



EKEY Biometric Systems is based in Linz, Austria & is specialized in Biometric Centralized Software Systems. With their unique **TOCA®** product, ekey biometric systems offers a comfortable and secure alternative to keys, passwords, access codes, credit card numbers & any other means of authorization. TOCA® is based on the unmistakable characteristics of a human being and is thus currently the most secure method of authentication. TOCA® provides the highest possible degree of protection, enhances the comfort of the user while reducing the costs in comparison to previous methods of identification. TOCA® can be combined with different types of biometric technologies as well as business or private uses. Because of its system openness, the most modern biometric technologies can be integrated with great ease making it flexible to react to future developments.



TOCA® is available in the following 5 solution packages to suit various authentication requirements:

TOCA® Worldwide

TOCA® Business

TOCA® Logon

TOCA® Access

TOCA® Bit

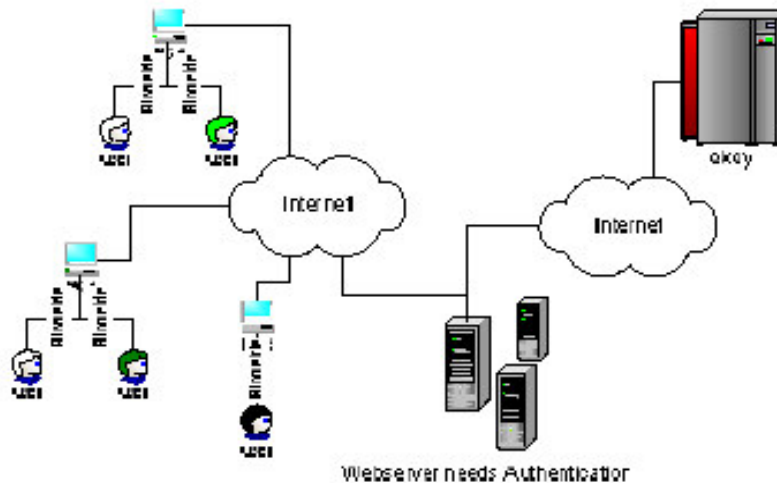


Advantages at
your fingertips.



People are our center
of focus

Use biometric authentication through the Internet by using the biometric data processing service centre TOCA[®]Worldwide. This central service may be used e.g. for eBanking, ePayment, eTicketing, VPN authorization etc. TOCA[®]Worldwide is being successfully used since IV/2002



ekey Patent for Anonymous Centralized Authentication

The central concept is based on the separation of personal attributes and biometric data. Personal attributes remain as they have in the past at the provider (perhaps a bank). The biometric code is stored in the secure ekey computing centre under a user ID. This user ID is sent by the provider together with the master code to ekey. Personal data, such as a name, telephone number, or other personal information, are not stored in the ekey computing centre. This way it is not possible for any misuse of the biometric data at the ekey centre. The companies are legally independent, and therefore a list of names and biometric codes cannot be generated in one of the companies.

Implementation

The provider uses only scripts that have been prepared by ekey. The system is implemented in a matter of a couple of hours.

Possible Applications

- VPN authorization (replacement of passwords, cards or tokens)
- Supply -chain-management assurance (replacement of passwords, cards or tokens)
- eBanking and eBrokerage (replacement of PINs and/or TANs)
- ePayment (replacement of entry of the credit-card number on the Internet)
- eTicketing (replacement of passwords/codes)
- Customer cards—Assurance that the user of the card is the authorized owner

Benefits

- Simple and secure authentication in various applications by means of biometric methods (fingerscan)
- Replacement of codes, keys, smart cards, touchless tokens, etc., with biometric methods
- Highest security (against loss, theft and spying)

Added Value

- No cards or tokens (no forgetting, loss or theft, all of which are costly to the user)
- No passwords, PINs, TANs or codes (that can be forgotten or stolen)
- Separation of biometric and personal data in legally and economically separate companies/computing centres

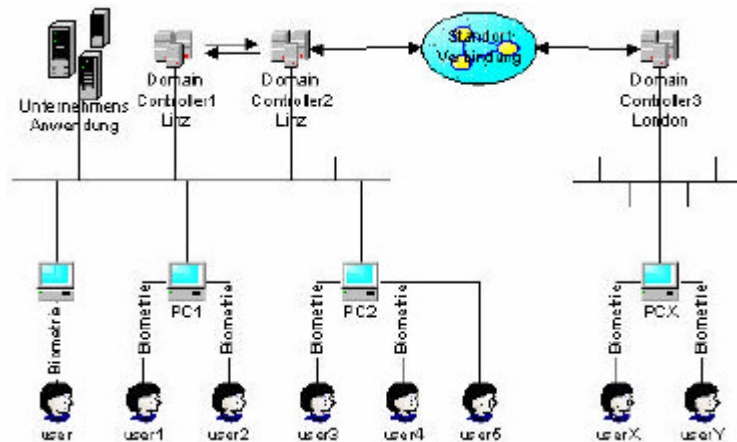
- The code derived from the finger image cannot be converted back into the finger image.
- The finger scanner can be used to logon to a system or used for other applications.

Technical Data	
Duration at the Client	~ 1 second (for image creation, code generation and encoding)
Duration in the ekey Centre	< 400 milliseconds (for decoding, matching and returning message)
Protocols	HTTPS or HTTP
FAR/FRR/FTE	~ 1×10^{-5} / 1×10^{-2} / $< 0.1\%$ when using TOCAbit This rate of recognition was calculated with an internal fingerprint database (recorded with the Atmel FingerChip™ sensor).
Fake Finger Recognition	This ekey algorithm distinguishes between a person's skin and other known materials
Finger Scanners	TOCAbit, Siemens ID Mouse, Atmel FingerChip sensor, etc. (Please inquire.)
Template Size	< 1024 bytes

TOCA[®]Business

TOCA**business** is very similar to TOCA**worldwide**, however the biometric data processing service centre is located at the customer and can be adopted individually. Also here the complicated and expensive administration of passwords can be simply replaced by Fingerscan or other biometrics. Different applications in the Internet, LAN or local ones may be modified for the use of TOCA.

Networks, PCs or notebooks may be secured by biometrics (e.g. Fingerscan). Since passwords are not necessary anymore, the convenience for the user increases and cost for system administration drops dramatically. A combination with existing technologies is possible. TOCA[®]Logon will be Microsoft certified and integrated in the Microsoft Active Directory. TOCA[®]Logon is in development for Windows 2000 and XP as Logon to a Windows Domain.



Procedure

Instead of entering the user name and the password, TOCA[®]Logon can be implemented at any location without the need for configuration and replication. The unique multi-user design makes it possible to unlock locked PCs inside a user group without logging off the user or closing any software programs.

Applications

- Bank software
- Hospital software
- Shift workplaces
- Help desk
- Maintenance personnel
- For Windows 2000 and XP Professional as a logon to a Microsoft Windows domain
- Can be integrated into applications as password replacement
- Fits for all – big or small organizations

Benefits

- Replacement of the user name and password with biometric technologies
- Convenience with a simple touch of the finger
- Increased security
- Screen saver with biometric technologies
- Multi-user technology
 - several users configured to one virtual user
 - full security and feasibility in workplaces for shift workers

Added Value

- TOCA[®]Logon is being certified by Microsoft and is being integrated in the Microsoft active directory
- Combinable with password, SMART card, etc.
- Combinable with several biometric methods
- Short logon times

- Full Microsoft integration
- Certified by Microsoft
- No dependence on particular hardware
- Replication and availability through Microsoft active directory
- No additional licenses required

Existing physical access control systems may be upgraded, complemented or replaced through TOCA[®]Access in a convenient way. Keys, passwords or PINs, etc. cannot be lost or forgotten anymore. Apartments, houses, public buildings, high-security-areas, safes, weapon security containers, etc. may be individually equipped with TOCA[®]Access.

TOCA[®]Access NET 1.0



Procedure

The authorized user places his finger on the scanning device. The key code generated by the finger image is compared with the registered key codes and the door opener is activated by an electronic impulse. If more than one hundred users are registered per door, preselection by means of a number code or card is advantageous.

Possible Identification

- Only fingerprint
- Code and fingerprint
- Smart card and fingerprint
- Smart card and code

Possible Applications

- From small companies to large enterprise
- Public buildings
- Parking houses
- Access to buildings
- Access to high-security areas

Benefits

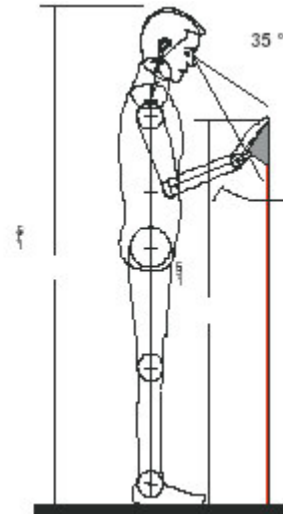
- Convenience by simply placing one's finger on the scanner. with more than 100 persons combined with PIN or
- Card for preselection
- Heightened security, low costs
- New users authorized immediately by means of authorization system on the server for all access areas

Added Value

- Several doors and several buildings networked
- User report with access times
- No lost data in the event of loss of power
- Connection to emergency power supply

Technical Data	
Operating voltage	inside unit: 220V outside unit: administered from inside unit
Power	~1W
Storage in the scanning unit	up to 700 fingerscans in the scanning unit
Interface	TCP/IP
Temperature range	-20 to +60°C
Switch-on time	Full operation in < 250 milliseconds
Biometric data	FAR: approx. 1.0×10^{-5} at FRR 1.4×10^{-2}
Template size	<= 560 bytes
Security	Temper alarm

TOCA[®]Access LI GHT & TOCA[®]Access LI GHT+



Personal access problems are solved with TOCA**access**. Keys, passwords, PINs, etc., can no longer be forgotten or lost. Apartments, houses, highly secure areas, safes, weapons cabinets, etc., can be individually equipped with TOCA**access**.

TOCA**access** light and light+ each consist of an inside unit (for control, recording and deleting of users) and a scanning unit (to record the fingerprint data and encoding them). Both units are connected by means of codes from the time they are initialised. The inside unit is connected to a 220-240 V/AC power source and is connected with a four-pole cable to the scanner. There is also a potential-free connection to the door opener. The authorized user places his/her finger on the scanner. The key code is checked and the door is opened by means of an impulse if the key code has been registered in the system.

Possible Applications

- Home door and/or garage locks in one-family or multiple-family houses
- Apartments
- Companies up to 100 people
- Garage or public parking garage up to 100 persons

Benefits

- Convenience through easy scanning of a finger
- Replacement of codes, keys, Smart cards, touchless tokens, etc., by biometric technology
- Increased security (loss, theft and spying is no longer possible or extremely difficult)

Added Value

- Keys no longer need to be remade.
- Children need no key (where loss would be a threat to personal safety).
- New users need no key.
- Guests need no key.

Technical Data

TOCAccess light	with one output for door/gate (1 relay)
TOCAccess light+	with three outputs for doors/gates (3 relays)
Operating voltage	Inside unit: 220V; outside unit: is operated by inside unit
Power	~1W
Storage	2MB Flash 8MB SDRAM
Interface	RS 232 for configuration
Temperature range	-20 to +85°C
Switch-on time	< 250 milliseconds to full operation
Biometric figures	FAR: ca. 1.0×10^{-4} for FRR 1.4×10^{-2} EER: ca. 1.0×10^{-2} This recognition rate was calculated with a company-internal fingerprint database (scanned with a Atmel FingerChip™ sensor)
Template size	<= 560 bytes
Time for encoding	~ 1.2 seconds
Time for matching	< 20 milliseconds per stored template

TOCAbit is Ekey's own Biometric Access USB Scanner for your personal PC. TOCAbit allows you to access your personal computer biometrically without the need of any access keys. Now you do not need to remember complex User-ids & Passwords OR be denied access to your own computer because you forgot your password.



Technische Daten

Breite x Tiefe x Höhe	60 x 82 x 22 mm
Gewicht	ca. 200 g
Schnittstelle	USB 1.1
Kabellänge	3 m
Sensor	Atmel FingerChip
Art der Messung	thermisch
Temperaturbereiche	10°C bis +85°C
Stabilität des Sensors	äußert robust gegen mechanische Beschädigung
Verpackung	Blisterkarton oder im Beutel
Herkunftsland	Austria
Kennzeichnung	CE