



## The US & European Perspectives on Digital Signature

“Giving confidence in the emerging electronic marketplace”

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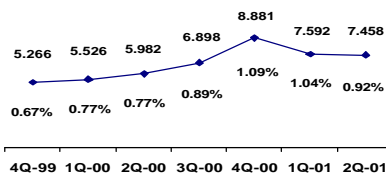
## Growth of E-Commerce

- E-Commerce : Small but vital segment of “B-to-C” transactions.
- E-commerce sales for 2000 in the US : \$25.8 billion (0.8% of total retail sales)
- A notable role in other sectors : Securities brokerage industry, on-line information services industry, travel services sector ...



## Growth of E-Commerce

Estimated Quarterly U.S. Retail E-commerce Sales  
(Billions of dollars and as a Percent of Total Sales - Source : Census Bureau)



## Giving Confidence in the e-Marketplace

- Consumers must have confidence in the integrity and credibility of this emerging electronic marketplace.
- A consistent national framework for electronic signatures and transactions is needed in order to :
  - Facilitate the use of electronic records and signatures by ensuring the validity of electronic contracts ;
  - Preserve the underlying consumer protection laws.



## The US Perspective

- June 2000 – Congress enacted the Electronic Signatures in Global and National Commerce Act (“ESIGN” Act) :
  - Contracts entered into electronically have legal effects ;
  - Businesses must obtain from consumers electronic consent to receive information electronically that a law requires to be in writing.
- October 1998 – Congress enacted the Government Paperwork Elimination Act (GPEA) :
  - By 01/31/2003, federal agencies have to provide the public with the option of submitting, maintaining and disclosing required information electronically, instead of paper.



## Case Study

- Electronic Federal Tax Payment System (EFTPS) : <http://www.eftps.gov/>
  - Individual and business taxpayers can make their federal tax payments electronically ;
  - Current statistics :
    - Enrollments (as of May 12, 2001) : 3,454,923 ;
    - Number of payments since 1996 : 197 million ;
    - Dollars transmitted electronically : \$5 trillion.
- Internal Revenue Service (IRS) e-file : [http://www.irs.gov/elec\\_svs/index.html](http://www.irs.gov/elec_svs/index.html)
  - Provide a more convenient method of filing taxes for taxpayers.



## The EU Approach

- June 2000 - Directive 2000/31/EC on electronic commerce :
  - " Member States shall ensure that their legal system allows contracts to be concluded by electronic means. Member States shall in particular ensure that the legal requirements applicable to the contractual process neither create obstacles for the use of electronic contracts nor result in such contracts being deprived of legal effectiveness and validity on account of their having been made by electronic means."
- In France – The "Information Society Act" has been sent to Congress :
  - Contracts entered into electronically have legal effects ;
  - "Double-Click" is needed : Request & Confirmation.



## A Case Study

- Electronic Value Added Tax (VAT) in France :
  - [http://www.minefi.gouv.fr/minefi/entreprise/teleprocedure\\_TVA/index.htm](http://www.minefi.gouv.fr/minefi/entreprise/teleprocedure_TVA/index.htm)
  - Mandatory for companies with sales over FF100 million per year ;
  - Filling and paying electronically at the same time ;
  - Based on a Public Key Infrastructure (PKI).



## Conclusion

- Digital signature : a positive impact on the continued growth of e-commerce and consumer confidence.
- Challenges for a full PKI implementation :
  - Interoperability, affordability, policies and procedures, training, ...



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