



The best way to predict the future is to **invent it.**

ENABLING TECHNOLOGIES

SHAPING THE FUTURE IN AUTHENTICATION

CIDWAY SECURITY SA PROPRIETARY

www.cidway.com



INTRODUCTION

Specializing in the fast growing market of IT security CIDWAY SECURITY S.A is headquartered in Lausanne, Switzerland.

CIDWAY offers a unique and distinctive portfolio of integrated security solutions including authentication products and enabling technology modules for:

- Remote banking
- Payment solutions
- Homeland security
- Advanced mobile security solutions

CIDWAY has patented technologies in the following areas:

- strong authentication
- digital signatures
- transaction data certification
- data protection
- acoustic data transmission
- time-based algorithms
- biometric technologies

These technologies open the window to an unprecedented scope of solutions that will shape the future of successful applications in the fields of access control, transactions and payments.

CIDWAY has been able to provide customized OEM solutions due to versatile software design, strong R&D and a huge library of technology building blocks that even accommodate the challenges presented by mobile devices. This has meant the ability to rapidly react to requests, lower development costs and flexibility - providing our customers with a **proven ROI solution and lower total cost of ownership.**

Examples of the many exciting innovative OEM applications of CIDWAY's technology include:

- Homeland Security's defense & border control authentication
- Banking security
- ATM fraud protection
- eWallet services

CIDWAY'S ENABLING TECHNOLOGY

The following enabling technologies are used in the company's off-the-shelf authentication products, custom applications and licensed IP offering - based on its extensive portfolio of patents and patents pending which include crucial technologies for **authentication, digital signature, biometry and mobile payment**:

PIN & Data Protection

Ability to protect secret data in mobiles or PDA

OTP

Ability to produce a highly secure time-based One Time Password (OTP) on hardware tokens or mobiles tokens (application)

Digital Signatures

Ability to generate time stamped digital signature, with Elliptic Curve algorithm, using only downloadable software on mobile, without any need to replace the SIM card or any other hardware part.

Time Management

Ability to time stamp OTP and digital signature in a very accurate manner and to allow an off-line (retroactive) verification of the OTP or of the digital signature. This allows for example, the corroboration of hand written signature on fax order or cheque.

Automatic Time Synchronization

Ability to fix in a transparent way for the user and for the server the time drift between the token and the server, even if the token is a mobile's application

Transaction's Data Certification

Ability to embed in the OTP as a challenge transaction's data

Two Way Authentication

Ability to manage one OTP for user authentication and one other OTP for Web server or call center authentication. The two OTPs are time-based and related together.

Private Identification

Ability to generate a dynamic string allowing the receiving part to identify the sender. This technology protects the user's privacy.

Acoustic Transmission

Ability to transmit data acoustically over a phone call, a PC microphone or any other equipment able to manage sound such as a POS equipped with a microphone.

System Differentiation

Ability to ensure that every system installed by CIDWAY cannot be polluted by data coming from another system, even with internal complicity

Mobile token's Registration and Activation

Ability to ensure a convenient and secure registration procedure for mobile's tokens

Secure Biometry Implementation

Ability to manage biometric technology with minimal risk of ID theft and without complicated networking components

INDUSTRIES

The following list exemplifies the versatility of CIDWAY's enabling technology to address many market solutions. Additionally, each market may have several end-user options from hardware tokens offered in several form factors to the "multi-service" mobile phone.

Market x Solutions		Top Security Access Control	Digital Signatures
Homeland Security	Guard exchange	X	X
	Biometric passport control		X
	Vehicles verification	X	
Governmental	Mobile Voting		X
	E-Government services	X	
Corporate	Secure remote access	X	
Banking	Client access control	X	
	E-mail corroboration	X	
	Fax corroboration	X	
	Phone/IVR access control	X	X
	ATM Wallet (MobiCash)	X	
	Secure ATM money withdrawal	X	
	Mail source verification	X	
Mobile	Transaction verification	X	X
	VISA Online Identification Initiative	X	
	On the spot transactions	X	X
	Loyalty programs	X	
	Online transactions	X	X