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electronic payment systems

1

THE E-BUSINESS ENABLER (Oct 2010 UPDATE)

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online since 1995

2

- http://blogs.orange-business.com/live [En]
- http://visionarymarketing.com/ [En]
- http://visionary.wordpress.com [Fr]
- http://blogs.orange-business.com/securite [Fr]

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mbaesg miniwebsite

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- http://visionarymarketing.com/mbaesg
  - available for one month
  - documents on school portal

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electronic payments overview

4

- introduction
  - lessons learnt from the early days of Internet-Banking
- electronic payments
  - e-payment systems usage
  - e-payment systems
  - e-payment security issues
- conclusion

2010 update with input from Atos, Orange Business Services, Jdnet, ECB and Banque de France

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October 2010 update

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- international e-payment systems/stats
- entire new section on mobile payment
- social e-payment
- status review on 3D Secure implementation
- recap on the state of fraud on the Internet

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introduction

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LESSONS LEARNT FROM THE EARLY DAYS OF INTERNET-BANKING

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back then, the obvious (apparent) solution was … the vault

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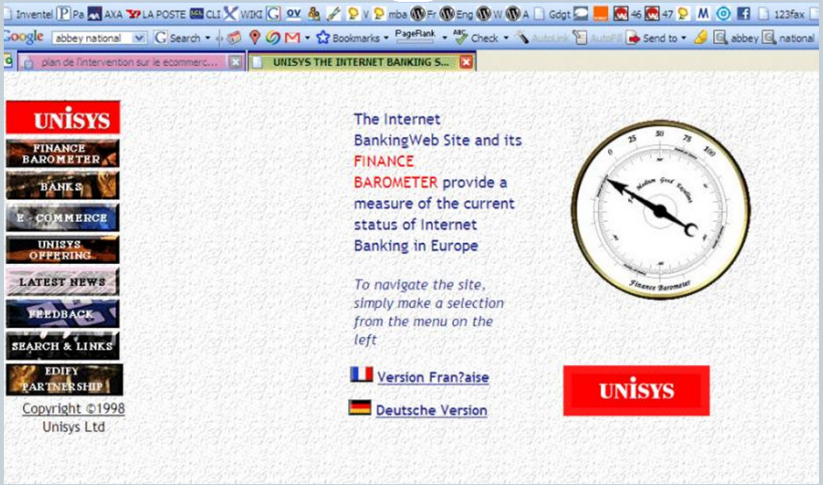
the Internet Banking barometer (UK – 96)

8



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now, Internet Banking is pervasive

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but has security improved since 1996?

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or worsened?

Firefox Issues Version 2.0.07, Fixes QuickTimes Flaw

by Max Brenn

00:49, September 20th 2007

THE CANADIAN PRESS

Internet threats shift toward financial gain, says security report

4 days ago

CALGARY (CP) — Internet hackers have fundamentally shifted away from nuisance and

INTERNATIONAL Herald Tribune

(Nicolae Asciu)

Credit card fraud keeps growing on the Net

By Jennifer Conlin Published: May 11, 2007

To understand the world of credit card fraud, you must first learn an entirely new language. Words like "skimming," "shoulder surfing" and "phishing" may sound less criminal than "stealing," but they are, in fact, ways in which money can be stolen off your credit card.

E-Mail Article
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Printer-Friendly
3-Column Format
Translate

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what have we learnt?

11

- strategy above technicality
- security is not an enabler
- but security issue never so acute
- barring a few exceptions borders have *not* disappeared
- Internet banking: the end of pure players

- what lessons for e-payments?

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electronic payments

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A BUSINESS PERSPECTIVE

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1. E-PAYMENT SYSTEMS USAGE

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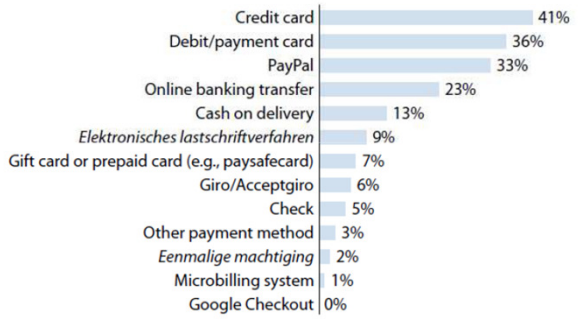
debit + credit cards = 77% of European epayments

14

Seventy-seven percent of online buyers used a credit/debit card to pay for online goods in the past three months

"Which have you used in the past three months to pay for products you bought online?"



Base: 10,659 European online buyers (multiple responses accepted)

Source: Forrester, European Technographics Media, Customer experience and Travel Online Survey, Q3 2008

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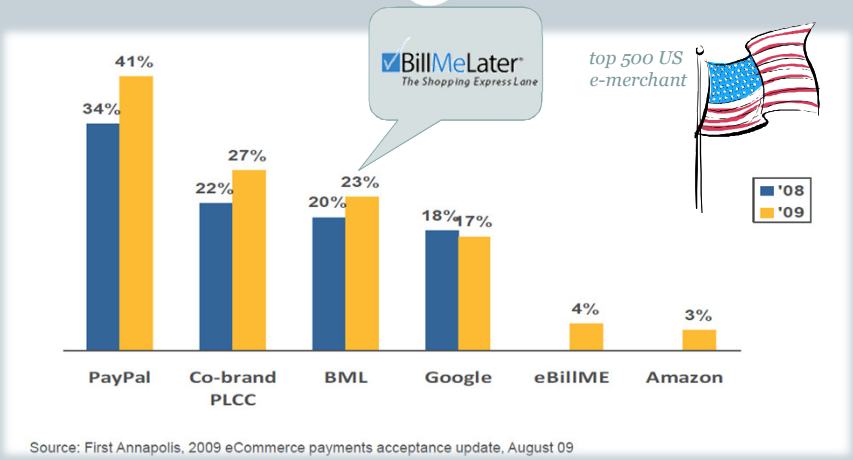
alternative payments developing fast

15



Source: First Annapolis, 2009 eCommerce payments acceptance update, August 09

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european discrepancies (2006 status)

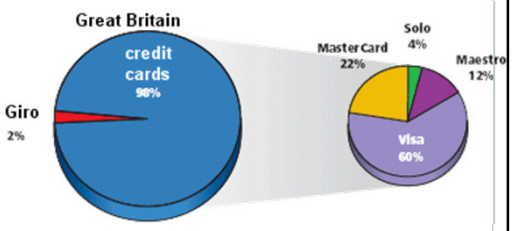
who has purchased online at least once

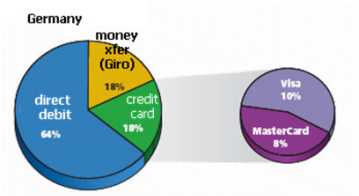
16

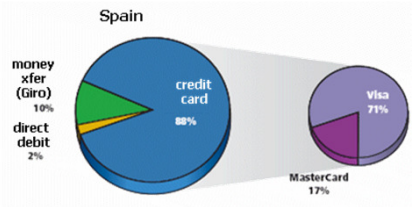
source: ebusiness.info

	Q2 2002	Q2 2003	Q2 2004	Q2 2005
Sweden	40%	48%	56%	64%
Netherlands	31%	40%	42%	45%
UK	54%	62%	66%	71%
Germany	48%	55%	58%	59%
Italy	14%	17%	18%	25%
France	27%	33%	39%	54%
Spain	15%	16%	16%	19%
Europe	37%	42%	46%	51%

Source : Forrester Research







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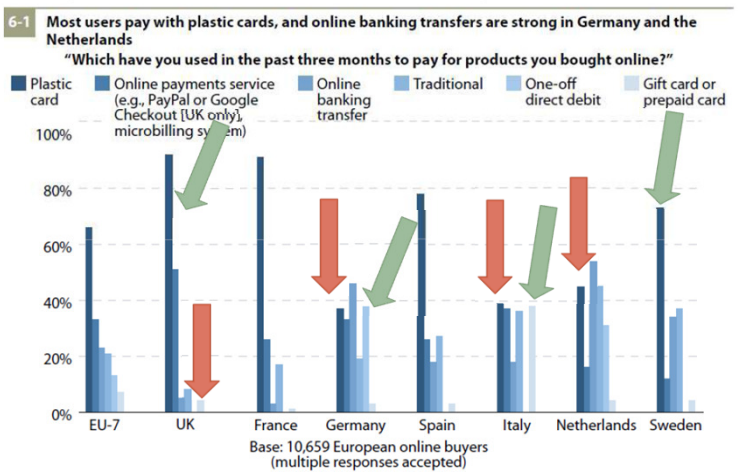
european discrepancies (Q3 2008)

17



Source: Forrester, European Technographics Media, Customer experience and Travel Online Survey, Q3 2008

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Girokonto Beleg (Girokonto transfer slip)

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a French love affair with cheques

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- 19% of French payments still done with cheques (2010)
- 50% of French users use plastic (vs. 37% in 2007) (*)

[excerpt] 2009 report – published 13 Sept 2010 by ECB

Table 1: Relative importance of the main payment instruments in the EU (2009)
(percentages of total number of transactions)

	Credit transfers		Direct debits		Cards		Cheques	
	2009	Change from 2008 (pp)	2009	Change from 2008 (pp)	2009	Change from 2008 (pp)	2009	Change from 2008 (pp)
Germany	34.69	-0.59	50.26	0.49	14.45	0.20	0.34	-0.07
Spain	14.55	0.06	43.74	0.87	38.81	-0.15	2.04	-0.49
France	21.08	4.11	18.90	-0.12	40.08	-1.[illegible]	19.12	-2.82
Italy	30.44	2.59	14.55	0.00	37.18	0.60	[illegible]	-1.62
Netherlands	29.86	-1.27	25.37	-0.40	41.24	1.84	.	.
Sweden	31.89	-1.15	8.47	-0.03	59.61	1.18	0.04	-0.14
United Kingdom	20.61	-0.27	19.82	-0.34	51.51	1.74	8.07	-0.14

Source: ECB.
Notes: Percentages may not add up to 100% as e-money transactions and other payment instruments are not shown. A dash (-) indicates data are not available while a dot (.) indicates data are not applicable. The term pp refers to percentage points.

(*) source : Orange Business Services – 2010

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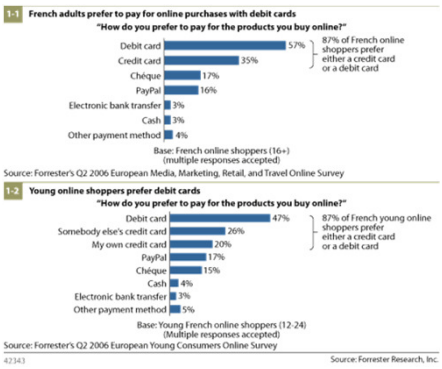
a French survey (Forrester, 2007)

20

- Forrester's conclusions
  - credit card + debit-cards mostly
  - little awareness of existing alternative payments
  - the French like their cheques
  - Paypal only available/known alternative
- a few open questions
  - security only a French issue?
  - paypal =? ebay?
  - what of virtual credit cards?
  - what about internet+?



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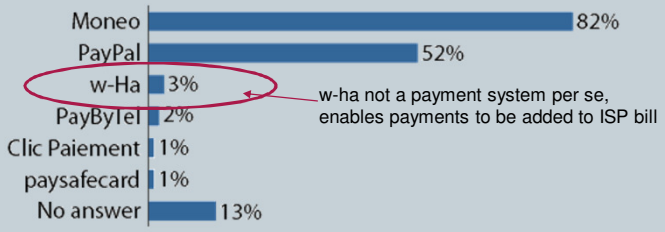
May 2007, Trends **"French Net Shoppers Need Alternative Payments"**

low awareness of alternative payments in France

21

Half of French Net users have heard of PayPal

"Which of the following new payment schemes, if any, have you heard of?"



Base: French Net users
(multiple responses accepted)

Source: Forrester's Q4 2006 European Financial Services Online Survey

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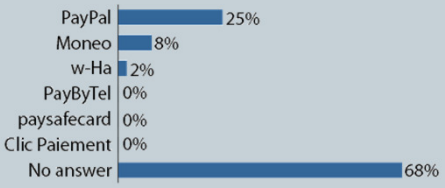
low awareness of alternative payment methods in France (cont.)

22

Only PayPal is widely used by French Net users

"Which of the following new payment schemes, if any, have you used in the past year?"



Base: French Net users
(multiple responses accepted)

Source: Forrester's Q4 2006 European Financial Services Online Survey

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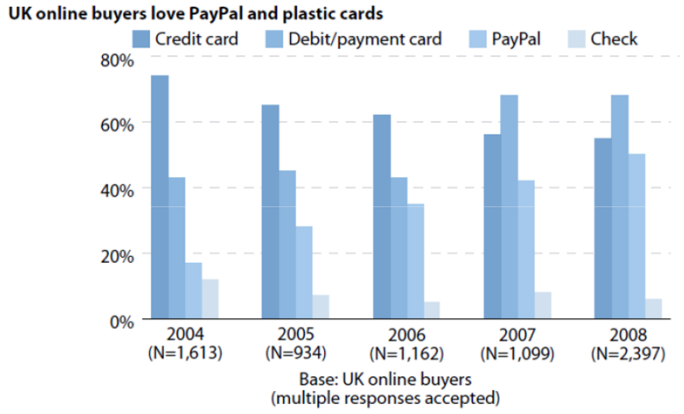
UK status (Q3 2008)

23



Source: Forrester, European Technographics Media, Customer experience and Travel Online Survey, Q3 2008

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focus on Italy & Spain

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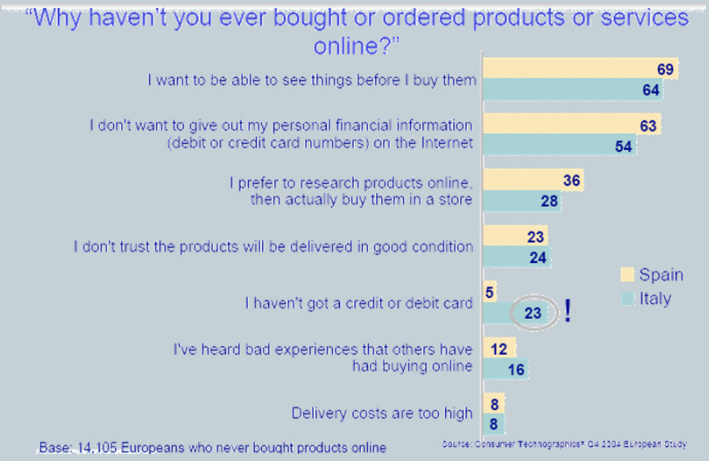

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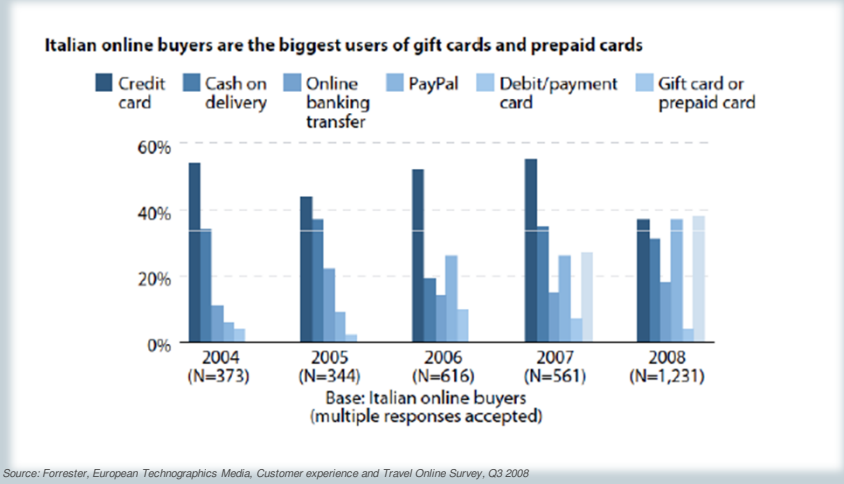
Italians biggest users of gift/prepaid cards

25



Source: Forrester, European Technographics Media, Customer experience and Travel Online Survey, Q3 2008

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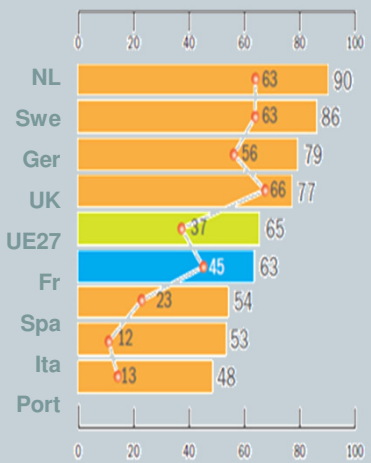
e-commerce/e-payment correlation?

26



- Spain, Italy & Portugal still lagging

source: Fevad, 2009 (bars = households – dots = individuals)

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still not convinced?

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overview of (most) available payments
in the world courtesy of
moneybookers

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Moneybookers : Widest support of local payment options

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SEPA may help level out European differences

29

direct debit around Europe

- German ***Giro*** not for all banks
- Poland's ***Przelewy24*** (http://www.przelewy24.pl/)
- ***Ideal*** in NL offers direct Xfer for all banks but only 4
- Austrian company offers ***Sofort überweisung*** offers complex overlay keylogging system

SEPA (Single European Payment Area):

- promotes direct debit as standard payment mode
- now available at some banks

SEPA's 32 members

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what have we learnt?

30

- Credit cards important barring a few exceptions (Germany, Spain, Austria, Belgium, etc.)
- Europe/world very diverse
- Italy: credit vs prepaid cards
- UK: exotic systems but few being used
- SEPA to generalise direct debit?

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electronic payments overview

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2. E-PAYMENTS SYSTEMS

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how a (2D) online credit transaction works

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source: addison wesley 2004

2010 : EV SSL (green)

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evolution of credit card online transactions in France

33

- Atos SIPS is leader in France (50% market share)
  - 2,500,000 transactions per month online in 2005 (30m p.a.)
  - 6,000,000 including mail-order and telesales payment processing service .
- outsourced solution
- accepts foreign currencies
- new methods of payment (cheques, vouchers, prepaid cards, etc.)

evolution of online transactons in 2006	in France		
	2005	2006	growth
number of credit card payments	60,987,954	86,482,186	42%
overall value in bn €	5.35	7.6	42%
average purchase value in €	87.72	87.98	0.3%
	Source : Journal du Net, 2007		

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evolution of credit card online transactions in France

34

- Atos SIPS is leader in France (50% market share)
  - 2,500,000 transactions per month online in 2005 (30m p.a.)

2009: 330,000,000 transactions in Europe, i.e. 20% CAGR, growth strongest in UK, NL, Sp and Ger

As of 2010, 23000 e-commerce websites are SIPS-enabled

Source: cfo news http://bit.ly/sips2010

average purchase value in €	87.72	87.98	0.3%
	Source : Journal du Net, 2007		

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turnkey solutions for e-commerce and e-payment

35

backup

- French e-commerce turn-key solutions comparison chart
  - http://somyblog.free.fr/benchmark/boutique/boutique-e-commerce-ASP.html

•compare e-commerce solutions side/side [En]
•9 e-commerce solutions by JDNet [Fr]

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e.g. powerboutique e-payment partners

= resellers of ATOS SIPS

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P@iement CIC
e-transactions CRÉDIT AGRICOLE
Cyberplus
Elys Net HSBC
SOGENACTIF SOCIETE GENERALE
CyberMUT Crédit Mutuel
SP PLUS CAISSE D'EPARGNE
Webaffaires Crédit du Nord
Sherlock's LCL
scellius LA BANQUE POSTALE
Citélis Crédit Mutuel
Mercanet BNP PARIBAS

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is virtual card payment working?

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- virtual credit card
  - an e-payment system in which a credit card issuer gives a special transaction number that can be used online in place of regular credit card numbers
- 2004 status:
  - 200,000 registered users in France
  - 157,000 new clients (110% growth)
  - 750,000 transactions (157% growth)
  - €62m revenue(154% growth)
- 2007 status
  - 500,000 active users in 2007
- 2009 update (source: Visa France)
  - 814,274 active users (10% CAGR)
  - 4,895,910 transactions (+ 25.7%)
  - €404.6 m revenue (+ 26,4%)
- Proportions ➔ different story
  - 250m-270m transactions for e-commerce by end of 2009 (ACSEL or FEVAD))
  - i.e. eCarteBleue approx. 2% of total e-commerce transactions

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orbiscom clients

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New!

- Irish company, created 1999, takeover by Mastercard in 2010

Orbiscom is now a subsidiary of MasterCard Worldwide

MasterCard Worldwide

orbiscom

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4 steps to online digital credit card payment

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direct online access in secure http mode : https://service.e-cartebleue.com/visapremiercl/

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micro-payment solutions

40

- e-micropayments
  - small payments < €10
- Many e-micropayment products:
  - BitPass (bitpass.com)
  - PayPal (paypal.com)
  - ...
- ISP solutions
  - w-ha
- prepaid cards (neosurf)

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Internet+/w-ha

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- history: ipin system became w-ha in 2000
- a subsidiary of the the FT Group
- viasolutions: 1st i-pin/w-ha client for micropayments (Wanadoo/Club-Internet)
  - why micropayments
- direct charge to ISP bill
  - ideal system for small value services online (content)

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The paypal example

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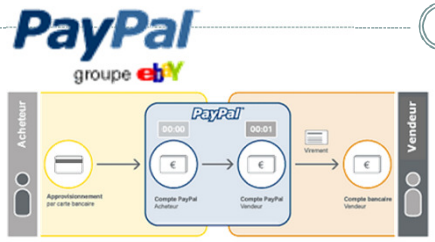
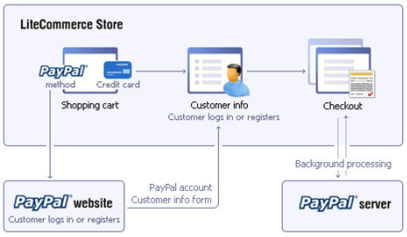


Customer can pay with credit card or paypal wallet

Payment processed in background



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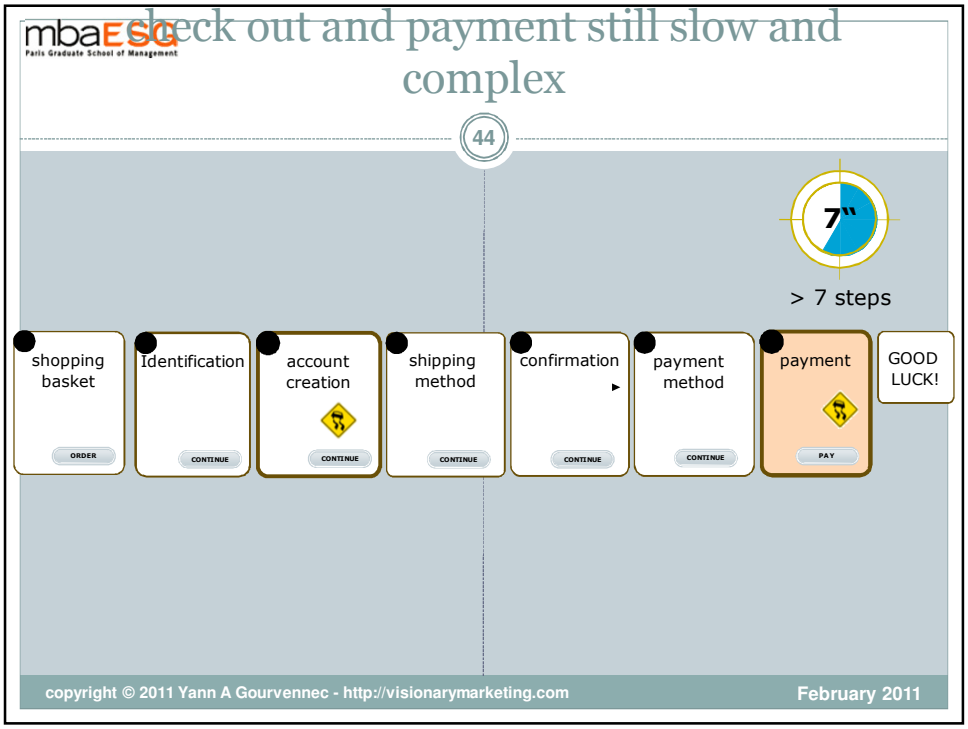
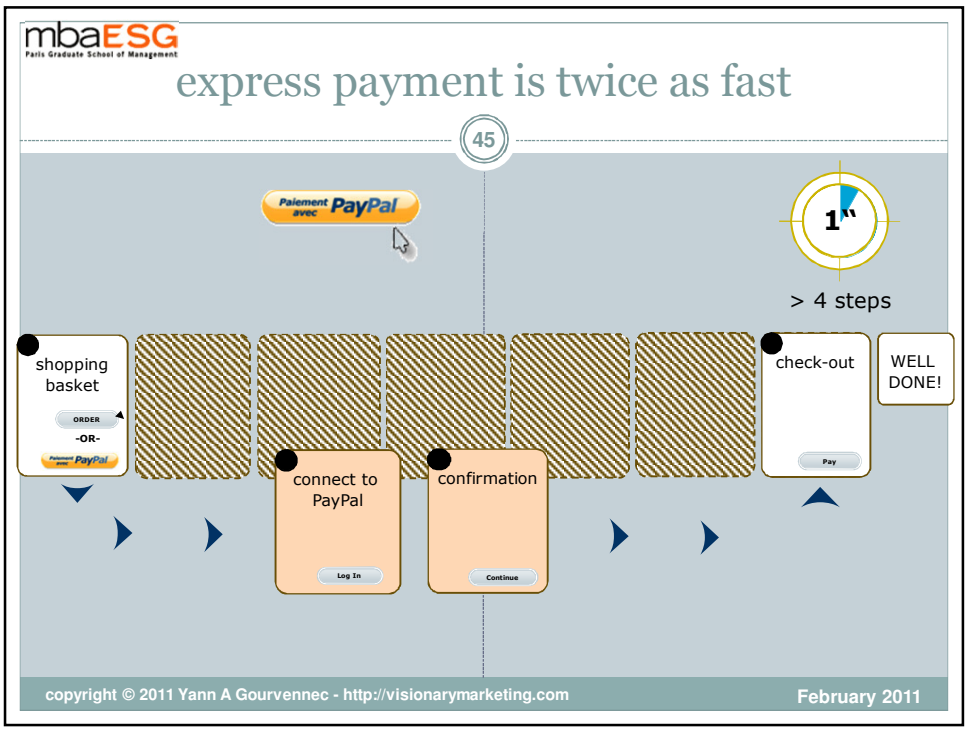
PayPal as an Additional Payment Option

PayPal Fast, Easy, Secure Online Payments

How Merchants Can Benefit
When They Accept PayPal on Their Site

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express payment is twice as fast
45
Paiement avec PayPal
1"
> 4 steps
shopping basket
ORDER
-OR-
connect to PayPal
Log In
confirmation
Continue
check-out
Pay
WELL DONE!
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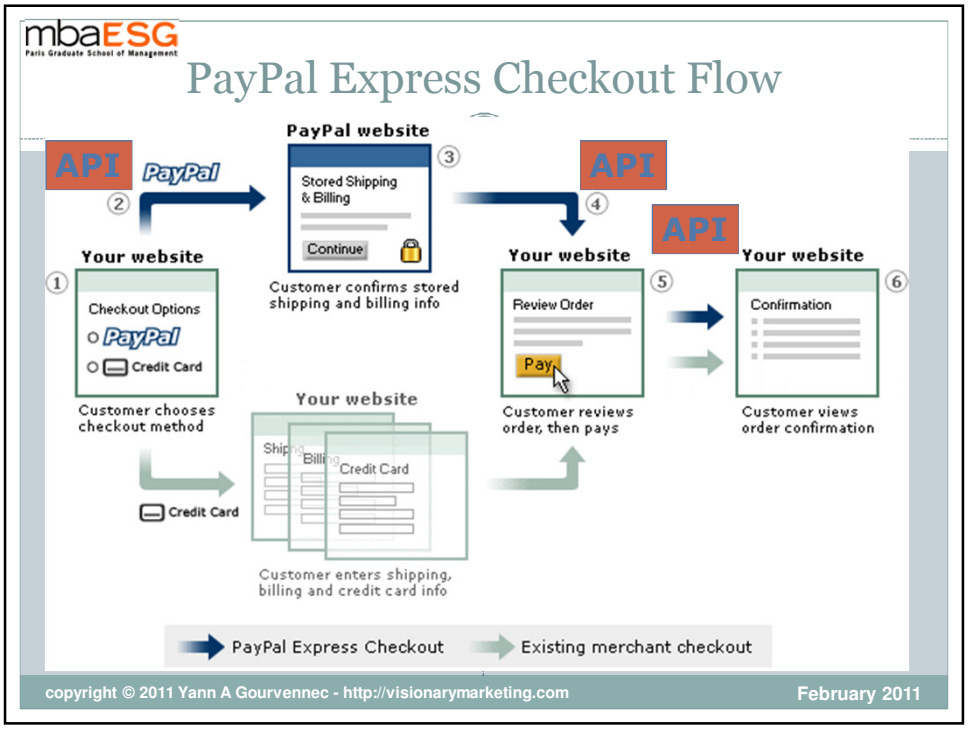
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PayPal Express Checkout Flow
API
PayPal
PayPal website
Stored Shipping & Billing
Continue
Customer confirms stored shipping and billing info
Your website
Checkout Options
PayPal
Credit Card
Customer chooses checkout method
Credit Card
Your website
Credit Card
Customer enters shipping, billing and credit card info
Your website
Review Order
Pay
Customer reviews order, then pays
Your website
Confirmation
Customer views order confirmation
PayPal Express Checkout
Existing merchant checkout
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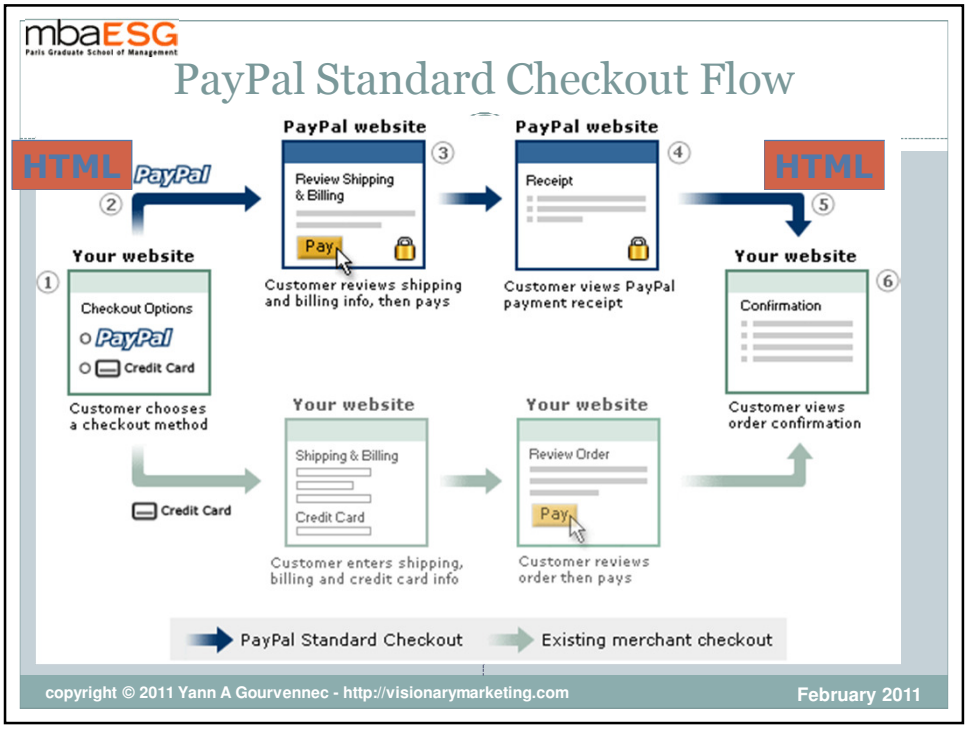
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PayPal Standard Checkout Flow
HTML
PayPal
PayPal website
Review Shipping & Billing
Pay
Customer reviews shipping and billing info, then pays
PayPal website
Receipt
Customer views PayPal payment receipt
HTML
Your website
Checkout Options
PayPal
Credit Card
Customer chooses a checkout method
Your website
Confirmation
Customer views order confirmation
Credit Card
Your website
Shipping & Billing
Credit Card
Customer enters shipping, billing and credit card info
Your website
Review Order
Pay
Customer reviews order then pays
PayPal Standard Checkout
Existing merchant checkout
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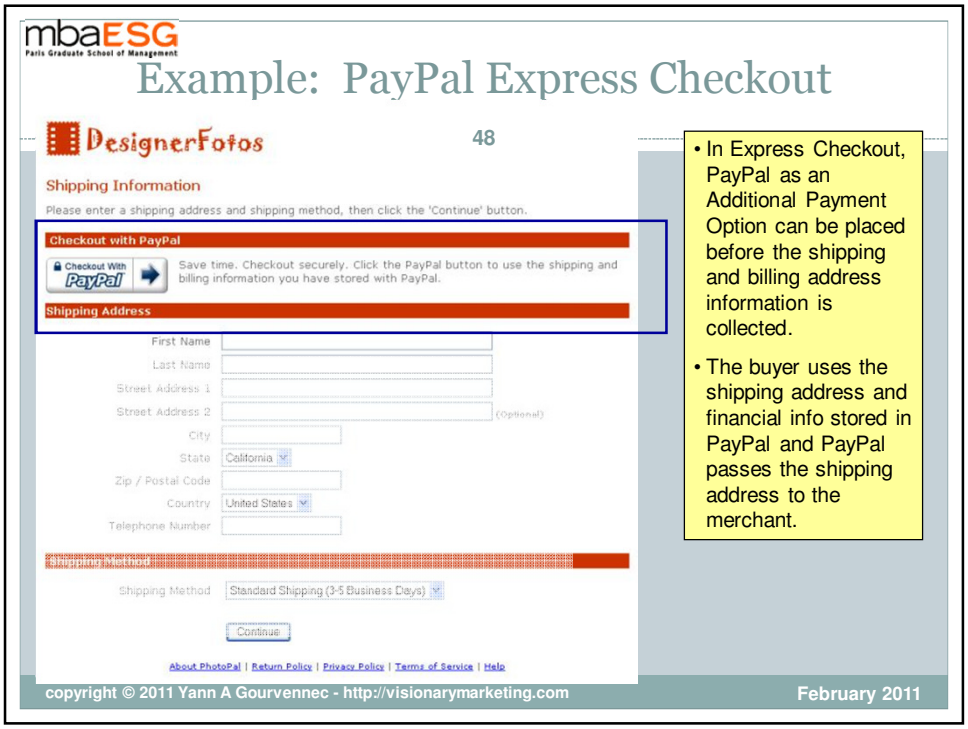
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Example: PayPal Express Checkout
DesignerFotos
48
Shipping Information
Please enter a shipping address and shipping method, then click the 'Continue' button.
Checkout with PayPal
Save time. Checkout securely. Click the PayPal button to use the shipping and billing information you have stored with PayPal.
Shipping Address
First Name
Last Name
Street Address 1
Street Address 2
City
State
California
Zip / Postal Code
Country
United States
Telephone Number
Shipping Method
Standard Shipping (3-5 Business Days)
Continue
• In Express Checkout, PayPal as an Additional Payment Option can be placed before the shipping and billing address information is collected.
• The buyer uses the shipping address and financial info stored in PayPal and PayPal passes the shipping address to the merchant.
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PayPal Express Checkout Flow

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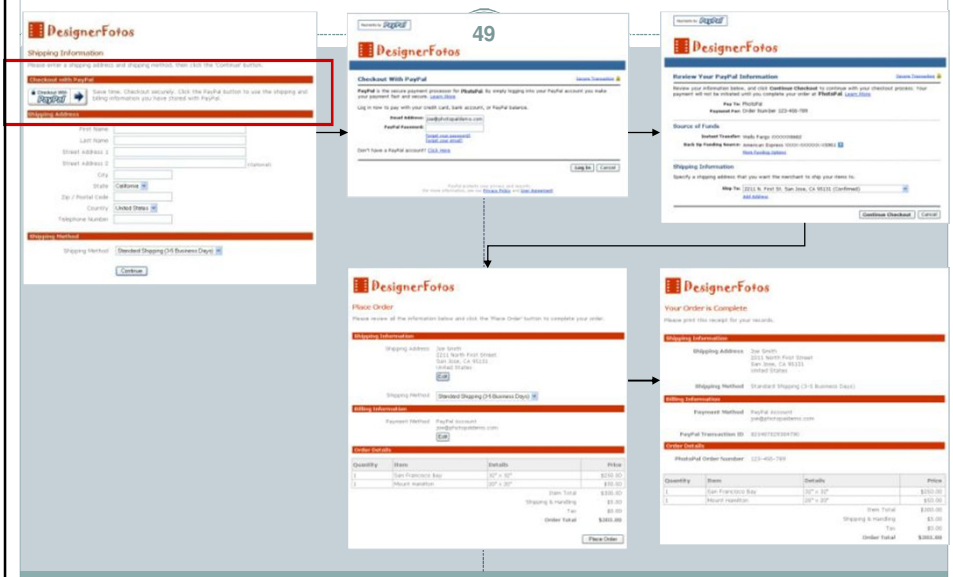

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different means of payment: why bother?

50

more means of payment

implies

= more revenue

e.g: adding AMEX to authorised credit cards
➔ +10% revenue *

*source: Atos

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m-payment status (2010 update)

51

- 3 types of e-payment
  - NFC : near field communication
    - Japan and rest of Asia ➔ ROW
  - money transfer via SMS
    - M-Pesa (Kenya)
    - Orange Money (Africa)
    - Africa ➔ parts of USA / low credit card equipment rate
  - on-mobile Internet payment
    - paypal X (2010) or other
    - smartphone apps APIs
    - USA ➔ Europe

Denis Vacher: in charge of new payment systems at Orange

a series of 4 interviews [Fr]

- http://bit.ly/dvacher1
- http://bit.ly/dvacher2
- http://bit.ly/dvacher3
- http://bit.ly/dvacher4

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m-payment status (2010)

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- 3 best practices
  - **Bump by PayPal**
  - **Instant loan via SMS (Sweden)**
  - **Starbucks' QR code**

Denis Vacher: in charge of new payment systems at Orange

- Status of m-payments in France
  - regulatory constraints
  - no common understanding
  - business model an issue
  - not a technical issue
  - quite a few successful tests
    - last one: Nice 2010

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http://wp.me/pmy5-Zg

last minute update 03/02/2011

Buyster.fr

➔ joint venture launched by mobile operators and Atos Origin in France

BUYSTER

Désormais, le mobile permet de payer sur Internet!
Une association inédite pour proposer le service de paiement adapté aux usages d'Internet d'aujourd'hui.

- vs. chicken and egg syndrome
- a complete ecosystem
- not competing with banks
- unique industry-wide alliance
- proper funding and central bank endorsement

Atos Origin · Bouygues · orange · SFR

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http://bit.ly/isiscnet

last minute update (cont.)

ISIS

➔ US initiative for mobile payment (POS only)

ISIS · T-Mobile · at&t · verizon

- US ISIS initiative (Nov 2010)
- AT&T, Verizon, T-Mobile
- Point of sale

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what's next: social payment

55

- **3 main periods**
  - social web to bypass marketing
  - brands → fake comments + infiltration (non ethical!)
  - consumers → social shopping
- Cardsoff launches shopperunion.com
  - sharing shopping experience with 'friends'
  - online shopping mall
  - tips and tricks
  - e-payment will be added later

- Ex1: **kaboodle.com**
  - facebook-like 2.0 shopping platform
- Ex2: **Woot**
  - Woot's tagline is "One Day, One Deal."
- Ex3 : **Thisnext.com**
  - product recommendations
- Ex4 : **Shopstyle**
  - blog-like recommendations
- Ex5 : **myITthings**
  - purely informative, blogging network (tips and tricks)
- Ex6 : **Iliketotallyloveit**
  - Preferred products and shopping experience
- Ex7 : **Macy's** on Facebook : 380.000 fan
  - contest on recommendations with up to $500 in prizes
- Ex8 : **Productwiki**
  - bloggers
- Ex9: Blippy
  - sharing your credit card purchases with friends

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Facebook credits (Sept 2010)

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source: NYT - http://www.nytimes.com/2010/09/23/technology/23facebook.html

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electronic payments overview

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3.E-PAYMENT SECURITY ISSUES

the ultimate security guide online by Orange Business Services

•http://blogs.orange-business.com/securite [Fr]

orange Business Services

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Online banking/ecommerce

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- **Online fraud status [Fr]**
  - Fraud not progressing in percentage but volume
  - all remote orders: 7% of fraud – 57% in volume
  - fraud volume increases by 20% every year
  - organic growth due to e-commerce boom (20% more online buyers every year)
  - 2 security measures
    - **PCI DSS**
    - **3D Secure**

Christophe Beauvais: :e-payment Marketing Manager

a series of 4 interviews [Fr]

- http://bit.ly/cbeauvais1
- http://bit.ly/cbeauvais2
- http://bit.ly/cbeauvais3
- http://bit.ly/cbeauvais5

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September 2006, Trends "Europe's 2006 Online Shopping Landscape"

security still high on the agenda ...

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"Why don't you buy products or services online?"

Base: EU-7 online consumers who don't shop online (multiple responses accepted)
Source: Forrester's European Consumer Technology Adoption Study Q2 2006 Survey

base: 13,668 EU non shoppers

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security issues

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user perspective

- who owns the server
- is merchant genuine company?
- are web page and forms safe
  - no malicious content
  - no harmful code
- privacy?
  - will merchant disclose/sell personal details?

merchant perspective

- is user genuine buyer or hacker?
- is user's payment system genuine?

transaction: 2 main issues

- can transaction be duplicated
  - online credit card theft
  - trojan horses > brute force
- can transaction be tampered with?
- if transaction is successful
  - is the user the rightful credit card owner?

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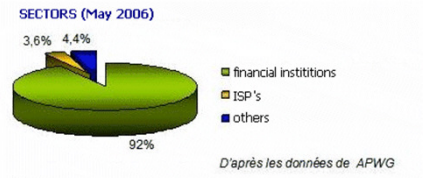
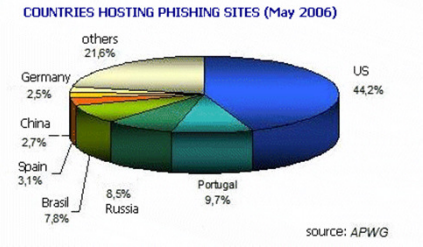
phishing by sector and by country (2006)

61

- financial institutions are main targets (92%)
- Now in Europe and elsewhere
  - 57% of banks impacted are outside US
  - Europe has become primary target
    - UK : 42%
    - Spain: 26%
    - Italy: 10%
    - Germany & Netherlands: 6 %
    - France is hit but numbers marginal
      - Source: RSA





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phishing

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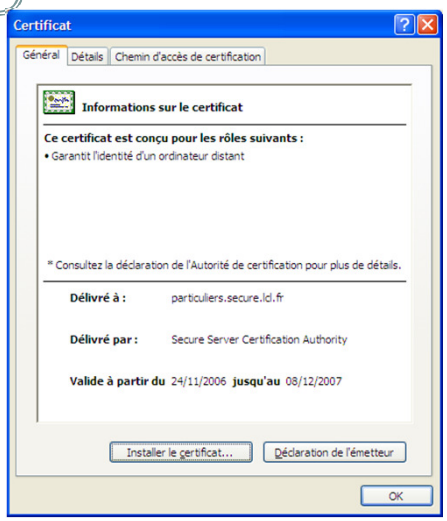
- aim is to steal (namely) credit card details access codes
- phishing = phreaking (itself "phone" + "freak") + fishing
- scammer (hacker) pretends he is the institution
- you will then provide them with the necessary information
  - mock emails based on real ones
  - may even include real links and logos etc.
- regular phishing scam targets:
  - Visa, eBay, Citibank, PayPal, US Banks
- what should consumers do:
  - in Europe, Visa will never contact you directly, let alone ask you anything
  - don't use the email link, go to the genuine website



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a few phishing examples

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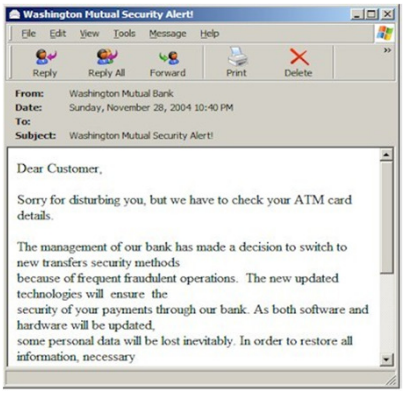
- **Washington Mutual Bank phishing email (2004)**
- phishing scam targeting Washington Mutual Bank customers.
- phish claims that Bank is adopting new security measures which require confirming ATM card details
- As with other phishing scams, the victim is directed to visit a fraudulent site and any information entered on that site is sent to the attacker



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Lcl phishing example (2006)

64

caution: phishing getting increasingly more credible and therefore increasingly dangerous

LCL LE CRÉDIT LYONNAIS DEMANDEZ PLUS À VOTRE ARGENT

Le test du nouveau systeme de securite. Notre devise: Banking sans fraude.

Compte tenu d'accidents tres frequents provoques par des activites frauduleuses sur Internet, notre banque a introduit le nouveau systeme de securite de nos clients. Conformement a celui-la chaque mois vous serez le destinataire d'une lettre confirmante vos donnee secretes. Nous esperons votre comprehension a l'egard de cet innovation. Les mesures entreprises nous permettront de reduire les risques d'acces non sanctionne de tierces personnes a votre compte personnel, ainsi que controler l'activite de votre compte en comparant l'adresse IP et version de votre navigateur de votre session presente et celle precedente. A l'avis de l'organisation mondiale bancaire ces mesures permettront de diminuer au maximum les voles d'argent des clients.

Log in: lecreditlyonnais

Si vous n'etes pas d'accord ou mecontent de cet innovation veuillez nous ecrire a lecreditlyonnais@banksecurity.fr
votre opinion sera prise en compte.

Nous vous remercions de nous avoir accorde vote temps et prions d'accepter nos salutations distinguees.

https://particuliers.lcl.fr/CLI/phishing012006.htm

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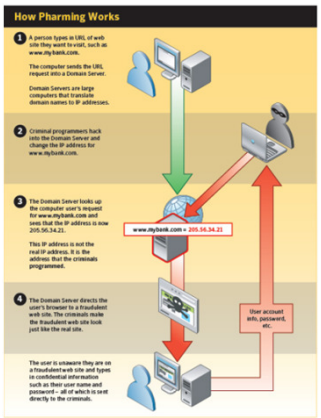
how pharming works

65 *sources: symantec, palisade*

1. attacker targets DNS service used by customer.
   1. either DNS server on LAN
   2. or ISP DNS server
   3. attacker changes the IP address of 'www.bank.com' to IP address of fake replica webserver
2. User logs on to bank site
3. User's computer queries DNS server for the IP address of 'www.bank.com'.
4. 'poisoned' DNS server returns IP address of fake website
5. user's computer tricked into thinking that poisoned reply is correct IP bank site address
6. hacker steals account details and logs on to bank account



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pharming, examples and anti-pharming techniques

66

- pharming examples
  - january 2005: large new york isp, panix, hijacked to point users to a site in australia
  - 2004: a german teenager hijacked the ebay.de domain name.
  - other attacks on american express, federal express, trend micro, msn..
  - q1 2005: more than 500 us firms of all sizes and sectors were targeted
- anti-pharming techniques
  - server-side software to protect users from pharming and dns protection.
    - example: identity cues
  - dns protection via dns sec protocol protecting tld
    - authorities respond to pharming (and phishing)

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3D Secure authentication scheme

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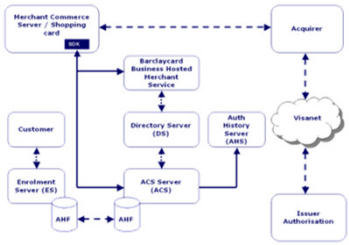
3-D Secure authentication as follows:

1. cardholder selects product, enters card details
2. plug-in routes card data to issuer's bank
3. issuing bank checks card registered for 3-D Secure + sends authentication server URL (ACS) to cardholder's computer
4. cardholder's computer redirected to ACS
5. cardholder receives input form from issuer and is required to submit 3-D Secure password.
6. authentication server checks password and forwards a response via the customer's computer to the acquirer
7. authentication server sends acknowledgement hence plugin initiates authorisation.



source: http://www.pago.de/Pago-3D-Secure.p3dsecure_en.0.html

Barclaycard Business

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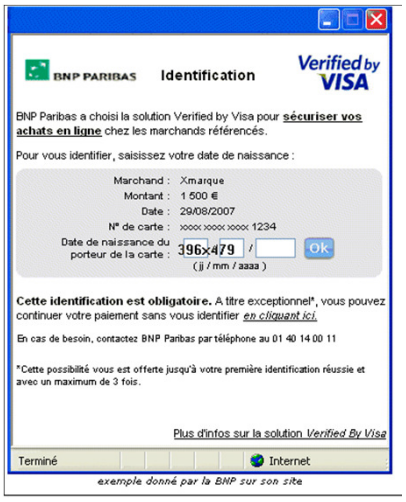
BNP 3D Secure example (since Oct 1, '08)

68

- affiliated e-commerce sites with 'Verified by Visa' and 'MasterCard SecureCode' logos
- additional input must be a randomly generated number
  - imposed by *Banque de France*



exemple donné par la BNP sur son site

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Axa Banque: 3D Secure mobile usage

69

AXA BANQUE
réinventons / notre métier

AXA Banque va encore plus loin pour sécuriser vos achats en ligne !

Monsieur,
Comme nous, vous êtes sensible à la sécurité lors des achats sur internet.
Nous vous informons que, **dès juin 2010**, nous allons renforcer l'authentification sur les sites certifiés « **Verified by Visa** », en remplaçant la saisie de la **date de naissance** par celle **d'un code confidentiel à usage unique qui vous sera envoyé par SMS** sur votre téléphone mobile.

IMPORTANT

Si votre numéro de téléphone mobile 06XXXXXX28 ne correspond pas à votre numéro actuel ou s'il est inconnu d'AXA Banque, nous vous invitons à le mettre à jour :

- en vous connectant dans votre espace clients, rubrique « Mes services/modifier mobile »,
- Pour en savoir plus, rendez-vous sur la rubrique« Sécurité » de la page de connexion de votre espace clients.

Nous vous remercions de votre confiance et vous prions d'agréer, Monsieur, l'expression de nos sincères salutations.

Hélène LECOQ
Directeur du Service aux Clients

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3D secure in a few words

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- benefits
  - Fr implementation 01/10/2008
  - developed by Visa
  - later adopted by mastercard and JCB (different names)
  - authentication of card owner by issuer
  - liability shift (from merchant to card issuer)
  - UK success
    - 3D Secure system taking off like wildfire
- concerns
  - Fr implementation ill-prepared
    - few clients warned
    - few tellers trained
    - few merchants ready/favourable
  - 15% abandonment rate
  - average payment time up 100%
    - from 100 seconds to 200 seconds
  - end-client often confused
  - weak security enforced in some cases

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3D Secure: UK status (01/2009 + 2010)

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- 2008 Verified by Visa and MasterCard SecureCode schemes used by 16% of merchants. Altogether the users of those programs now make 60% of UK purchases (*)
- 2010 status: 96% of UK purchases using 3D Secure (**)
- many merchants still rely on manual reviewers, 10% of them review every order" (*)

source: (*) http://ecommerce-journal.com (**) Orange Business Services

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3D Secure: France status (09/2009)

72

- % of transactions with 3D Secure: France 13% - Europe 48% - UK 96%
- Despite liability shift, 3D Secure perceived as the e-merchant's nightmare – Jdnet March 2010

source: OGONE survey, March 2010 – JDNET – la France à la traîne de l'Europe

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PCI DSS: data side protection

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aim: protect all credit holder data on merchant or vendor servers

- **PCI DSS Requirements**
  - 1. Install and maintain a firewall configuration to protect cardholder data
  - 2. Do not use vendor-supplied defaults for system passwords and other security parameters
  - 3. Protect stored cardholder data
  - 4. Encrypt transmission of cardholder data across open public networks
  - 5. Use and regularly update antivirus software or programs
  - 6. Develop and maintain secure systems and applications
  - 7. Restrict access to cardholder data by business need-to-know
  - 8. Assign a unique ID to each person with computer access
  - 9. Restrict physical access to cardholder data
  - 10. Track and monitor all access to network resources and cardholder data
  - 11. Regularly test security systems and processes
  - 12. Maintain a policy that addresses information security for employees and contractors
- Site audits (option)
  - according to e-merchant size, simple site scan ➔ fully fledged audit

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PCI DSS compliancy costs

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"An average of $2.7 million was spent to become PCI DSS compliant, excluding the costs of PCI assessment services."

Gartner

source: Gartner

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Internet banking
the UK chip and pin best practice

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Barclays pin sentry mechanism

- deployed Summer 2007
- strong encryption
- 1 million devices distributed within 12 months

- ... user-friendliness: a few issues (forums)

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Barclays - Pinsentry

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- Barclays Video on online banking security and the pinsentry mechanism

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open question on security issues

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ANY NUMBERS? HOW CRITICAL?

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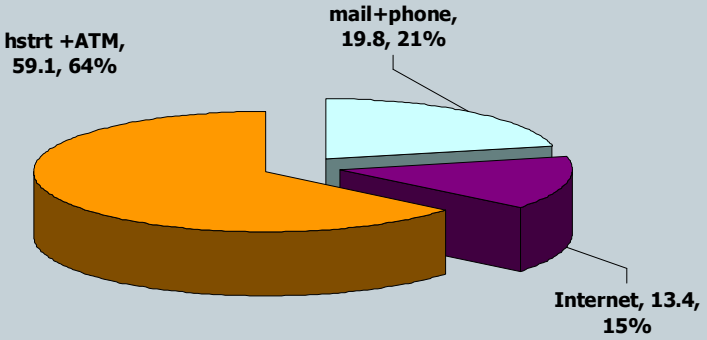
credit card fraud in France by type of transaction (2006)

78

higher fraud rate but far less in value
amounts in million €
source: Banque de France



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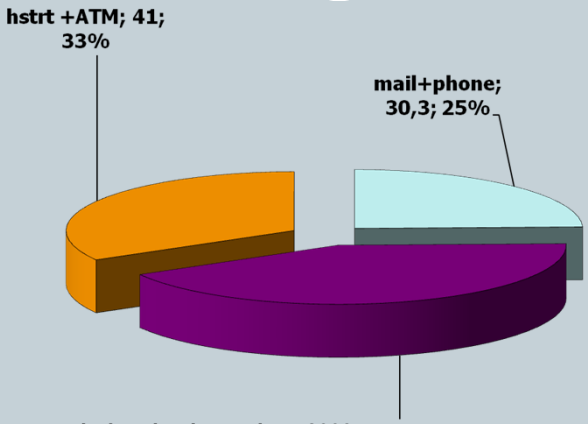
credit card fraud in France by type of transaction (2010)

79



dramatic increase in fraud volume since 2006
amounts in million €
source: Banque de France

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main issue is for merchants

80

- fraud weighs 2% to 3% of a website online revenues
- Trend is to buy insurance and/or launch credit schemes with credit companies
  - sofinco, cetelem, etc.
- 3D Secure implementation meant to solve this issue: 'liability shift'

ZURICH http://www.zurichna.com/erisk_edge.htm

FIA-NET.com LA GARANTIE SÉRÉNITÉ DE L'ACHAT

http://www.fia-net.com/annuaire/index.php

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conclusion

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main issues in online commerce (2006)

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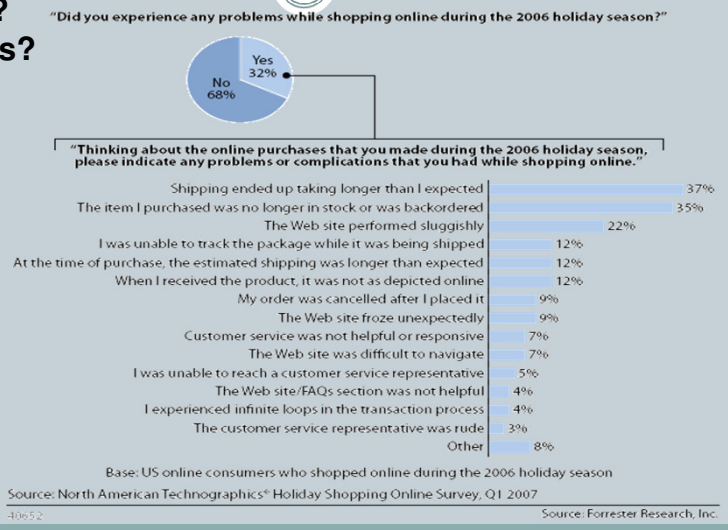
security?
payments?



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US 2009 update – security site appreciation factors

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- not topping the list but growing concern

source: yuseo.com

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[France] fraud and unpaid items (2008)

84

- **slight increase of fraud rates in 2008 by 2,69 % vs 2,63 % in 2007**
- **fraudsters increasingly organised in networks**
- **average value decreasing (yet above average purchase values)**
- **unpaid rate stable but average value lower**

year	Fraud %	unpaid %	average value
2002	2,22	0,45	578
2003	1,83	0,22	569
2004	2,41	0,27	505
2005	1,69	0,07	363
2006	2,21	0,10	462
2007	2,63	0,16	533
2008	2,69	0,15	435

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a totally new landscape

85

- security issue now huge
- PCI & 3D Secure
- Internet accounts for 42% of fraud (in France)
- yet … ecommerce still fraught with *many* other problems
- security is a necessary evil
- a never-ending wild-goose chase

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Fia-Net white paper [Fr]

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- the status of fraud in France (2010)

http://bit.ly/fianet

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about Yann Gourvennec

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- since 2008, head of Internet, Orange Business Services
- 2005-06/2007, innovation principal, Orange Business Services
- 2003-06/2005, alliance partner manager, france telecom
- 1999 – 2002 - director e-business: france telecom teleconferencing services
- 1997 - 1999 – consultant, Internet, marketing & information systems, cap gemini
- 1995-1997 – internet marketing consultant, unisys europe
- 1992-1995 – business systems manager, unisys europe
- 1988-1992 – business systems manager, unisys france
- 1985-1988 – account executive, philips france

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the business value and ICT blog

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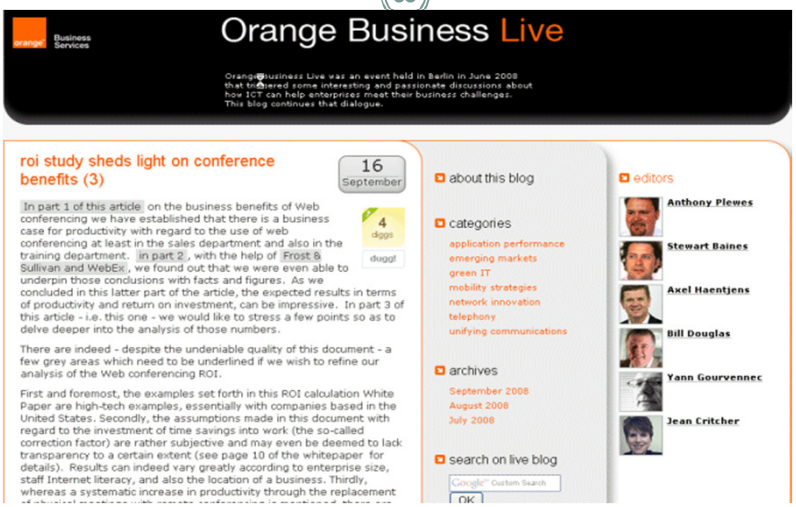

http://blogs.orange-business.com/live

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