

# Global eID Developments

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# Agenda

- Country View on eID initiatives
- Trustworthy Identity Scenarios
- Microsoft eID update
- Summary

# The Belgium eID Card

**BELGIË**    **BELGIQUE**    **BELGIEN**    **BELGIUM**  
IDENTITEITSKAART    CARTE D'IDENTITE    PERSONALAUSWEIS    IDENTITY CARD

**Naam / Name**    **Dupont**  
**Voornamen / Given names**    **Marie Christine**

  **Geboorteplaats en -datum / Place and date of birth**    **Geslacht / Sex**  
**Kortrijk 29 OKT 1978**    **V**

**Nationaliteit / Nationality**    **Belg**     

**Kaartnr. / Card No**  
**999-0013296-27**

**Geldig van - tot / Valid from - until**  
**12.06.2003 - 12.06.2008**

**Handtekening van de houder / Holder's signature**    

N° d'identification du Registre national / Identification number of the National Register  
**55.10.28-000.00**

Lieu de délivrance / Place of issue  
**ZETES**

Autorité / Authority



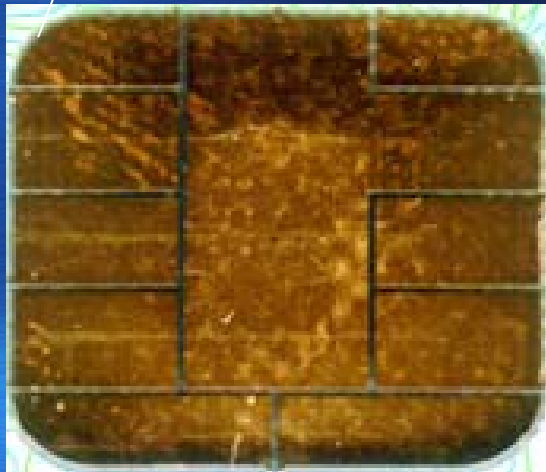
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**GATES<<WILLIAM<BILL<H<<<<<<<<<<**

55.10.28-000.00 ZETES 02.04  
0002 02 02 00





# eID: the main e-functionalities



data capture

authentication

digital signature

# Country View

- **Rollout:** Austria, Bahrain, Belgium, Brunei, China/HongKong/Macao, Denmark (SW), Estonia, Finland, Italy, Japan, Malaysia, Singapore, Spain, Sweden, Thailand,
- **Plans and Pilots:** Czech Republic, France (advanced on Health Cards), Germany (like France), Greece, Gulf States, Israel, Netherlands, Portugal, Slovakia, Slovenia, South Africa, UK
- => Near Future: 100 millions of citizens worldwide will have government issued Smart Cards

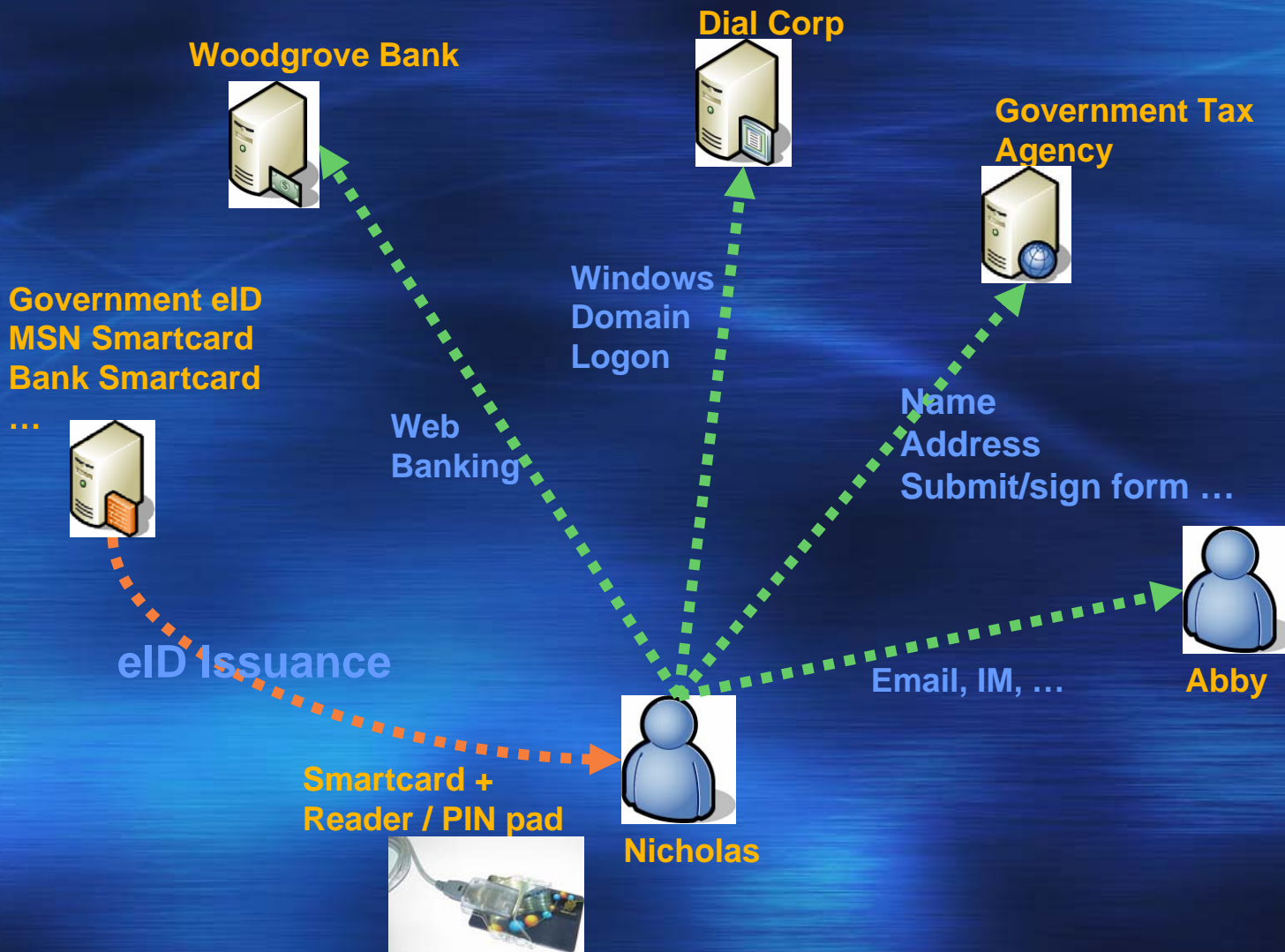
# The Big Picture of eID Cards

- Electronic ID cards are becoming more commonplace in advancing economy and security sensitive world
  - Most governments around the world are planning or will be issuing smartcards to citizens in next 3-5 years
- Most countries want to stimulate the eEconomy
  - However, it is difficult for governments to drive commercial application usage of smartcards
  - Most governments do not want to be in the software business
- Health Cards are driven by cost savings
  - Privacy, security and efficiency demands
- In several countries Legal framework for electronic signatures is in place
  - (in the EU: eSignature, eInvoice, eProcurements Directives)
- eID is a natural solution component to common problems such as phishing, online identity verification, etc.

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# Trustworthy Identity Scenarios



# Consumer eID Scenario

- Abby installs Windows Vista at home
- Abby wants to leverage her **eID** for strong authentication to MSN online services
  - Abby links her **eID** with her MSN account
  - MSN directs Abby to Windows Update to download the latest eID software to enable her machine for smartcards
  - MSN applications (i.e. Messenger) have a visual indicator (i.e. Buddy List gleams) that Abby is signed in using strong authentication
- Abby decides to do online banking with a financial institution which requires strong authentication
  - Abby links her **eID** to her online bank account
  - The financial institution no longer accepts a username and password to logon
  - Abby is able to select her **eID** from the credential selection UI in Internet Explorer when accessing her bank

# Preview – “InfoCard”

The screenshot shows a window titled "Digital Identity" with a back arrow icon on the left and window control icons on the right. The main content area is titled "Choose an identity for use at" followed by a hot air balloon icon and the text "Hot Air Travel".

Below this, there are three identity card options:

- My browsing card**: A green card with a photo of a family. It lists "Sensitive", "Financial", "Identifying", and "Basic" information. To its right, text states: "This card has been most recently submitted to the following services:" followed by logos for amazon.com, BEST BUY, ebay, and Apple. Below these logos is a link: [What information will be sent?](#)
- All about me**: An orange card with a photo of a woman. It lists "Sensitive", "Financial", "Identifying", and "Basic" information.
- Deepest secrets**: A blue card with a photo of a pig. It lists "Sensitive", "Financial", "Identifying", and "Basic" information.
- Secret Identity**: A yellow card with a photo of a man. It lists "Sensitive", "Financial", "Identifying", and "Basic" information.

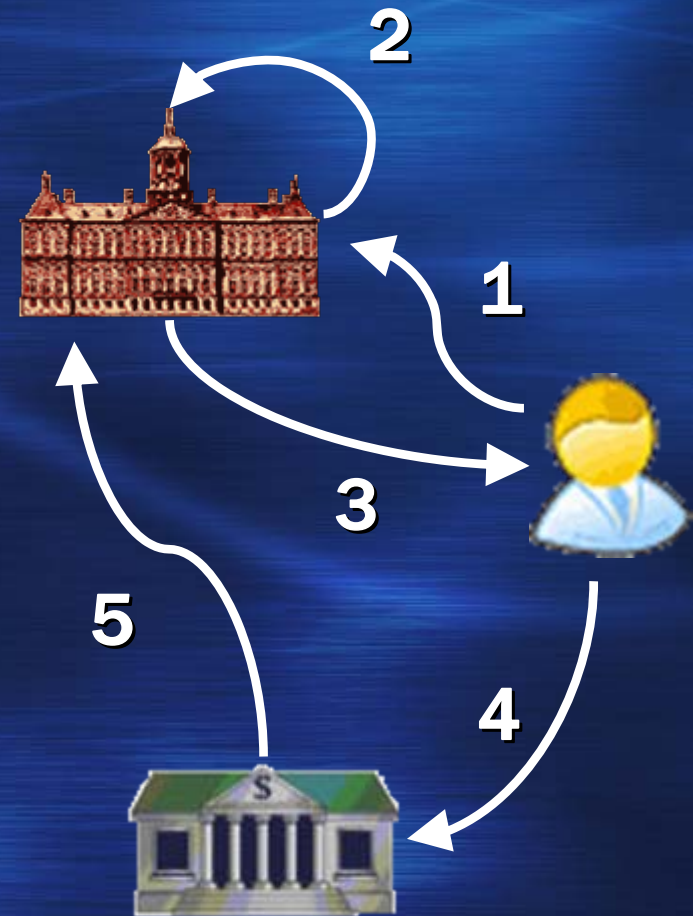
At the bottom of the window, there are two buttons: "Submit Card" (highlighted in blue) and "Cancel".

# Business User eID Scenario

- Nicholas installs Windows Vista at work
  - Windows requires Nicholas to configure his Windows User Profile to log into his corporate domain
  - Ichiro (corporate IT admin) configures Nicholas's user account to use his **eID** for smartcard logon
  - Nicholas is able to logon to his Active Directory account and access corporate services using his **eID**
- Nicholas goes home in the evening and files his annual tax report
  - Nicholas logs on to government web site using **eID**
  - Government site also supports transaction signing natively

# Document request from a Municipality (Belgian Example)

- All features implemented
  - Authentication / Authorization
  - Data capture
  - Electronic signature
- Scenario: request marriage certificate to obtain a loan
  - On-line request using eID to authenticate
  - Approval and signing of document by civil servant
  - Download signed document
  - Present document to the bank
  - On-line verification



# Submission of legal documents (Belgian Example)

- Submission of documents to the Record Office (Griffie)
  - Embrace and extend the existing work process
  - Integrate with existing lawyer software, eID, MS Office
  - Operate within the legal framework and guidelines of the Belgian Law
  - Support industry standards: XML, XML signatures, web services, ...
- Technical implementation based on Microsoft Infopath 2003 and XML Web Services
- Infopath has out-of-the-box support for XML Signatures

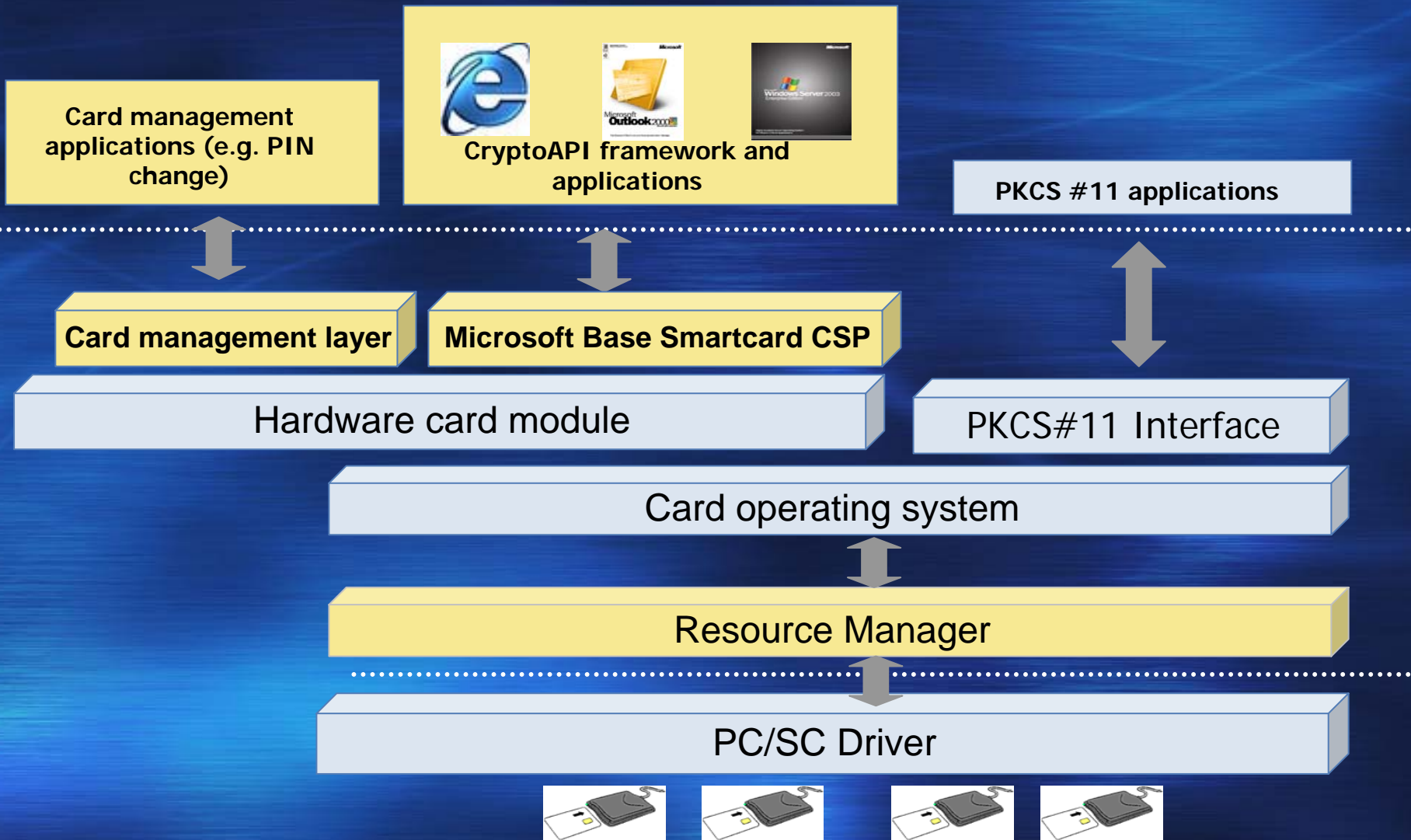
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# Windows Smart Card Infrastructure

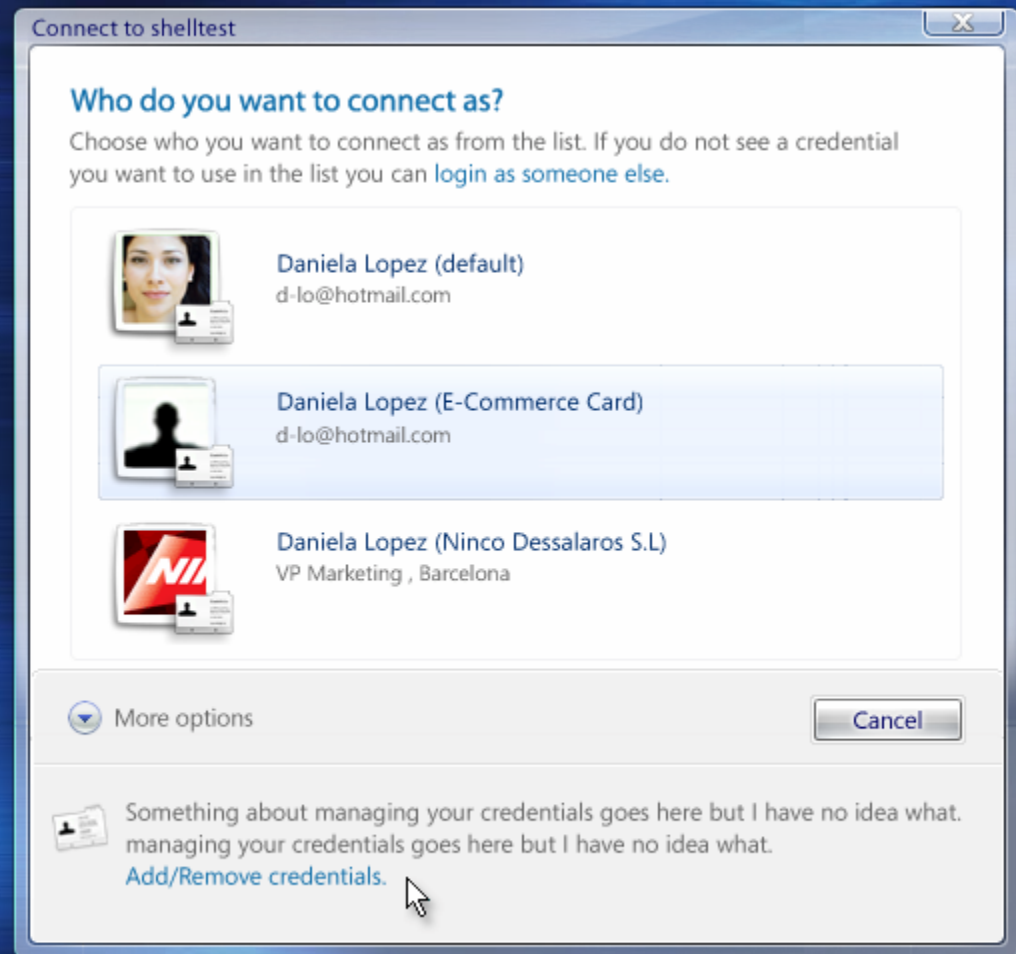
- Provide a uniform interface for cryptographic, provisioning, management and data storage across all smartcard operating systems and vendors
- Out of box smartcard management tools
- Simplify development of Smart Card “drivers”
  - New Smart Card “base CSP”
  - New “Card Module” standard
- Consistent performance, reliability, user experience and security model across vendors

# eID Windows Architecture



# Improving the User Experience

- Unified Logon UI and credential selection UI
- User may select from multiple credentials on smartcard



# Additional Vista Investments

- OCSP client and server support in Vista platform
- General revocation checking optimizations
  - CRL/DeltaCRL/Response pre-fetching
  - Support caller supplied revocation information
    - Support TLS Extensions (Stapling) - RFC 3546
    - Support HTTP 1.1 proxies
- Full support for smartcards with Encrypting File System

# CryptoAPI

- Crypto agility
  - Provide the ability for customers to use their own algorithms or implementations of standard crypto algorithms
- Provide a more developer friendly plug-in model
  - Use the same API for both kernel and user mode
- Key isolation
  - Store and use long lived keys in a secure process in order to comply with Common Criteria requirements
- Support pluggable crypto in the kernel
  - Use the same API in both kernel and user mode in order to fully support the crypto agnostic feature
- Provide support for the current set of algorithms in CAPI 1.0

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# Summary: Current eID issues

- Government issued eID cards solve the 'chicken and egg' problem of open PKI
- Contactless cards vs contact cards
- Biometric Security (and Privacy)
- Mandatory roll-out vs optional offer vs market driven approach
- Managing a national PKI a challenge: Costs, Reliability, Security, Privacy.
- Citizens will have more than one Smart Card (Health Cards, Credit/Debit Cards, eID cards, ... ): raising the question of multi-application cards
- Who is driving applications?

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