
Mode:

MA 100, MA J, MA 500, MA VP Multi-Factor Mode

Mode:



SET THE MULTI-FACTOR MODE SETTINGS FOR YOUR REQUIREMENTS



BIOMETRIC DEVICE PROFILE

Access Control Mode Settings

Access Control Mode: Custom

Wiegand Out Enabled:

Clock and Data Out Enabled:

Panel Feedback Mode: None

Panel Feedback No Response Timeout: 3000 (in milliseconds)

Relay Enabled:

Relay Duration: 1000 (in 10s of milliseconds)

Push To Exit Enabled:

Request to Exit Egress Timeout: 25000 (in milliseconds - please refer to the MorphoAccess Sigma Series Administration Guide for further information)

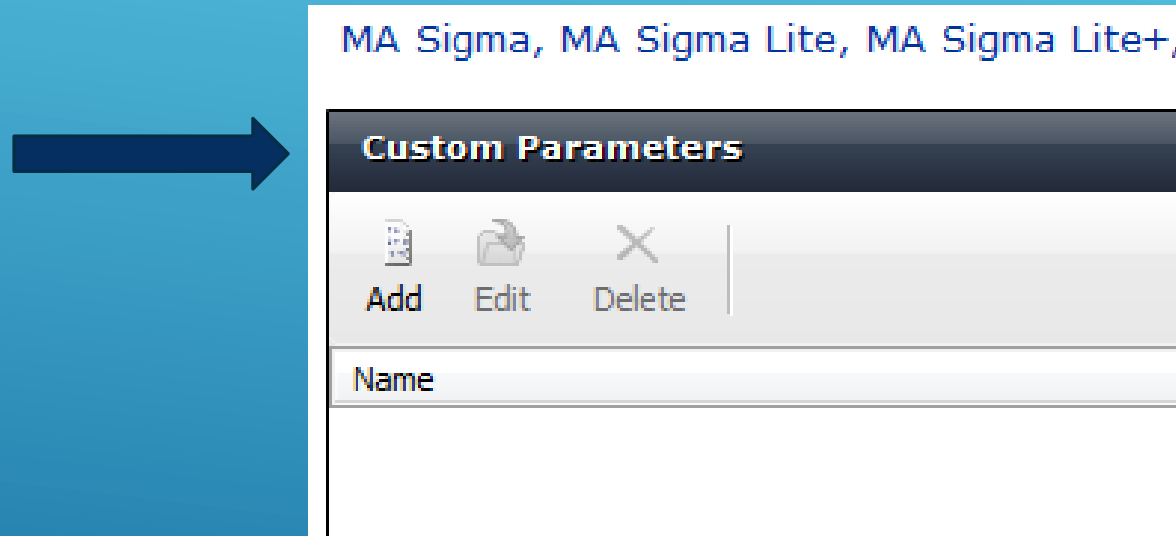
Duress Wiegand Mode: Disabled

Duress Wiegand Profile: Automatically generated random 64t

**ACCESS CONTROL MODE MUST BE SET TO CUSTOM
CLOCK AND DATA WILL BE AUTOMATICALLY CHECKED
DURESS WIEGAND MODE MUST BE SET TO DISABLED**



BIOMETRIC DEVICE PROFILE






CLICK NEXT TILL YOU GET TO CUSTOM PARAMETERS



BIOMETRIC DEVICE PROFILE

MA Sigma, MA Sigma Lite, MA Sigma Lite+,

Custom Parameters

Add Edit Delete


Name

| |
|--|
| |
|--|




CLICK ADD



Next 

BIOMETRIC DEVICE PROFILE

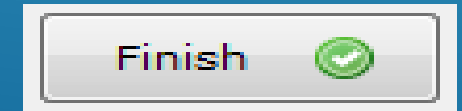
MA Sigma, MA Sigma Lite, MA Sigma Lite+, MA Sigma Extreme, MA VP MD, MorphoWave Custom Parameter

Name: 

Value:

PUT IN THIS VALUE

wiegand.external_port_input_format
VALUE 0



USER POLICY



Path Administration>User Policy

Create new User Policy

Select the User Policy that this user will belong to. This is an important selection, as the policy will determine Biometric Device access and other access control and time & attendance settings.

USER POLICY

CREATE A NEW USER POLICY

Operator

Key Policy

Biometric Device Profile

Biometric Device

Wiegand Profiles

User Policy

Access Schedules

User Distribution Group

User Authentication Mode

Enter the details for this User Policy

Name: User One

Description:

Access Mode: All Biometric Devices and Clients

Allow MA 500 database selection during user enrollment

Access Schedule: 24 hours, 7 days a week

Extended User Details: Display extended user details

Wiegand Profile: Clock and Data

User Authentication Mode: Biometric (1:Many)

Show Photo Capture Page:

Next

WIEGAND PROFILE: USE THE CLOCK AND DATA FORMAT YOU CREATE EARLIER
USER AUTHENTICATION MODE: IS FOR HOW THIS USER WILL AUTHENTICATE

USER POLICY

CLICK TWO FOR FINGER BIOMETRICS

Enter the details for finger biometric options

Finger Biometric Enrollment Minimum Fingers:

Preferred Finger One:

Preferred Finger Two:


Preferred Duress Finger:

Vein / Print Mode:



It is recommended the mode set in User Policy for enrollment should be the same mode or a more restrictive mode than the mode set in Biometric Device Profile. Using a less restrictive mode in User Policy than in Biometric Device Profile is likely to increase the False Rejection Rate (FRR) of biometric devices.



Next 

USER POLICY

NONE FOR WAVE ENROLLMENTS

Enter the details for wave biometric options

Wave Enrollment Minimum Hands:

None

Show Wave Biometric Capture Page:



Finish



WIRING

WHAT WIRES ARE NEEDED FOR
CLOCK AND DATA

SIGMA WIRES

DataClock Output

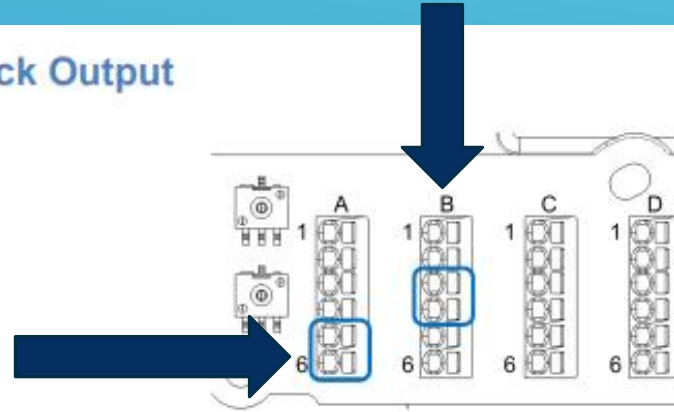


Figure 21: Serial port wiring – DataClock

PICK ONE OF THE
DIGITAL GROUNDS



DO_OUT IS YOUR DATA



D1_OUT IS YOUR CLOCK

| | |
|---|----------------|
| 5 | Digital ground |
| 6 | Digital ground |
| 3 | D0_OUT |
| 4 | D1_OUT |

Ground for Wiegand (connect pin 5 or 6)

Ground for Wiegand (connect pin 5 or 6)

Out Data (5V TTL)

Out Clock (5V TTL)

SIGMA LITE WIRES

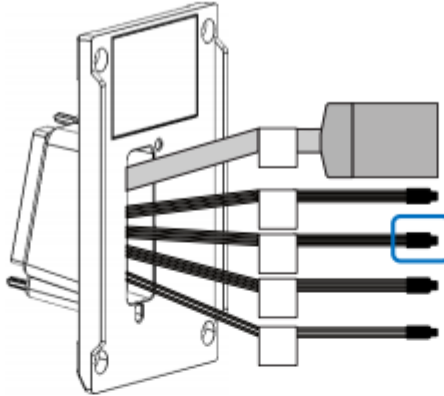


Figure 17: Wiegand port wiring – Data Clock

| | | | | |
|----|-------------|-----------------|-----|--|
| 14 | Green | WIEGAND_OUT0 | Out | Data (5V TTL) |
| 16 | White | WIEGAND_OUT1 | Out | Clock (5V TTL) |
| 17 | Blue | WIEGAND_LEDOUT1 | In | Card present signal (if configured, only one selectable for Morpho Legacy) |
| 18 | Blue / Red | WIEGAND_LEDOUT2 | In | Card present signal (if configured) |
| 20 | Black / Red | WIEGAND_GND | | Ground for Wiegand |

**GREEN, WHITE
AND GROUND
ALL NEED TO BE
CONNECTED**

MWC WIRES

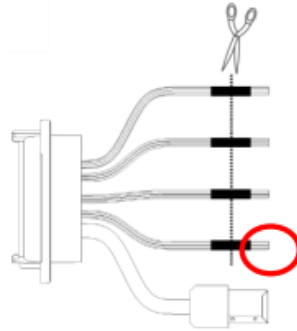


Figure 17: Serial port wiring – DataClock Output

| | | | | |
|----|-------------|-----------------|-----|--|
| 24 | Green | WIEGAND_OUT0 | Out | Data (5V TTL) |
| 26 | White | WIEGAND_OUT1 | Out | Clock (5V TTL) |
| 25 | Blue | WIEGAND_LEDOUT1 | In | LED IN 1 (option): panel feedback (Output type required: Open drain or 5V+/-5%) |
| 28 | Blue / Red | WIEGAND_LEDOUT2 | In | LED IN 2 (option): panel feedback (Output type required: Open drain or 5V+/-5%) |
| 27 | Black / Red | WIEGAND_GND | | Ground for Wiegand |

**GREEN, WHITE
AND GROUND
ALL NEED TO BE
CONNECTED**

SIGMA EXTREME

DataClock Output

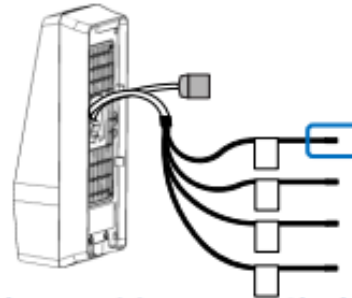


Figure 20: Serial port wiring – DataClock Output

| | | | | |
|---|-------------|-----------------|-----|--|
| 4 | Green | WIEGAND_OUT0 | Out | Data (5V TTL) |
| 5 | White | WIEGAND_OUT1 | Out | Clock (5V TTL) |
| 1 | Blue | WIEGAND_LEDOUT1 | In | LED IN 1 (option): panel feedback (Output type required: Open drain or 5V+/-5%) |
| 2 | Blue / Red | WIEGAND_LEDOUT2 | In | LED IN 2 (option): panel feedback (Output type required: Open drain or 5V+/-5%) |
| 8 | Black / Red | WIEGAND_GND | | Ground for Wiegand |

**GREEN, WHITE
AND GROUND
ALL NEED TO BE
CONNECTED**

ENROLLMENT PROCESS

USER MANAGEMENT

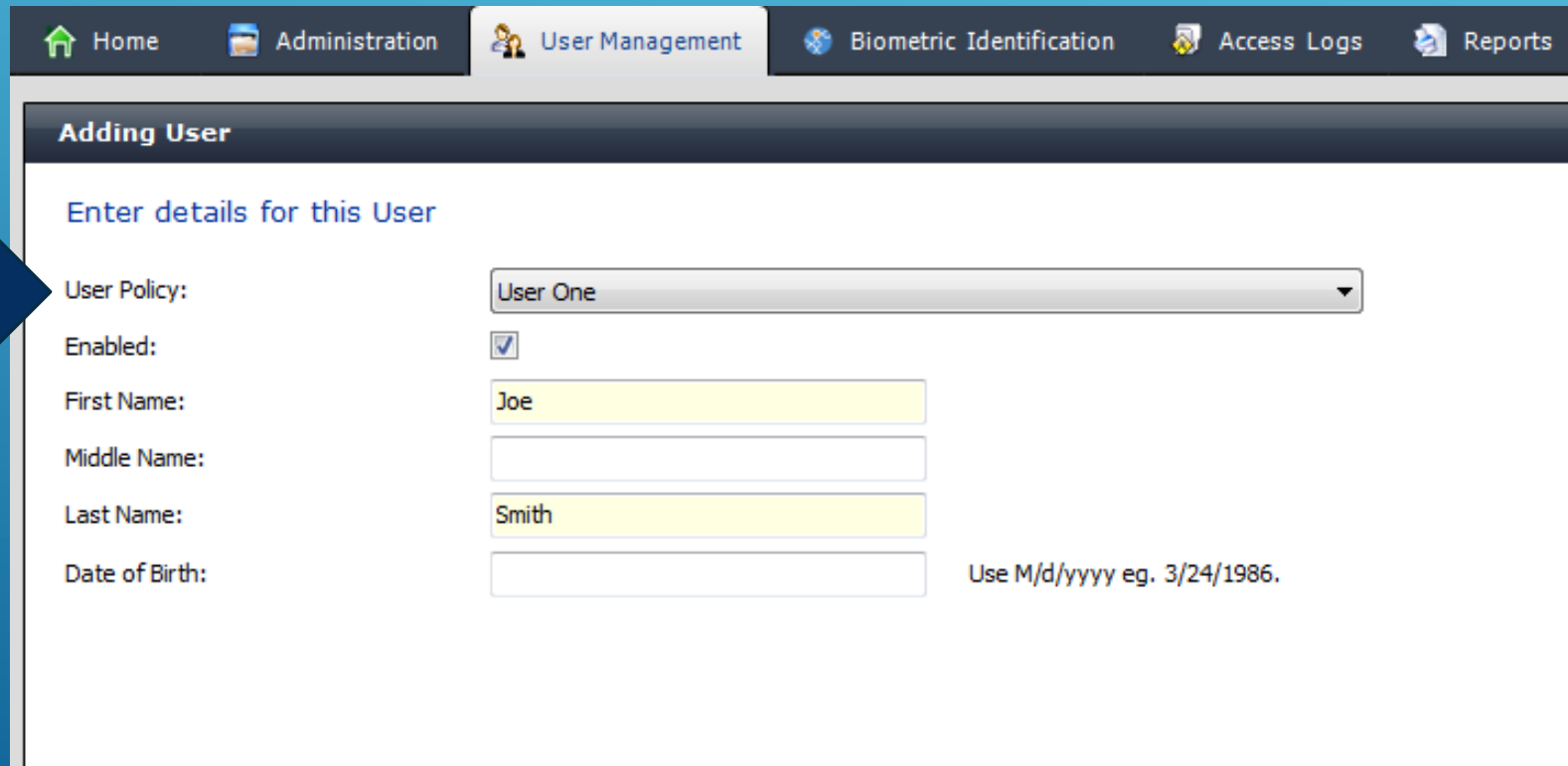


User Management

Users are people who will have their biometric data sent to the selected Biometric Device for identification purposes for either access control or time and attendance.

USER MANAGEMENT

CREATE A NEW USER WITH THE USER POLICY CREATED EARLIER



Home Administration **User Management** Biometric Identification Access Logs Reports

Adding User

Enter details for this User

User Policy: User One


Enabled:

First Name: Joe

Middle Name:

Last Name: Smith

Date of Birth: Use M/d/yyyy eg. 3/24/1986.

Next 


USER MANAGEMENT

MANUALLY TYPE IN THE USER ID NUMBER, THIS NUMBER WILL ALSO BE SENT TO YOUR ACP AFTER VERIFICATION TAKES PLACE

Wiegand Values

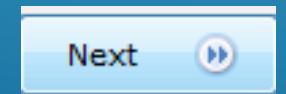
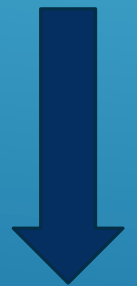
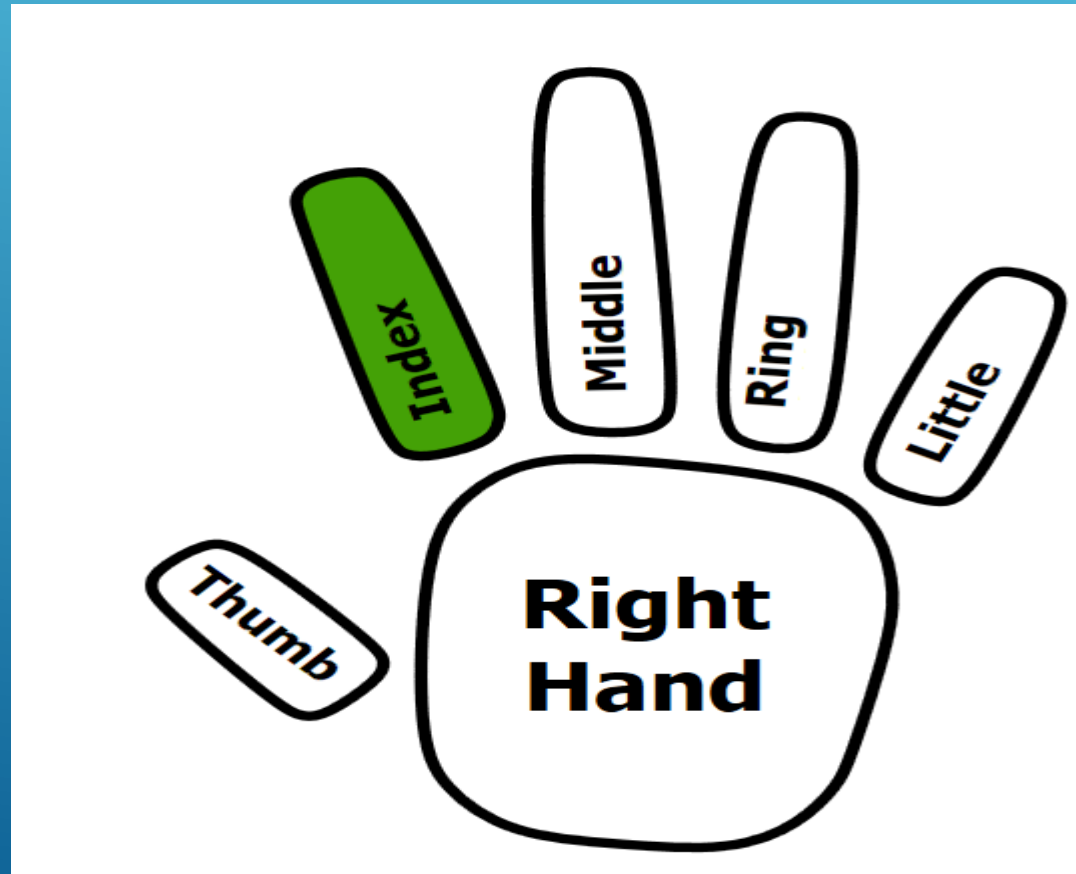
| | |
|------|------------------------------------|
| User | <input type="text" value="12345"/> |
|------|------------------------------------|



Next 

USER MANAGEMENT

CAPTURE YOUR FINGERPRINTS



FINAL RESOLUTION

CLOCK AND DATA NEEDS TO BE CREATED FIRST UNDER WIEGAND PROFILES

BIOMETRIC DEVICE PROFILE MUST CONTAIN THIS CLOCK AND DATA FORMAT

USER POLICY MUST CONTAIN THIS CLOCK AND DATA FORMAT

WEBSITE

Please visit our website,
service.morphotrak.com for
software, firmware, videos and
PDF'S