

BIOMETRY

SWISS IDENTITY SECURITY SYSTEMS

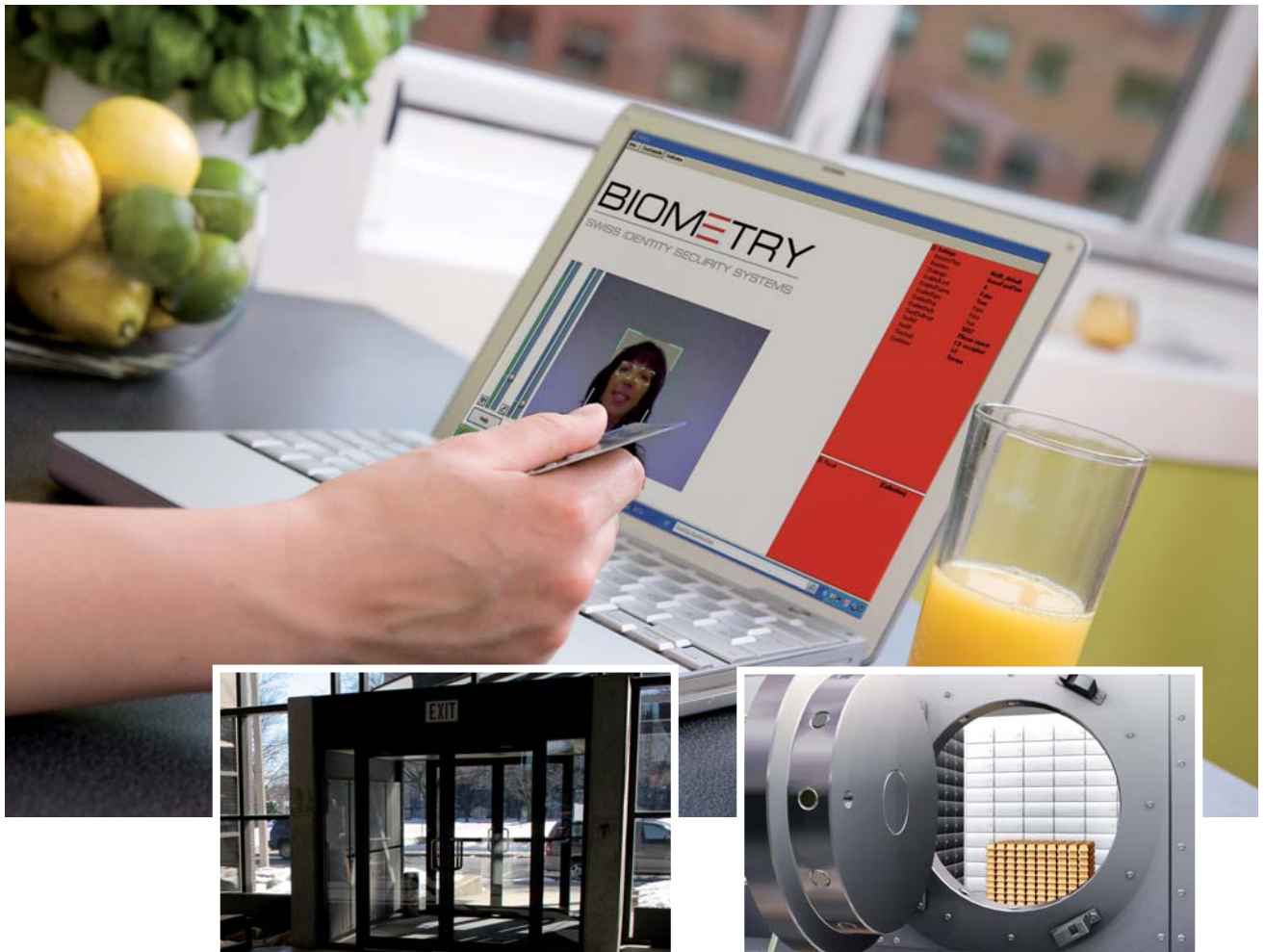
Biometrics as part of our contemporary life

Biometrics is generally understood as the determination of people's identities based on their physiological characteristics or behavior. These are unique featu-

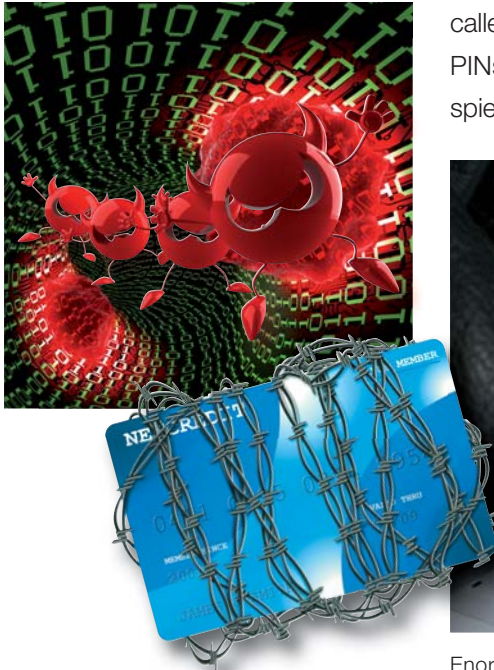
res of every individual. Criminality and terrorism have increased exorbitantly so that the security of passwords, PIN codes, and even Smart Cards is no longer sufficient. In countless situations, it is of the utmost priority to verify whether a person is who he is purporting to be. Biometric authentication simplifies this process and in doing so simultaneously in-

creases security. Governments from 189 countries have decided that biometrics must be a permanent component of official travel documents. Mankind will thereby place trust in biometrics and, step by step, biometric authentication will become a permanent part of our modern life.

Biometric authentication can be used for various purposes:



Source of danger: cyber crime



Credit cards and eBanking are becoming more and more vulnerable through criminal activities in the Internet such as phishing, pharming, skimming, and modified Trojans (so-called “man in the middle”). Original PINs and passwords were thereby spied out, or later Internet payments

were duplicated and redirected with credit cards. With the latest form, “man in the middle,” the recipient IBAN is altered during eBanking without the customer or bank noticing this. Money is then channeled externally as cash from this fraudulent account.

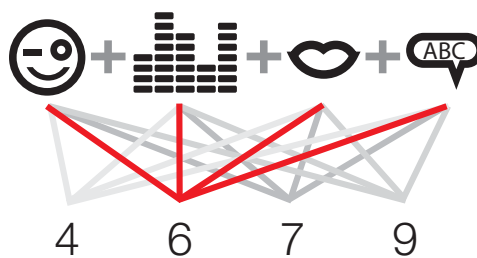


Enormous increase in cybercrime

ComBiom, the Swiss solution for BIOMETRY.com AG

BIOMETRY.com AG developed a multimodal, simultaneous biometric authentication based on biometric face recognition, biometric voice recognition, the recognition of biometric lip movement, and word recognition. A randomly generated sequence of four numerals that the user speaks successively is thereby displayed on the screen. A webcam registers the audio and video, and the software generates files (tem-

plates, c. 4 KB) per numeral. These are compared with the originally established reference templates and they permit access assuming the authentication is positive. This product is called **ComBiom** (Communication Biometrics) and is patent-protected. The combination of multiple biometrics as well as the randomly sampled numerals (random challenge response or otp = one-time password) offer the greatest possible level of security. Furthermore, the application is very simple since one no longer has to memorize codes or carry access cards (FreeHaM: Free Hands and Memory). In addition, there are minimal or no costs for the hardware required by **ComBiom** – webcam with microphone (is integrated into most laptops today).



0 1 0 0	0 1 1 0	0 1 1 1	1 0 0 1
0 1 0 0	0 1 1 0	0 1 1 1	1 0 0 1
0 1 0 0	0 1 1 0	0 1 1 1	1 0 0 1
0 1 0 0	0 1 1 0	0 1 1 1	1 0 0 1

= 16 processes

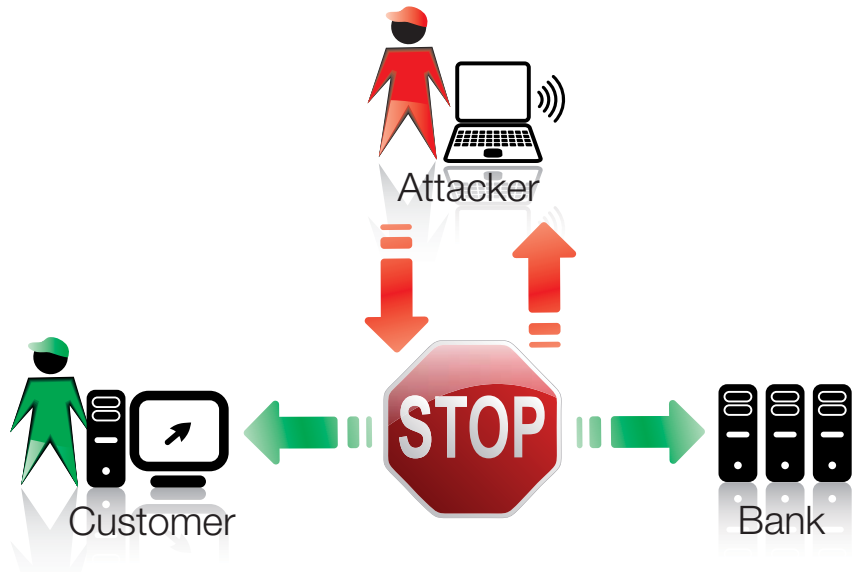


ComBiom is a multimodal, simultaneous, biometric authentication process that queries biometric face, voice, lip movement, and word recognition with a randomly generated numerals.

BiTCo, higher security for the user and supplier of eBanking

After the customer has logged on to eBanking (occurs during access by means of ComBiom), he gains access to the transfer form. The most important data that is entered here is the amount and the recipient's IBAN. To protect the data transfer from the man in the middle, BIOMETRY.com AG developed the product **BiTCo** (Biometric Transaction Confirmation). It calculates the checksum of the amount and the recipient account. The multi-digit number thus generated is a type of check digit that defines the trans-

action contents. When concluding eBanking, these check digits are retrieved to the screen and the customer speaks them into the webcam again, as with ComBiom. The biometric templates of the check digits are subsequently sent to the bank after the transaction. The bank compares them with the transfer data and can immediately detect if a Trojan has altered data.



Man in the Middle, (Modification Trojan), is redirecting the payment to the account of the attacker, without being noticed.

MobiComBiom: MAD – Mobile Authentication Device

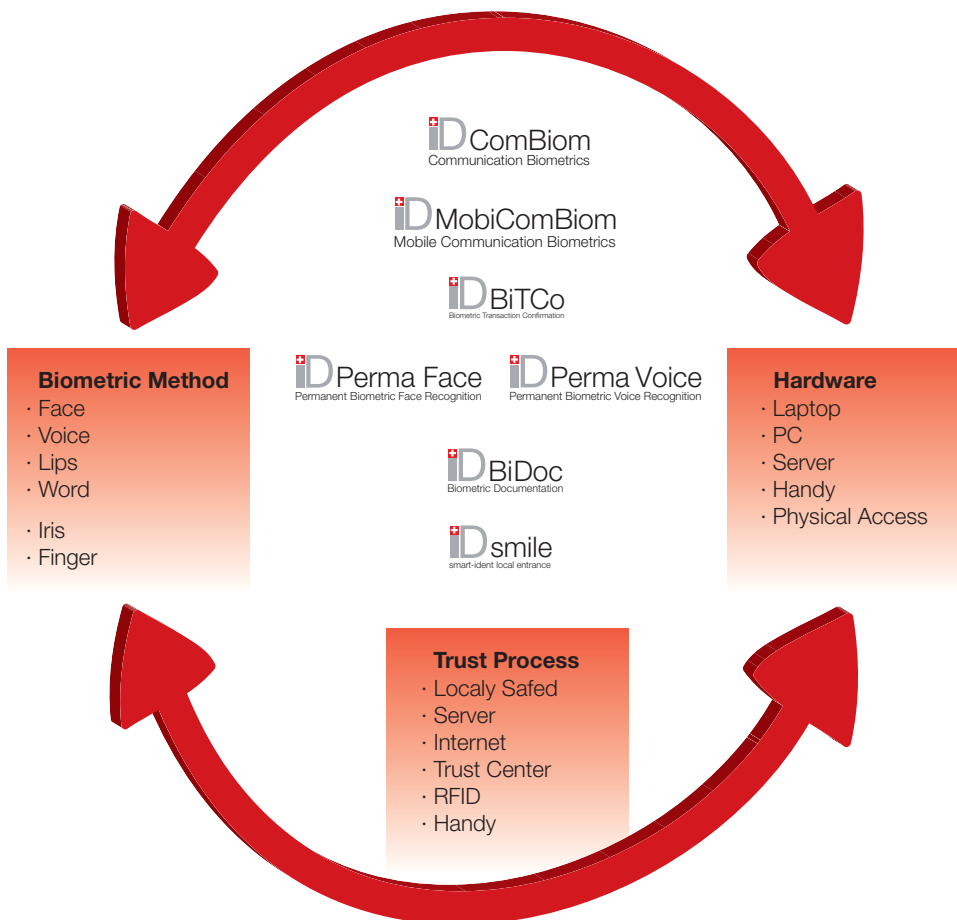
Mobile technology is developing very fast and is producing jacks-of-

all-trades that support us in daily life and constantly accompany us. But the many new application opportunities that these devices bring with them also hold great security risks. Who can guarantee that the user of a handheld is actually authorized to use the mobile services? To solve this security problem, BIOMETRY.com AG has developed the product **MobiComBiom** (Mobile Communication Biometrics). This brings ComBiom to the cell phone and with it guarantees unique user authentication. With it, the highest security is made possible for mobile payment, mobile banking, and all other mobile applications.



All-in-one software

ComBiom is all-in-one software. In other words, the user can always select whether he wants to use **ComBiom** as a complete package or whether he only wants to use individual components. The advantage is that the omission or addition of individual biometrics, customized to individual security requirements, can be undertaken at any time.



BIOMETRY.com AG in brief

Biometry.com AG is a high-tech security company headquartered in Switzerland that secure and easily usable biometric authentications. A multi-modal product as well as the individual application of certain modes result in a all-in-one software. This enables the most varied applications to protect the personal identity of people and their property. The algorithms used are the worldwide known **BIODID***, which ensure highest Security and Comfort.

BIOMETRIC AUTHENTICATION FOR A SECURE WORLD!

BIOMETRY

SWISS IDENTITY SECURITY SYSTEMS

Other products from Biometry.com AG:

iDComBiom
Communication Biometrics

iDMobiComBiom
Mobile Communication Biometrics

iDBITCo
Biometric Transaction Confirmation

iDPerma Face
Permanent Biometric Face Recognition

iDPerma Voice
Permanent Biometric Voice Recognition

iDBiDoc
Biometric Documentation

iDsmile
smart-ident local entrance

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