



timeware[®] 2017 biometrics





For more information about timeware® products, version updates, datasheets and reports, please refer to the timeware® community website:

www.timeware.org

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Contents:

Page

6. What are biometrics?
7. Thinking of introducing biometrics into your company...

What makes fingerprint the ideal solution for attendance, access control and job costing?
8. Can employee fingerprints be recreated or worse - stolen?
9. So what is a template?
10. Now for some technical stuff: "What is 1:1 and 1:n matching?"
11. Why are timeware® biometrics better than others?

Can timeware® biometric terminals be installed at different sites around the country?
12. How easy is it to enroll employee fingerprints?



What are biometrics?

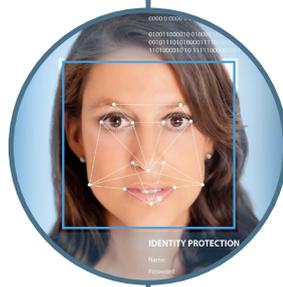
Biometrics is the science and technology of measuring and statistically analysing biological data. In the time management industry, biometrics usually refers to technologies for measuring and analysing human body characteristics such as eye retinas and irises, facial patterns, fingerprints, and hand measurements.

Eyes - Iris & Retina Recognition



The use of the features found in the iris to identify an individual.
The use of patterns of veins in the back of the eye to accomplish recognition.

Face Recognition



The analysis of facial features or patterns for the authentication or recognition of an individual's identity.

Fingerprint Recognition



The use of the ridges and valleys (minutiae) found on the surface tips of a human finger to identify an individual.

Hand Geometry Recognition



The use of the geometric features of the hand such as the lengths of fingers and the width of the hand to identify an individual.

What makes fingerprint the ideal solution for attendance, access control and job costing?

Fingerprint biometrics eliminates "buddy punching". No more falsified time cards. No more unauthorised access to restricted area of your buildings.

Fingerprint biometric solutions are better suited for attendance, access and job costing than mag-stripe badges and proximity cards because a fingerprint cannot be stolen or lost.

Consequently, there is no on-going cost with biometrics. No-more ordering replacement cards and remember, a fingerprint reader requires virtually no maintenance – an occasional wipe with a soft cloth will clean a reader fitted in the most dirtiest environment.

Fingerprint biometric systems are extremely accurate, quick to implement, and cost effective.



Readers too large for access control. Can be light sensitive.



Low cost. Readers are very small. Perfect for attendance, access control and job costing installations.



Expensive. Not suitable for multi-door access



Readers too large for access control. Can be light sensitive.

Thinking of introducing biometrics into your company?

Introducing a biometric system often causes employees to raise the issue of 'lack of trust in the workforce'. timeware® strongly recommends focusing on positives such as accurate data collection which in turn provides an error-free payroll, more reliable fire roll-call reports and when access control is being considered, improved security for the workforce.

THE LAW ON BIOMETRICS

Several pieces of legislation are relevant to the issue of biometrics, but of these the Data Protection Act 1998 is the most important. The Act provides a framework to ensure that personal information is handled properly and provides individuals with rights, such as the right to find out what personal information is held on them.

The Act stipulates that anyone processing personal information must comply with eight principles. They are:

- 1. Fair and lawful processing of data**
- 2. Processing for limited purposes**
3. Adequate, relevant and non-excessive storage of data
4. Keeping data accurate and up to date
- 5. Ensuring data is not kept for longer than is necessary**
6. Ensuring data is processed in line with other rights
- 7. Keeping data secure**
8. Ensuring data is not transferred to other countries without adequate protection

The first, second, fifth and seventh principles (highlighted) are the most relevant to this issue. The protections they provide are as follows:

1. Fair and lawful processing of data requires that employers ensure that staff are informed about and understand the purpose for which their personal data is being processed. timeware® uses this data to

- a. ensure that timekeeping & data collection records are accurate.
- b. ensures a secure environment offering a high level of physical access control.

2. Holding biometric data for limited purposes means that it should not be used for any purpose not directly related to that for which it was collected.

timeware® biometric data is not only held as template data but is also encrypted within the SQL database.

5. Ensuring personal data is not kept for longer than it is needed.

This means that biometric data on staff should be destroyed as soon as they cease to be employed by that employer.

On timeware® biometric installations, a special script ensures that an employee's biometric data is automatically destroyed 30 days after they are flagged as leaving the employment of the company.

7. The security principle means that biometric data should be protected against unauthorised processing and accidental loss, destruction or damage.

timeware® ensures that biometric data is encrypted but it is the companies responsibility to ensure that system backups are kept up-to-date and that system passwords are never compromised.

There is nothing in law to stop employers introducing biometric monitoring in the workplace if they satisfy the conditions set out above.

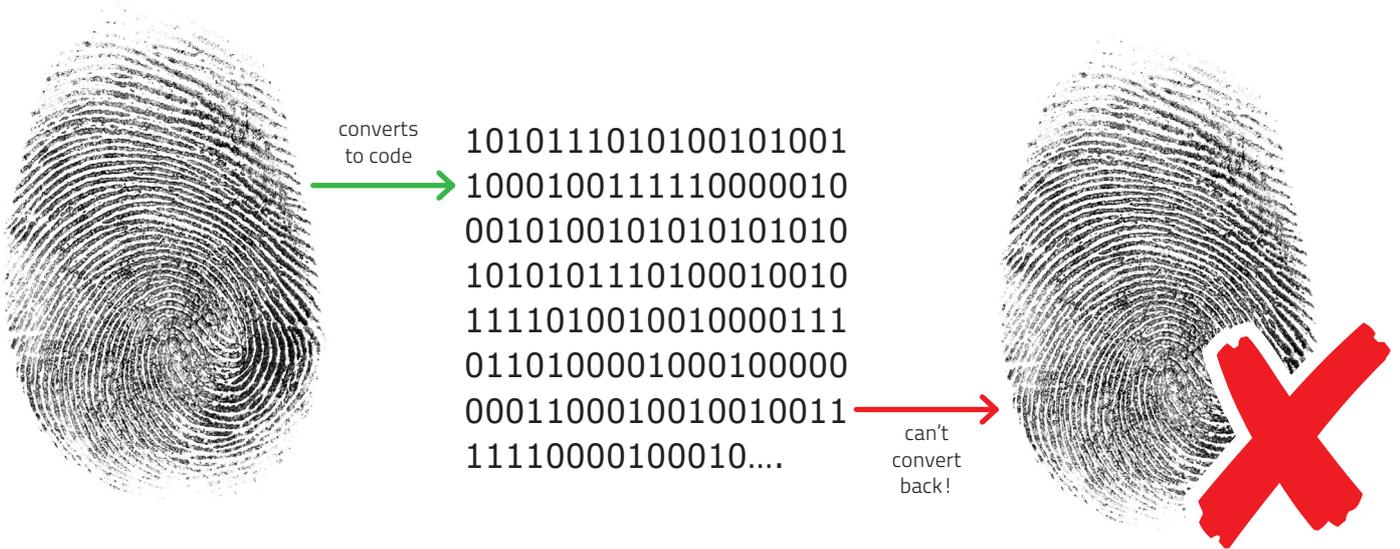




Can employee fingerprints be recreated or worse - stolen? **No!**

timeware® biometric fingerprint readers never store an image of your actual fingerprint.

The fingerprint sensor identifies unique minutiae points and measurements within your fingerprint and creates a digital template (not an image) for matching.



So what is a template?

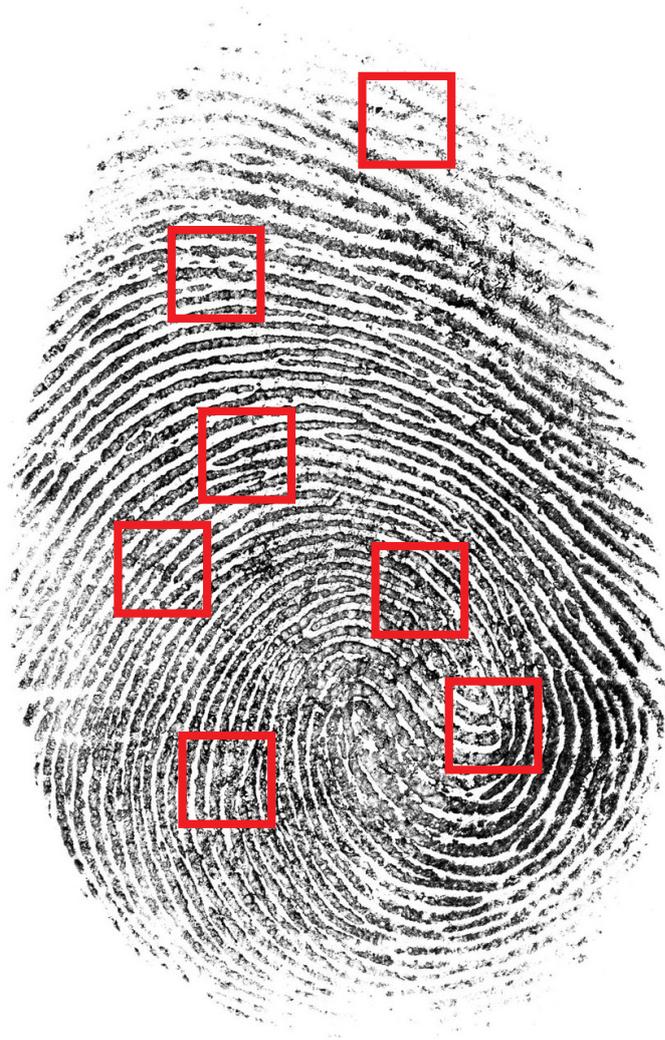
A fingerprint template is a set of lines, angles and measurements (minutiae) based upon the unique characteristics of an individual's fingerprint. These details are captured upon enrolling a person's fingerprint into the system, and later used for 1:1 or 1:n matching.

No actual fingerprint images are stored in the timeware[®] database - the template is simply a mathematical representation of your fingerprint's unique characteristics.

Two templates per employee are recorded. The templates are referred to as the primary and secondary templates. We normally recommend registering the right thumb and right index finger.

It is important to note that timeware[®] biometric templates are encrypted and cannot be reverse-engineered to form a fingerprint image.

timeware[®] uses a world standard fingerprint template methodology approved by NIST (National Institute of Standards and Technology), the leading biometric standards organisation.





Now for some technical stuff: "What is 1:1 and 1:n matching?"

1:1 matching is the name for verification

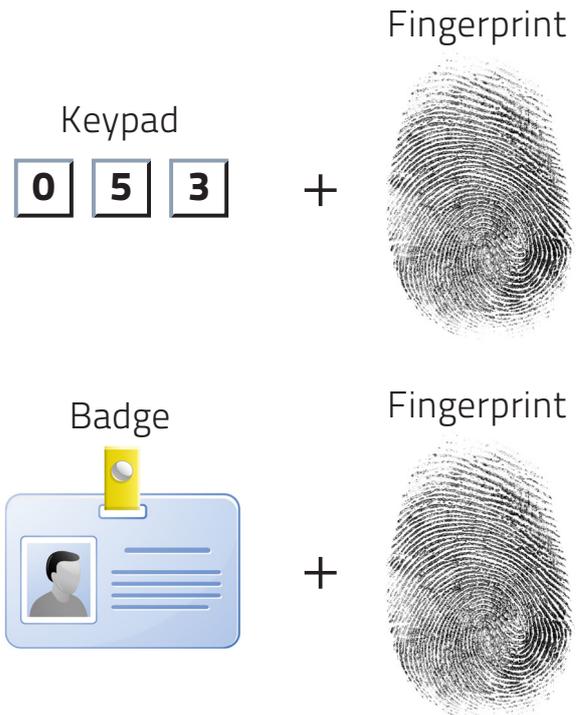
This is a method of examining one biometric record against another in order to determine whether the two match.

This is the type of biometric match that occurs when a biometric system is set up for badge plus finger matching.

The user presents a badge or enters a number which tells the biometric reader who the user is supposed to be.

The user then proves their identity by scanning a finger on the device.

This type of matching is very fast and accurate, and has been in use for some time.



Fingerprint only

1:n matching is the name for identification

1:n matching is a means of identifying a person against a broad database of other users simply by means of a fingerprint.

The user simply places his / her finger on the biometric reader, and a very rapid search is initiated in order to find and verify the user's identity.

This type of matching is more convenient since no PIN numbers or cards are required.

This is the most popular method and is used by the majority of timeware® biometric installations



Why are timeware® biometrics better than others?

timeware® biometric sensors are designed by SecuGen Corporation, the world's leading provider of advanced, optical fingerprint recognition technology.



Durable

SecuGen fingerprint sensors are extremely rugged and feature a virtually indestructible sensor prism. From the sensor surface to the internal lens and electronic components, SecuGen sensors are designed to be strong and dependable to deliver consistent performance in indoor, outdoor, hot, cold and other harsh environments.

Accurate

SecuGen sensors are very accurate thanks to a patented optic design that produces distortion free images from which data points are extracted for matching. Higher quality images mean greater precision, less false rejection and acceptance, and better overall performance.

Maintenance-free

Unlike semiconductor-based sensors and other optical sensors in the market, SecuGen sensors are made with a hard quartz-like material that needs no coatings but resists scratches, ESD, corrosion and other stresses. The optic parts are tightly assembled so that if the sensors are ever dropped, there is no need for recalibration.

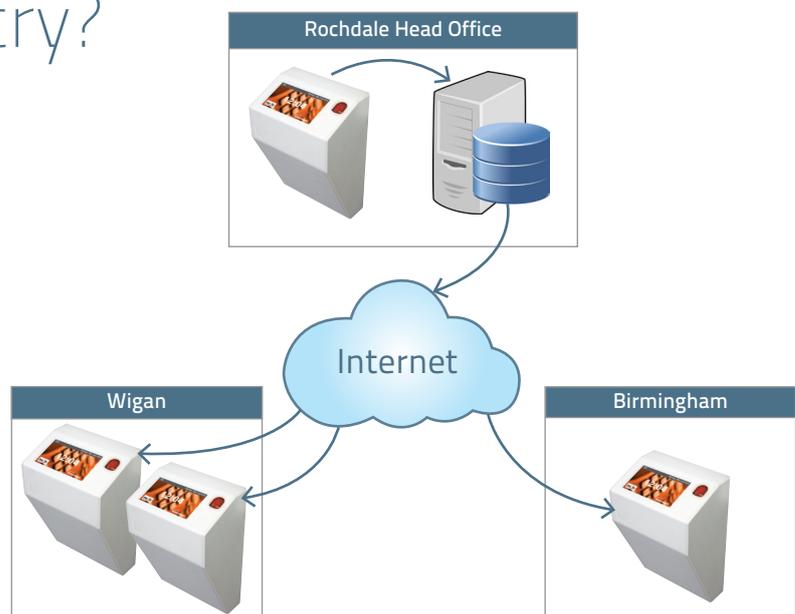
Cost-effective

SecuGen designs, develops and manufactures fingerprint sensors that are built to last. SecuGen guarantees the best product quality in the industry, which translates into savings by eliminating costly replacements and losses from system downtime

Can timeware® biometric terminals be installed at different sites around the country?

timeware® biometric terminals, just like our standard terminals, are extremely simple to install and configure. Sitting on your standard network, they collect information locally and then pass the data back to the software every few seconds. They can be installed on both local networks (LANs) and wide networks (WANs). We have many customers that have installed terminals initially at their head office and then expanded their system to incorporate sites in other towns and even other countries!

Here is a simple diagram of a multi biometric terminal installation with the head-office in Rochdale and two remote sites, one in Birmingham and one in Wigan. Please note that if one of the sites closed down, say Birmingham, the terminal could be very easily relocated to a new location anywhere else in the country.





How easy is it to enroll employee fingerprints?

Before beginning the enrollment process you must first ensure that the employee has been added into timeware® personnel.

Once this is complete, you have a choice of either enrolling their fingerprints at a biometric attendance terminal, a biometric access terminal or at a PC using the desktop enroller.

Most companies prefer to enroll fingerprints at the PC – its quick and simple and can become part of the new employee induction process.

Remember that the within seconds of the new fingerprints being added, they are instantly sent to all of the attendance, job costing and access control terminals that the employee is allowed to use through their terminal policy.



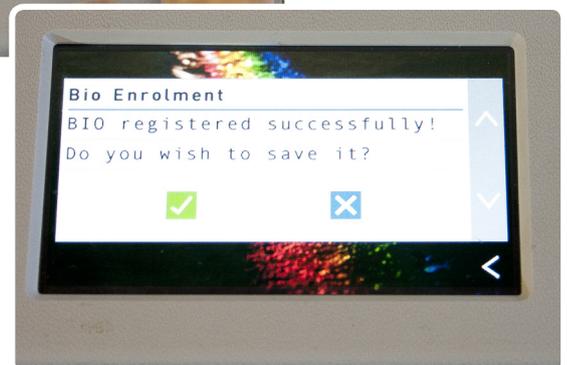
Enrolling at the terminal – ideal for remote locations without access to a timeware® PC.



The supervisor begins the enrollment process by accessing a PIN protected option at the terminal.



The supervisor controls the employees primary and secondary finger enrollment procedure.



When successfully registered the fingerprint template is saved and distributed across the timeware® network

Enrolling at the PC – just another small step during the employees induction process.

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File View Tables Sort and Filter Calculation... Personnel...

Select personnel from the menu

Edit the personnel record

Personnel
Employee ID: 7 First name: Lauren Last name: Brazier

Essential (General)
 Badge: 1234
 Payroll: PY19212
 Integration ID:
 GPS IMEI:
 Known as: Brazier, Lauren
 Security pin:
 Biometric data: Finger (Remove) Other (Remove) Finger Print Registration Wizard
 Date started with company: 19/10/2006 9 years, 3 month(s), 7 day(s) Remove 'Years Service' from To Do List
 Badge activation: Mon 04 Aug 2014 09:00 to Thu 14 Sep 2012 23:00
 Current employment: Employee (Weekly Paid) 08:00-14:00 \ 07:30-16:00 Week rotation: 1

Biometric data: Finger (Remove) Other (Remove) Finger Print Registration Wizard

Select the wizard

Finger Print Registration Wizard
 Register Your Primary Finger
 Ask the individual to please place their finger on the scanner. Once you have a clear image of their finger print click the capture button.
 Captured
 Release
 Help < Back Next > Finish Cancel

Enroll the fingerprint using the t8-0355 biometric enrollment device.
 When successfully registered the fingerprint template is saved and distributed across the timeware® network

t8-0355 biometric enrollment device