Fingerprint Enrollment Procedures

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Introduction

This document is an aid to training individuals in charge of the enrollment process for a biometric access control or time and attendance system.

The person responsible for the enrollment of members should be patient, a good trainer and communicator. Before enrolling a member, it is necessary to explain the concept of using the fingerprint as a key in addition to the significance of the finger's area that has been enrolled and the importance of re-presenting the enrolled area to the reader device.

There is a script in this document, which should be modified to flow easily from the individual administering the enrollment process, without changing the essence of the script.

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Enrollment Station Layout

The enrollment station should be L shaped so the person being enrolled and the person performing the enrollment can both see the screen. This is important as it gives the member to be enrolled immediate feedback as they learn and understand the consequences of presenting the finger in a particular way.

19inch LCD Screen (21 inch better)

Mouse or Track Ball

Keyboard

Reader
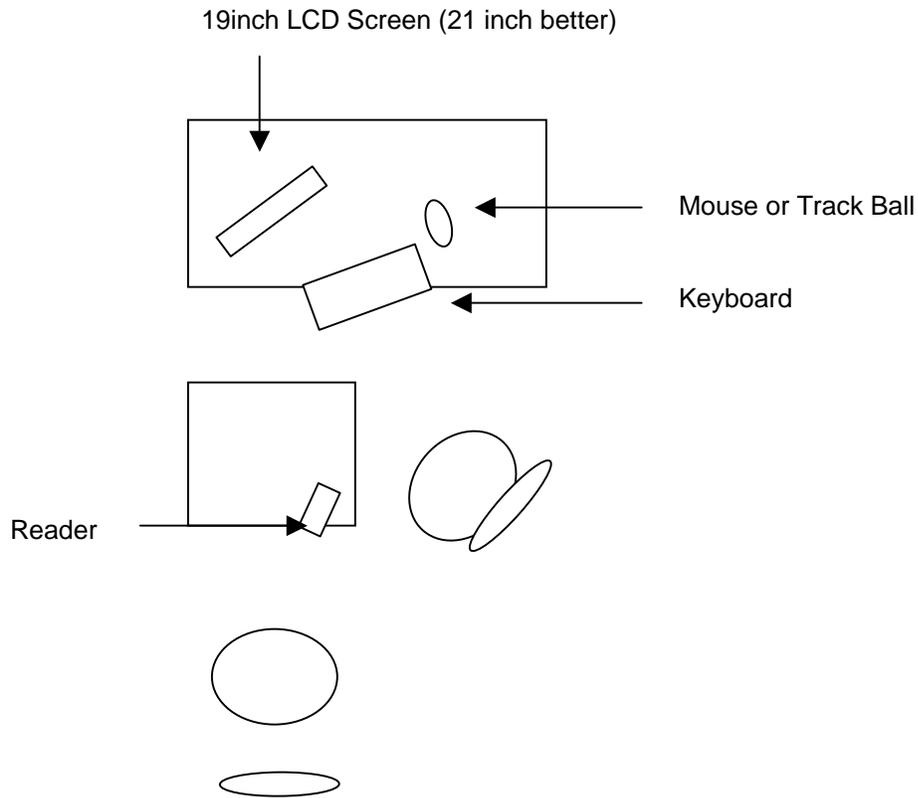
Enrollment Process Basics

We recommend at least two fingers be enrolled, one from each hand. For some individuals, you may wish to enroll more fingers.

The enrollment script that follows has been tested. The script takes about 9 minutes for a first time enrollment, which includes the enrollment of two fingers.

It takes approximately 1min, 30 seconds for the first finger of a person knowing how the system works and 30 seconds for each fingerprint thereafter.

1. Before enrolling, explain the concept of the fingerprint as a key. Enrollment makes a very precise key (template) that they don't have to carry around in their pocket. A key must be placed very precisely in the lock or it will not work. The same is true with the fingerprint – the fingerprint must be placed on the reader the same way it was placed during enrollment.

    Other Comments:

    o The enrollee should relax and enjoy the process.

    o It helps if the operator is a people person, can follow instructions, finds the process fun and likes to talk to people.

    o **Use the enrollment as an educational opportunity: The enrollee should be trained to look at the screen before they punch IN or OUT and if another person's name is on the screen, note the name, wait a moment and apply their fingerprint again.**

2. When enrolling - the first fingerprint is key. The following is recommended:

    a. Seat enrollee so operator and enrollee may both see the screen at the same time

    b. Look at enrollees fingers and select two or more fingers – if in doubt, have enrollee touch reader and pick the best fingers

    c. Practice with enrollee before you accept a fingerprint

    d. Cover the oval fingerprint reader as much as possible – press a little if necessary (the goal is to have as many minutiae in the print as possible)

    e. Enrollee looks at screen only after the reader has been touched

    Note: Each print adds to the template established with the first fingerprint. The first fingerprint sets the pattern so to speak.

3. Score: The score process relates to the construction of the template. The closer to 250, the better. Here, human judgment will be required. Actually, in this case, judgment is really more like experience because as the operator gains experience, the operator will know if the template is the best possible.

4. More than 90% of enrollees with a score of 220 or better will be able to apply their finger to the reader in the same manner as in the template and be identified on a consistent basis.

5. A small number of enrollees with a score of 200 or better will not be able to apply their finger to the reader in the same manner as during enrollment and will find it difficult or impossible to be identified. For some reason, when the enrollee presents their finger the same minutiae are not read. Reenrollment of these persons is therefore recommended.

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The Sentinel – Administration Tool must be open on the screen
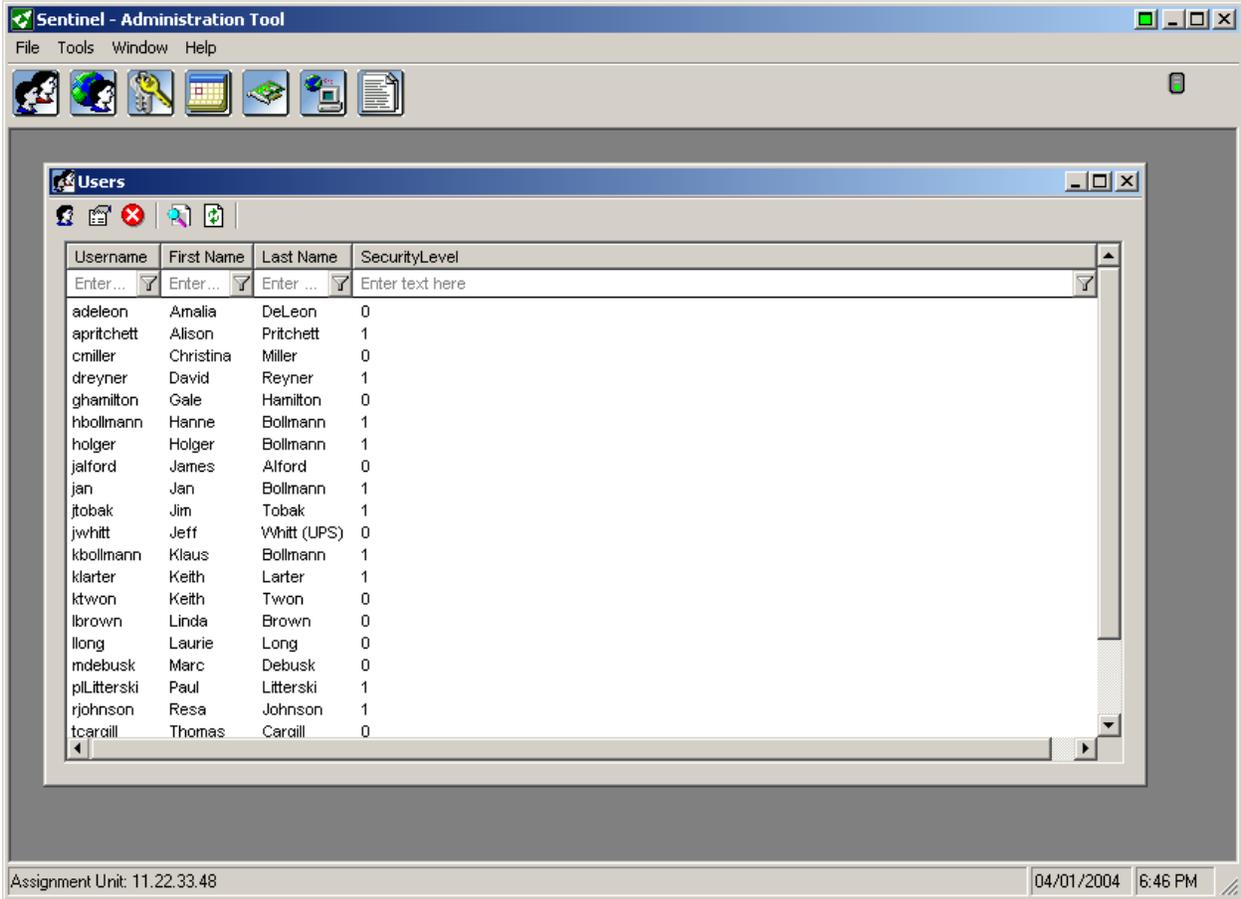
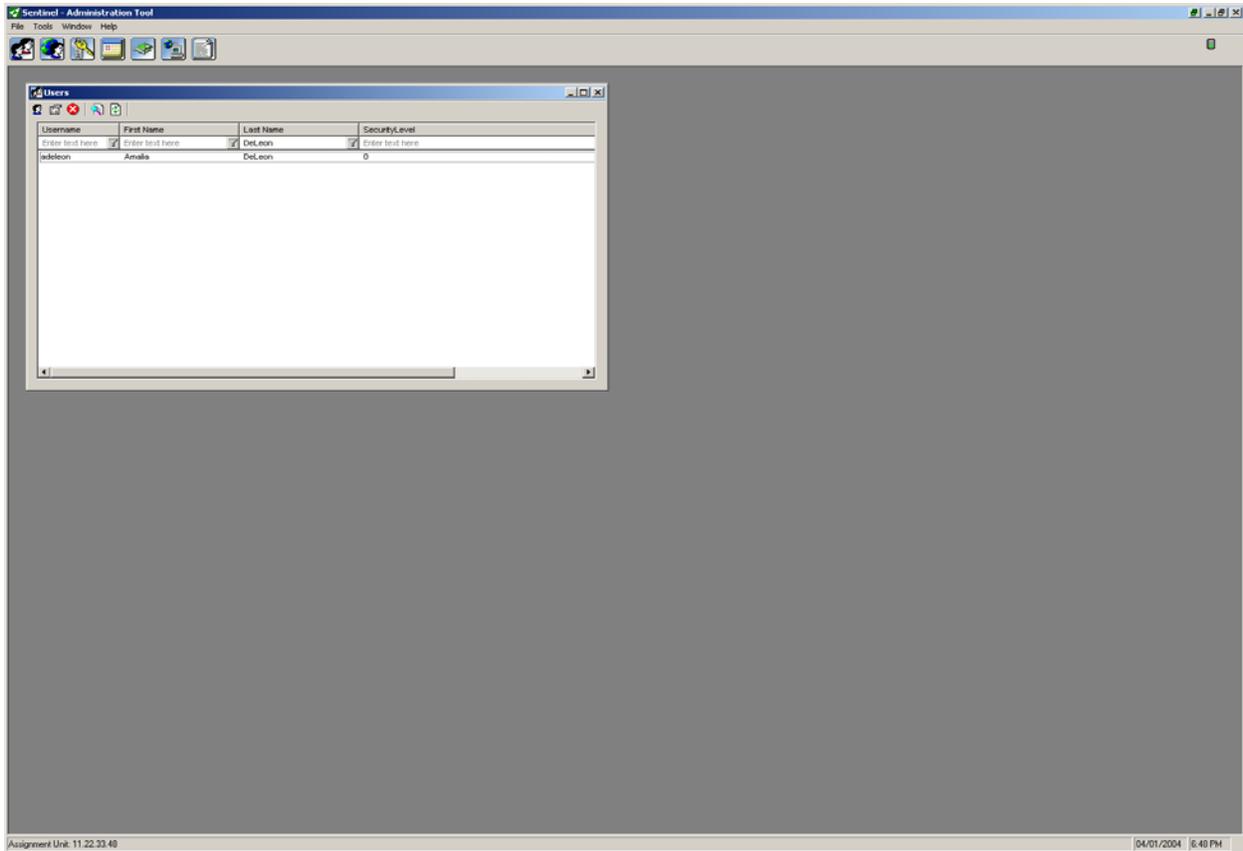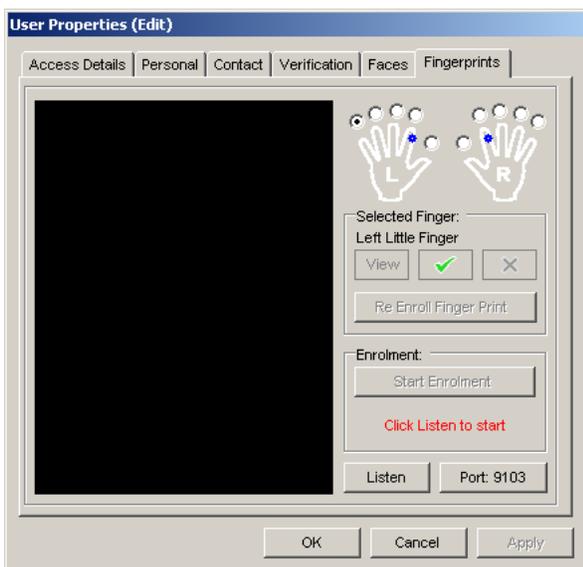| Enrolling Person	Member to be Enrolled	time (min:sec)
Hello, may I have your name please.	Amalia DeLeon	0:00

[Look up member on Sentinel]

[double-click the member in the Users window and select the Fingerprints tab]

Enrolling Person	**Member to be Enrolled**	**t**ime(min:sec)

Nice to meet you Amalia. What we will try to do today is enroll two of your fingers so you can clock in and out for work by simply presenting your fingerprint.

Before we actually enroll two of your fingers, I will explain to you how this new system works so you can achieve successful and fast identification at the clocking terminals as consistently as possible.

Using a fingerprint can be very convenient, but you have to understand that using a fingerprint instead of a swipe card or a key requires a degree of precision.

Very much as using a key from a key ring. If you enrolled one finger of each hand then you can only use one of those two fingers to be successfully identified by the system. This means you have to remember which fingers you have enrolled as much as you would have to remember which key opens which door.

Does this make sense?   ◄ No   2 mins.

Imagine! You have just arrived on planet earth. You have lived in a tent all your life and you did not need a key. You want to get into your new home and are given a bunch of keys and are told they will open the door for you.

If you threw them at the door, it would not open. If you chose any key on the ring you might select the wrong one when trying to open the door.

If you had the right key you would have to insert it into the hole, all the way and then turn it into the right direction all the way. Only then will the door open.   ◄ Yes   (1 min if required)

Using your finger will work in a similar way. The area of the fingerprint reader does not cover your whole finger, but only the area of your finger that you present.

Therefore you have to remember the position of your finger during the enrollment process.

Try to cover the whole area of the reader, like this —

[demonstrate]

Do not cover it like this

[demonstrate]

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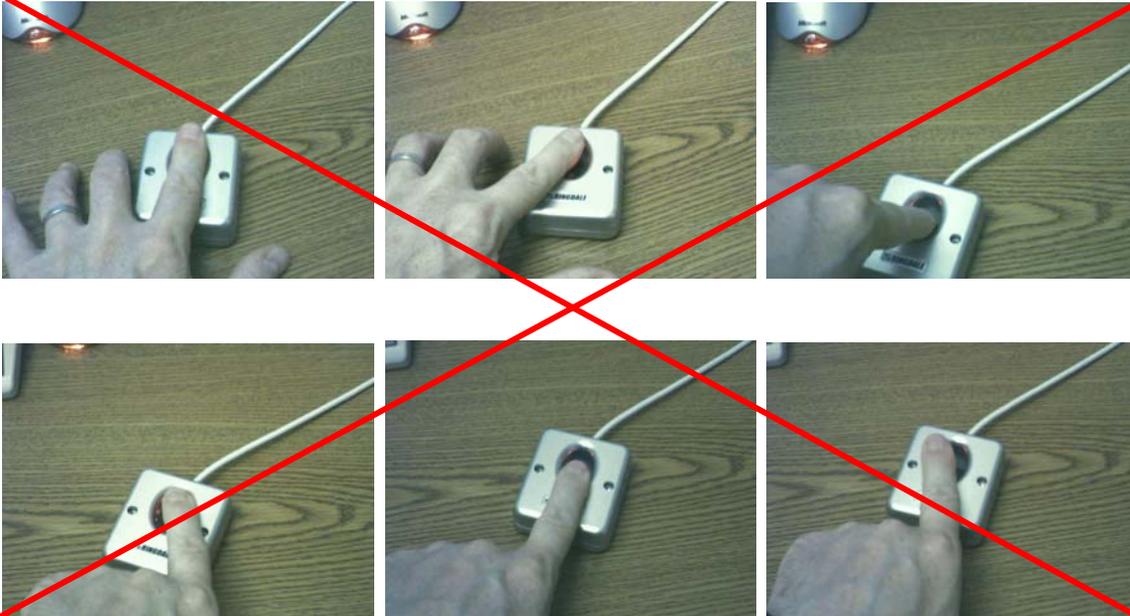
Enrolling the first fingerprint in the best possible quality is key. We therefore will have to repeat this a few times until you are comfortable with the way the finger should be presented.

To help you understand how to present your finger, we have the monitor at an angle so you can see what the system sees from the reader.

[point to chair at the end of the enrollment station]

Please take a seat and relax. Let me know when you are ready to start the enrollment process.

[member gets seated]

Let's practice how to present the finger.

◄ I am ready now   45 sec

Do you have mostly moist fingers or dry fingers?

◄ Dry

If you have mostly dry fingers you may have to apply a little pressure on the reader with the emphasis on "little".

◄ Moist

If you have moist fingers, do not press hard. Press down just enough so your finger covers the biggest surface area. If you press too hard the water droplets will join up and the sensor will show a very dark or black image.

Cover the oval fingerprint reader as much as possible and wait for the monitor to show your fingerprint.

– press a little if the print is very light.

– Reduce pressure if the image is very dark

[observe and assist giving pointers as to what to and what not to do – if too dark ask enrollee to reduce pressure until you see a good fingerprint covering as much area as the person can cover]

I will now give you examples of screen images you should aim for and examples of what to avoid:

[Once a good fingerprint image is on the screen]

This one looks perfect for the first print. Please wait for me to start the process. Try to re-present your finger four times in the same way and the same position.

Are you ready?   ◄ Yes

[Observe and prompt the person as to when they should put their fingerprint on again until the system acknowledges the enrollment as completed]
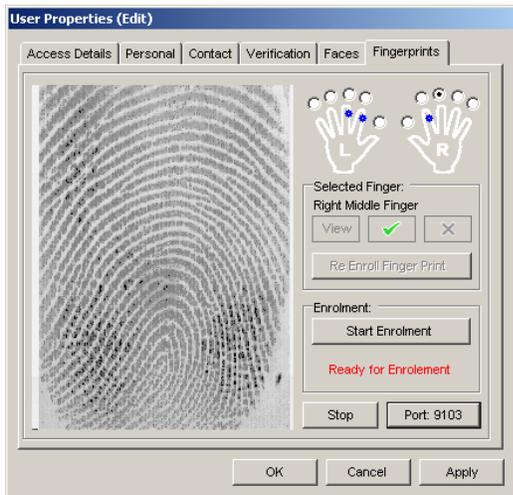

Too little pressure and finger not covering whole area

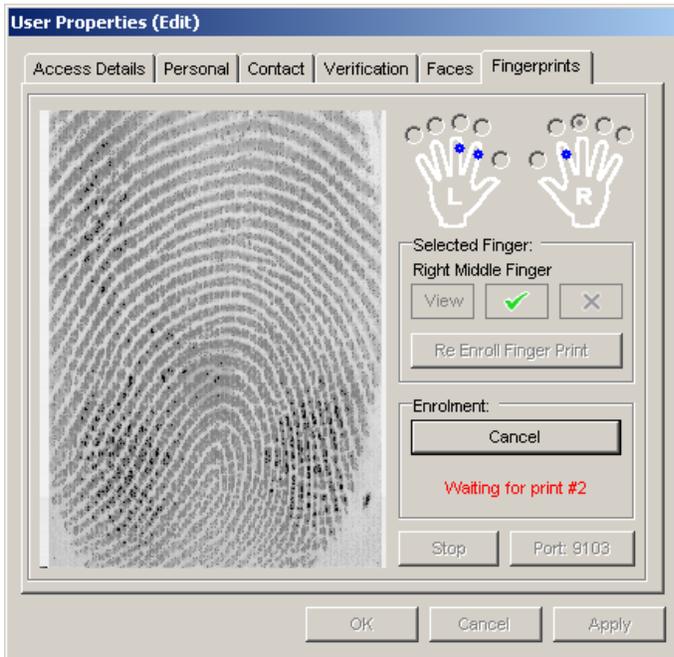Covering area, but still not enough pressure

Very moist finger and too much pressure

Good print – now I will start the enrollment process.

[click Start enrollment]

Try to re-present your finger four times in the same way and the same position.
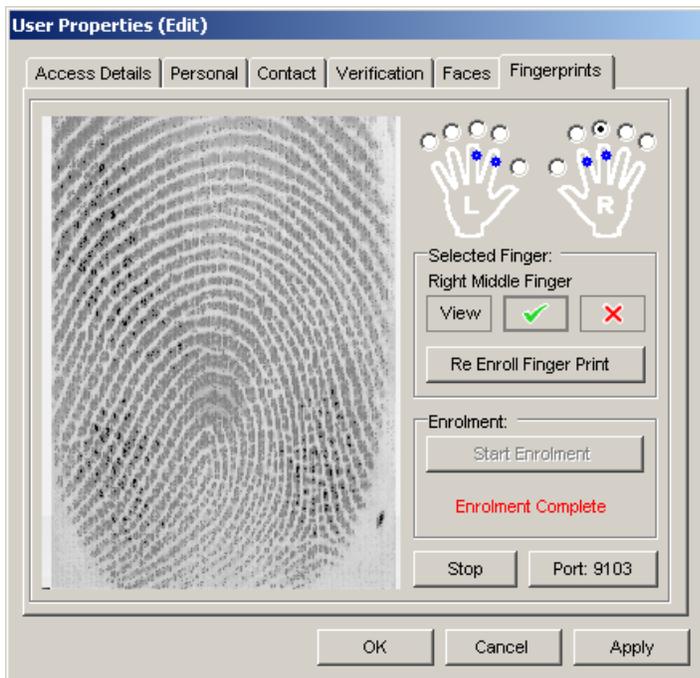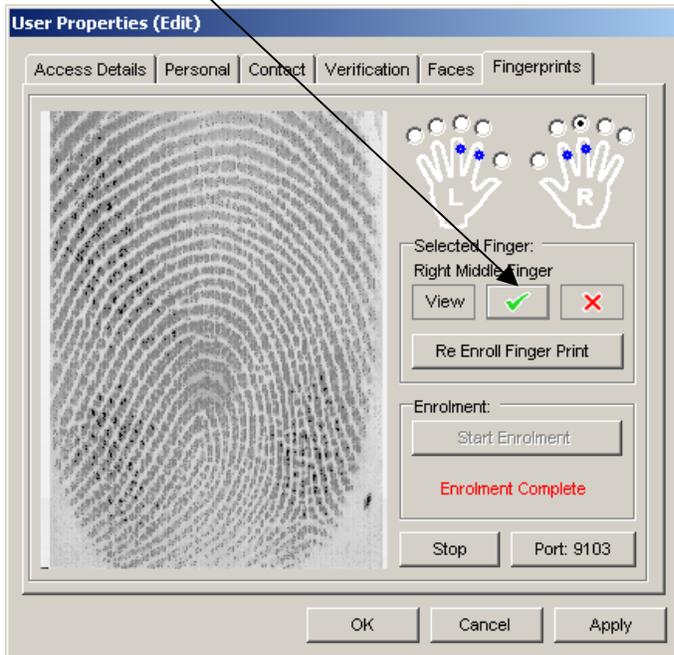

Good print

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Now present again in same position

Good print

And present for a last time – in the same position please

Let's see if the system can identify that last print

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[click the tick button]

The following score message will appear 3:30

Your fingerprint is now enrolled! Let's now try the second 0:12

[Enroll and verify]

1:30

You are now enrolled and should be able to clock in and out.

Always look at the screen before you punch IN or OUT and if another person's name is on the screen, note their name, wait for the main screen and apply your fingerprint again.

Please try it on your way out and let me know if you have any problems or if you get identified as a different person.

Have a nice day.

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What to do if:

<u>False Positives:</u>

1.   In the event an employee applies their fingerprint to a fingerprint reader and another person's name comes up, review the enrollment of both users.

Delete the fingerprint of the false name and reenroll that person.

2.   In the event, an employee continues to get false names when clocking in, reenroll that employee.

When reenrolling, begin from the very first and explain the concept of the fingerprint versus key. Reenroll the fingers using the most current guidelines.

<u>Not identified:</u>

6.   Some enrollees with a score of 220 or better may not be able to apply their finger to the reader in the same manner as during enrollment and will find it difficult or impossible to be identified on a consistent basis. For some reason when the enrollee presents their finger, the same minutiae are not read.

7.   Reenrollment of these persons is recommended. It is likely the individual has moist fingers and the procedure for moist fingers has to be followed during enrollment.

8.   If this person continues to fail when attempting to clock in, consider giving this person another form of ID such as a PIN number, swipe card, proximity card or a barcode.

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