



smartⁱ

Security. Control. Comfort.

access control
time & attendance
building management

based on multimodal biometrics using facial and voice recognition

Samples of use:

Time & Attendance

Introduction

In shopping for our time & attendance needs, we all are looking for basically the same things. We want cutting edge technology that assures us we are paying our employees fairly for that work they have done, but not overpaying, or being cheated. We want a system that is easy to understand, implement and use and we do not want to go through the process of changing systems again anytime soon. We want a system that will adapt with our changing needs; a system that will be prepared to handle even those eventualities that we have not yet thought about. In effect, we do not want to regret our buying decision.

Paying for work actually being done

- Automated attendance systems typically measure the presence of a key card or pin code, not a person. This can easily be abused. **smarti** eliminates "Buddy Punching". Whether you use biometrics, PIN code or a proximity card reader, the visual record from the built-in infrared CCTV camera keeps workers from abusing the system by clocking each other in or out.

Flexibility in setting up your attendance tracking

- Includes customizable, rolling presence schedules, overtime management, absence schedules... Everything you need to track your employees' exact time usage.
- Customizable reports give you precisely the information you need in the format you need, and make the payroll job easier.
- Tardiness, break times & early exit are duly noted.
- Because **smarti** is around, employees are less likely to try and abuse the system, relieving worry and letting you work on other pressing matters.
- **smarti** can be customized to meet any local rules and laws governing attendance systems.
- Can be integrated into existing system to help eliminate buddy punching without the need to change your current solution.
- In many cases it is possible to set up data to be exported into other payroll software, making end of the month payroll calculations fast and easy.
- In addition, holiday and independent vacation schedules can be programmed in eliminating costly manual monitoring.
- All these capabilities are there when you need them, and the system can be tightened or loosened based upon your needs.

Complete system for access control and building automation

Modules for access control and building automation are also already included in the software saving you money as you do not need to buy additional systems for these features.

- Integrated Access Control System
 - Multimodal biometrics based upon facial and voice recognition prevents unauthorized use of cards, PIN codes, keys etc.
 - Built-in infrared CCTV camera, gives a time and date stamped visual record of all events thus discouraging abuse.
 - High flexibility allows you to tailor your security level to meet your requirements now and change as your needs change. You can use any combination of PIN codes, biometrics, and external readers to reach these required levels.

- Protocol independence allows you to connect practically any electronic device to the system (i.e. sensors, identification readers, alarms and other electronic devices.)
- Easily integrates into existing systems.
- System can be stand alone or networked with other devices and computer networks.

- Building automation
 - Control of electronic devices - electronic locks, lights, alarms, air conditioning, blinds, heating, different sensors... Automation of electric devices according to needs and wishes for higher security, comfort, quality of life and lower energy costs.
 - These devices and functions can be integrated with access control and attendance functions (alarm is set and heating adjusted after the last person leaves the office.)

Case 1

The situation

In an office building, with many enterprises, two neighbouring companies have decided that they need an access control solution. One of the two companies wanted to use the solution for time & attendance also. At the same time both companies needed to introduce some form of communication with the visitors at the entrance to their offices.

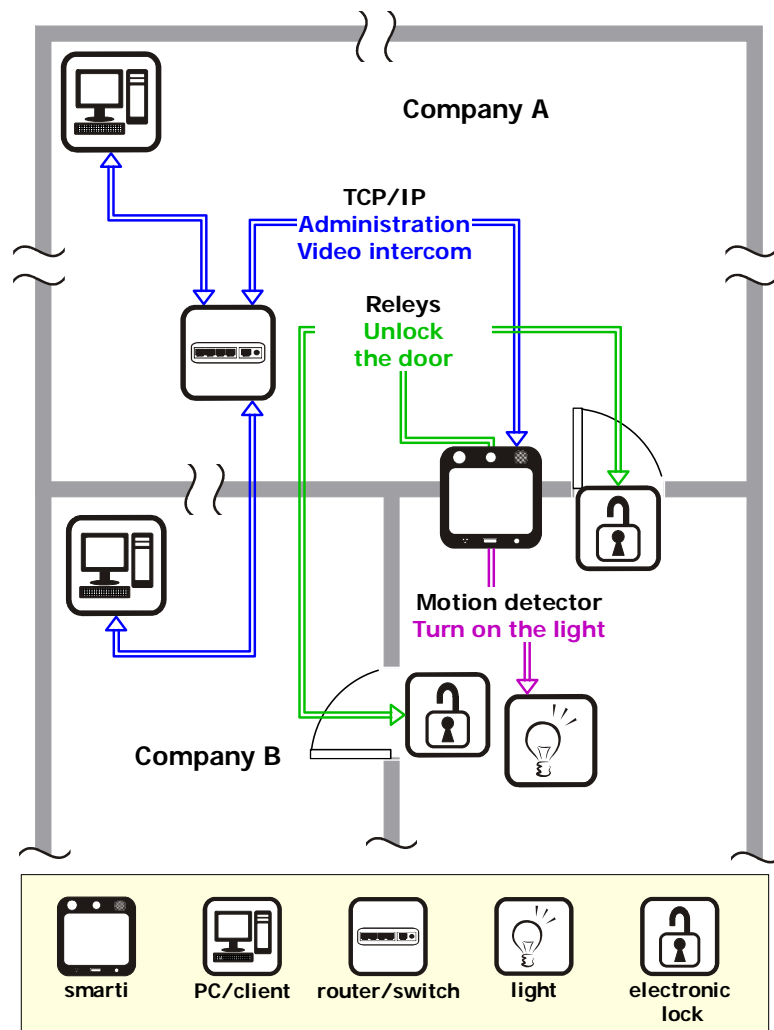
The companies wanted to use a joint solution for access control and time & attendance - **smarti**[®] with the possibility of separate event tracking and administration.

The solution

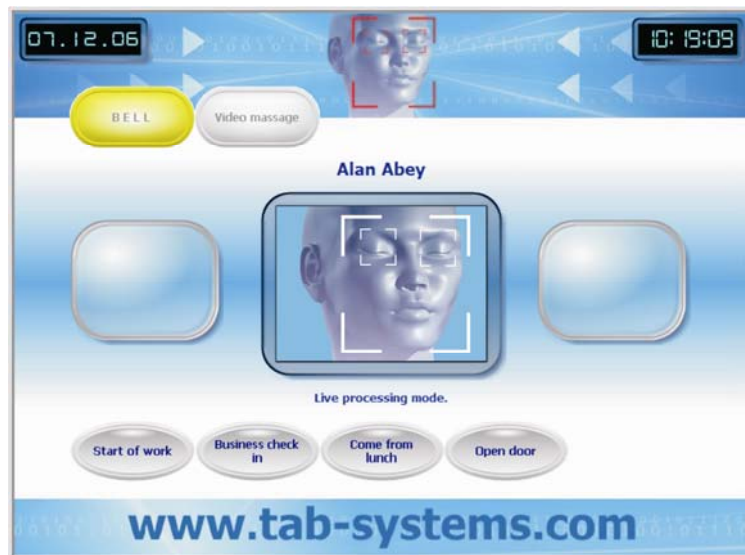
A **smarti** unit was installed on the wall between the entrances to the offices of both companies. A light was mounted above the unit and connected to the unit's motion detector. The electronic locks in the doors to the offices where connected to the relays on the **smarti** unit. The registered users were divided into two groups:

- Company A
- Company B

For Company A which uses both access control and time & attendance the system was configured so that the following buttons appear in the lower part of the screen to a person who is identified and granted access:



- **Start of work** unlocks the door and registers the time when the person came to work.
- **End of work** registers the time when the person left from work.
- **Go to lunch** registers the time when the person went to lunch.
- **Come from lunch** registers the time when the person came back from lunch
- **Business check in** registers a business check in.
- **Business check out** registers a business check out.
- **Open door** unlocks the door to Company A.



The interaction between the users and the **smarti** system is done through a colour touch screen. All events are tracked, with time stamped photos recorded and filed and can be easily used to generate all the needed reports for time & attendance.

The employees of Company B which uses only access control have only one button available after they are granted access

- **Open door** which opens the door to Company B.

All visitors and registered users can also use two buttons which are always available in the upper part of the screen:

- **BELL** starts the video intercom.
- **Video message** starts the video messaging application.

Below the line

With the use of the **smarti** both companies have wholly met the above stated demands in an efficient and economical way.

The used solution prevented abuse, unauthorized and unsupervised access which is possible with more commonly used access solutions (ID cards, PIN codes...).

The visitors can communicate with the representatives of both companies in a friendly, simple and effective way.

The use of the solution immediately gave a realistic image of presence & attendance and made the correct evaluation of the labour costs possible.

Case 2

The situation

An IT company wanted to introduce a biometric solution to control access to their premises and server room.

The company has an independent entrance to their offices which are located in a large corporate building. This leads into a corridor which ends with two doors. One door leads to the secretary's office and the management, the other to the offices and the server room.

The company wanted to implement access control:

- at the main entrance, where access would be granted to all employees a video intercom would make communication with the visitors possible and time & attendance would be tracked.
- at the entrance to the secretary's and management's offices only management and the secretary would have access.
- to other offices all employees would have supervised access.
- to the server room only authorized personnel would have access.

The solution

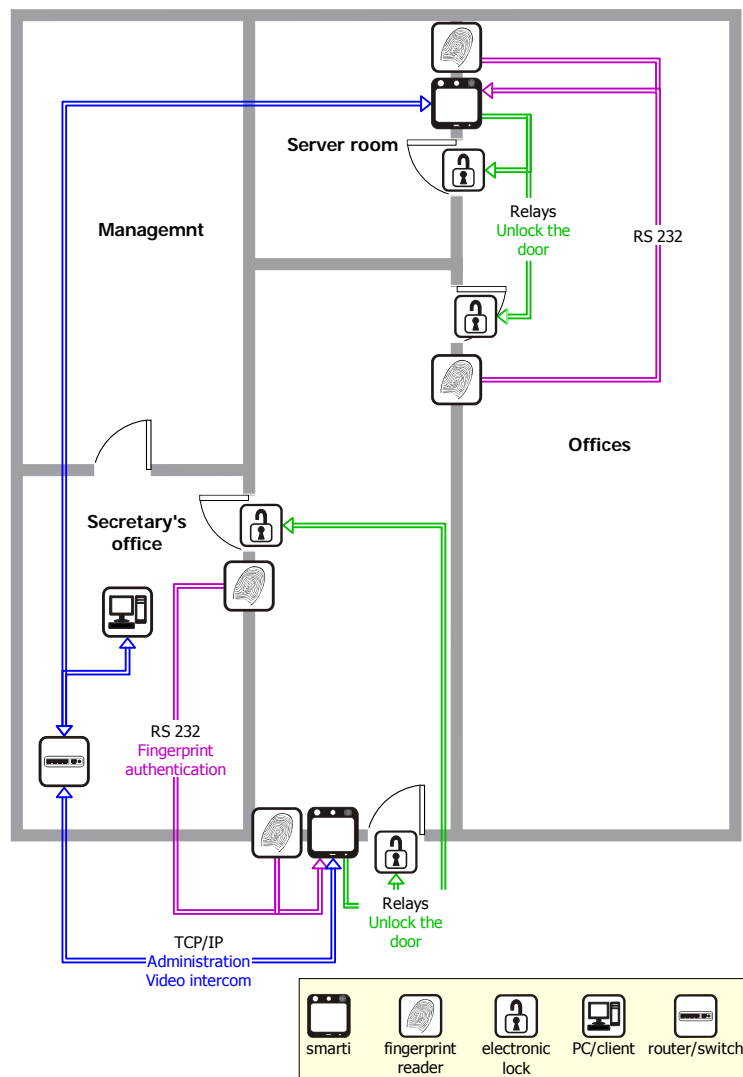
The company decided on the **smarti** system in combination with fingerprint readers (they could have also used palm scanners etc.) because:

- it uses multimodal biometrics for identification,
- it offers time & attendance management and
- it has an integrated video intercom function.

The first **smarti** unit was installed at the main entrance. Below the **smarti** unit a fingerprint reader was installed and connected to it. The system is configured so that after a person's fingerprint is successfully authenticated the face recognition is automatically started.

Besides access control time & attendance is also managed at this unit. When an individual is authorized the following buttons become available to him:

- **Start of work** unlocks the door and registers the time when the person came to work.
- **End of work** registers the time when the person left from work.
- **Go to lunch** registers the time when the person went to lunch.
- **Come from lunch** registers the time when the person came back from lunch



- **Open door** unlocks the door.

The button **BELL** is always available in the upper part of the screen to all visitors it connects them via video intercom with the secretary.

The second fingerprint reader was placed by the door to the secretary's and management's offices and linked to the first **smarti** unit at the main entrance.

The third door which leads to the offices was equipped with a fingerprint reader which was linked to the second **smarti** located at the server room entry.

At the entrance to the server room the second **smarti** unit was installed. Below the **smarti** unit a fingerprint reader was placed and connected to it. The system is configured so that after a person's fingerprint is successfully authenticated the face recognition is automatically started. If the person is successfully authenticated **smarti** unlocks the door to the server room.

Both **smarti** units are connected to a central database and server so that the whole system can be administrated from it. Thus people can easily be assigned access privileges and schedules to different parts of the company from a central location.

Bellow the line

The use of the **smarti**[®] system in combination with the fingerprint readers has proven it self to be very affective in achieving a higher security and reliability level with minimal additional costs.

An effective enforcement of security standards and recommendations was attained in the most reliable and economical way.

The integrated time & attendance management feature is very useful to the company which supports the choice of the described solution.

Additional benefits

The use of the **smarti** system offers many potential benefits when used for time & attendance.

- Time card or key card can be lost and abused. **smarti** identifies humane features (face, voice), this way it prevents abuse of keys, ID cards etc.
- Increasingly today, as managers we are accountable for knowing specifically the presence or absence for more than just payroll reasons. In case of fire or accident, it is important to have a reliable list of who is on the premises.
- System can be used to handle any number of employees - from large multi nationals to small family owned businesses.
- Customizable reports to suit the whim of any boss.
- Accountability. In case of incident, time and date stamped photo of each event is recorded and can be recalled at any time.
- **smarti** has no problem dealing with multiple shifts or working over midnight.
- Video intercom and IP phone.
 - A built-in video intercom allows for easy guest recognition.
 - Answer your door bell even if you are away on your mobile or on your stationary phone.
 - Receive text messages or email with photo about unexpected events in your office or in your home.
- Video surveillance
 - Any time of day or night at key access points provides you with the peace of mind knowing you are protected.
 - If a forced entry is attempted, you will have a visual record of the event and perpetrators.
- Video messaging – the ultimate read receipt confirmation.
 - Users can leave a video message and can be sure that the addressee will receive it.
 - Answering machine for your door. If you are away and unavailable your visitors can leave a video message for you.
- A unique thing about **smarti** is that it has so many features and built-in capabilities. Many of the features would cost as much by themselves as **smarti** does for all.
- A key benefit of the above is that it allows you to choose those functions you need, but also gives you the peace of mind to know that you can adapt **smarti** as your needs change.

Summary

The advantages

- Multimodal biometrics, unlimited connectivity and numerous additional functions in one device.
- Simplifies, speeds up and automates authentication and identification of authorized individuals.
- Biometric identification is unobtrusive and reliable.
- Identity authentication based on previously acquired biometric patterns.
- Offers highly reliable identification - biometric patterns can not be lost, stolen, fraudulently acquired, damaged, misappropriated or lent to someone like per example ID cards, PIN codes, passwords etc.
- Provides a consistent and effective enforcement of security and privacy policy.
- Offers a realistic and correct evaluation of presence & attendance and labour costs.

The cost of ownership

smarti is designed:

- to reduce the cost of investment because it costs less than other widely used solutions which use ID cards...
- to reduce implementation costs with the completeness of the solution, which adapts to many different physical-access environments and needs.
- to easily integrate with existing access-management systems.
- for ease of use and maintenance during its life time.

The financial advantages

Security can impact your budget therefore you should consider the upfront costs and ongoing expense of managing a security solution. **smarti** the complete multimodal biometric access control solutions can:

- reduce security cost with automated, unmanned entry points.
- extend your budget to improve employee and constituent confidence in your security measures.
- reduce cost of data protection by verifying authorized users in secure areas.