



Is it really Dangerous?



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Year 2001

Actual Credit Card Fraud in 2001

- Online losses: \$700 Million
- Total online sales: \$68.1 billion
- 1.14% of total online sales
- ◆ POS losses: 0.09%
- Online losses 19 times higher than offline losses
 - Source GartnerG2



Cost of Internet fraud with and without technical investment

Year With investment Without investment

2000 \$1.6 billion \$1.6 billion

2005 **\$5.7** billion \$15.5 billion

Where do we go?

Source: Meridien Research

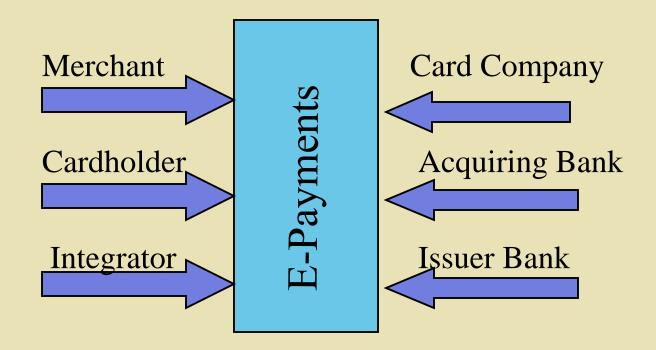


Objective

- Online risks analysis
- Risk profiling of online risks
- Risk management of online risks
- Chargeback insurance
- Other e-commerce risks



Components of e-Payment



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Online Risks Checklist

- Hacking definition, example
- Viruses
- Electronic Fraud
- ◆ Theft of Intellectual Property St. Petersberg
- Credit card fraud
- Legal Liability newspapers, SMS
- Professional Liability
- Claims made by employees
- Threats or Extortion



E-Risk Losses

- Damage to systems including hardware, software, programmes and records
- Loss of data and intellectual property
- Loss of business / Business Interruption
- Legal expenses and compensation due to cases from Clients (Target – banks, exchange houses, IT consultants, S/W developers, website owners, etc.)
- Chargebacks
- Loss of reputation & market share
- Extortion money



Risk Management options for e-Merchants

- Risk Avoidance
- Loss Prevention
 - Legal advice
 - I.T. security advice
 - Training
 - UCAF SPA, VBV
- Loss reduction
 - Legal Action
 - Recovery
- Risk Transfer
 - Insurance Protection



Chargeback

- Chargeback means the debit process of a Service Bank as a result of a Card being used fraudulently and the Consumer repudiating the CNP Purchase.
- A Charge back must be only those transactions which an Issuer may legally Charge back to the acquirer, who in turn may return to the Merchant under the terms of the *Merchant Agreement*.



CNP Purchase

CNP Purchase means a Card Purchase of a product or service via *Payment System* where neither the consumer nor anyone purporting to be consumer is present at your office at the time of the transaction. This simply means *'Cardholder Not Present'*.



Payment System

Payment System means an electronic fund transfer facility for the online card transactions, which is provided by the "Integrator" enabling a CNP Purchase between the merchant and the Service Bank via the Integrator.



Case Study

This is an actual case from the UK, but names have not been included.

- A photographic dealer set up a direct order facility via his website.
- A number of thieves used stolen cards, or details, to buy £100,000 worth of goods online.
- The orders were taken in good faith and the goods delivered.
- The legitimate card owners questioned their statements with the credit card company
- The credit card company investigated and uncovered the fraudulent use of the card.
- £100,000 worth of 'chargeback' was made against the photographic dealer by the bank.
- In order to recoup this money, which is completely lost, he had to sell a further £1,000,000 worth of goods.
- Ultimately, as a result, the company risked closing down.



Coverage

- This insurance will pay for the claims arising out of the Merchant's liability to the Service Bank for a CNP Purchase in circumstances where the use of the consumer's Card was unauthorized and made fraudulently.
- A CNP Purchase will be deemed to have been transacted when notice of CNP Purchase is approved by the Payment System and recorded by the Merchant.



Eligibility

This insurance is available to all businesses that use a processing system acceptable to the insurers, where a CNP situation arises.

- Processing systems
- Cards used
- Products / services sold



Requirements

- Past record of the merchant
- Online trading history
- Completed proposal form
- Product details & brochure
- Wait period in some cases
- Fraud prevention measures



Which Cards?

- All valid Credit Cards
- All valid Debit Cards

bearing MasterCard, Visa Card or Switch symbols, but excludes American Express Card.



Excluded Countries?

If the Delivery Address is located in or the Card is **Issued** in the following countries, the transactions are not covered: Afghanistan, Albania, Algeria, Angola, Armenia, Azerbaijan, Belarus, Bosnia & Herzegovina, Burundi, Cambodia, China, Colombia, Cuba, East Timor, Ecuador, Eritrea, Ethiopia, Fiji, Georgia, Guinea Bissau, Guyana, Haiti, Indonesia, Iran, Iraq, Kazakhstan, Kenya, North Korea, Kyrgyz Stan, Lao Peoples, Latvia, Liberia, Libyan Arab Jamahiriya, Macedonia, Malawi, Moldova, Mongolia, Mozambique, Myanmar, Nigeria, Pakistan, Papua New Guinea, Romania, Russian Federation, Rwanda, Sierra Leone, Slovakia, Slovenia, Somalia, Sudan, Suriname, Syrian Arab Republic, Tajikistan, Turkmenistan, Uganda, Ukraine, Uzbekistan, Vietnam, Yemen, Yugoslavia, Zaire or Zimbabwe.



Limits of Insurance

- An Annual Aggregate limit
- Per CNP transaction limit
- Capped to a maximum amount per month



Excess / Deductible

Three ways:

- Per transaction
- Aggregate deductible
- Combination of both
- Shown as % of CNP transactions



Underwriting Factors

- Total turnover of the company
- Total CNP sales and relation to total turnover
- Number of CNP transactions
- Average size of CNP transaction
- Maximum size of individual CNP transaction
- Fraud prevention measures in place



Rating / Premium

This is expressed as a percentage of CNP transactions (subject to a minimum and deposit premium) and is also adjusted at the end of the policy period.



Other Online Risks



Other Online Risks by Group

- Software Developers Professional Liability
- IT Consultants Professional Liability
- Payment Gateway Providers Legal / Professional Liability
- Internet Service Providers First party as well as Third party risks
- ◆ **Banks** Third party losses, Legal Liability
- Business Houses Loss of data, loss of system, loss of business
- ◆ Website owners Legal liability, loss os business
- ◆ **Newspapers** Loss of business, legal liability

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Solutions

- Risk Financing or Self Insurance
- Insurance
 - First Party Insurance
 - Damage to systems
 - Business Interruption
 - Electronic Fraud
 - Extortion
 - Third Party Insurance
 - Legal Liability
 - Professional Liability
 - Chargeback Insurance



Some Famous Cases



16 Khaleej Times, Wednesday, July 25, 2001

WASHINGTON - The Defence Department temporarily cut off public access to most of its Web sites on Monday to ensure that they are protected against the "Code Red" computer virus, some versions of which display the

Pentagon closes web sites

slogan "Hacked by Chinese!" on worm no longer poses any threat infected Internet sites.

fence) Web sites will not be accessible by the public until this

to DoD networks," said Lt-Col. "Most DoD (Department of De- Catherine Abbott, a Pentagon spokeswoman.

Technicians are working to last week. - Reuters

determine whether security patches needed to fix the problem previously had been installed, La-Cot Abbott said.

The "Code Red" virus, which is a self-propagating worm, surfaced

ay, May 25, 2001

Hacker's give policing site a taste of its own medicine

PITTSBURGH - In a cruel irony, the organisation that is supposed to warn against backer attacks has seen its Web site backed. The Computer Emergency Response Team Coordination Centre (CERT/CC) said in a statement that it's been under attack by backers since Tuesday. The site is a cooperative effort of law enforcement and high tech compa-

Energy grid hacked

LOS ANGELES - Hackers attacked a computer system vital to California's electrical grid at the height of the state's energy crunch, the Los Angeles Times reported yesterday, citing a confidential utility company report. The attacks began as early as April 25 and were not detected until May 11, the Times said. - AFP

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Cyber break-in at Microsoft latest in a series

NEW YORK — As bizarre as the tale of the break-in at Microsoft Corp.'s computer network may seem, it follows a string of high-profile Internet security breaches this year.

As first reported by The Wall Street Journal, Microsoft discovered this week that someone was using an e-mail account in St. Petershurg, Russia, to steal passwords to its corporate network. The backers then used these passwords to transfer source

code — the binep Microsoft's popu Office programs company's headq doesn't appear to be a blackmailing.

For starters, the culprits reportedly had access for several months to Microsoft's network, yet hid low and aren't known to have made any demands. Rather, it seems, they preferred to monitor Microsoft's work and access the

as more companies to their businesses to the Internet. Already there have been several high-profile cause this year — and in most, the culprits have been quickly caught.

In August, Parametric Technology Corp. had to turn to the FBI for help when it received paid their "consulting fee", they promised to reveal how they had reportedly cracked the media organisation's computer systems.

As part of a sting, Bloomberg agreed to meet with the men in London, where they were quickly apprehended by police.

In Mny, a Colorado graduate student was charged with attempting to extort money from Audible Inc., which sells downloads of spoken-voice content.

While incidents of cyber-extortion are infrequent, they are becoming

Hackers hit paper's web site

NEW DELHI — The Internet web site of India's Economic Times newspaper was hacked by opponents of New Delhi's rule in Kashmir yesterday, shortly before the finance minister was due to present his annual budget. An employee at ET Online, said the homepage of the newspaper's site (www.economictimes.com) was hacked at about 9.30am. The site was back to normal about an hour later.

The web site plans to publish news from the 2001/02 budget, which Finance Minister Yashwant Sinha will present in parliament at 11,00am. The homepage of the site briefly read "D0SeD of HaXoBuGz OWNS YOU so the INDIA'S not BUSINESS newspaper got HACKED!", and then there was a headline "SAVE KASHMIR". The hackers went on to say that India's allegations that Pakistan assists the Kashmiri people in their struggle were unfounded. — Reuters

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Online banking //a new tool for fraudsters

KUALA LUMPUR — Globalisation of the financial sector and the rapid expansion of online banking are making it easier for criminals to hide the profits of crime, an official told a regional conference on anti-money laundering yesterday.

Opening the three-day meeting of the Asia-Pacific Group on While Internet banking may have contributed to reducing costs and making the sector more efficient, it has also made customer identification and monitoring of accounts and transactions by financial institutions more difficult, the report said. These monitoring procedures are fundamental to

Hacking for fun, not profit

SAN FRANCISCO — Jeff Baker hacks into corporate computer networks for fun, not profit — with no subversive purpose in mind.

Baker, a 24-year old systems programmer, is part of a group of computer experts who spend their free time trying to figure out potential Internet security threats to large networks.

Over the last year, Baker's hobby has led him to technology security lapses at E*Trade, the Charles Schwab brokerage concern, Wells Fargo bank and Critical Path, an email service

As hacking cases rise, web site gives up tracking

NEW YORK — A Web site that more than 15,000 items, Attrition has one of the Net's most extensional and the Net's most extens



Hacker who sent Viagra to Gates freed

LONDON — A teenage hacker who used Bill Gates's credit card details to order him a batch of Viagra tablets escaped a prison sentence.

Judge Gareth Davies said Raphael Gray had at least shown a sense of humour in sending the tablets to the computer billionaire.

Gray, who admitted ten charges of computer fraud, posted the credit card details of 25,000 shoppers on the Net in a campaign to show up serious security flaws in



Lessons

- No system is impregnable.
- Don't remain overconfident.
- Cyber crime is a hobby too!
- Use insurance as an umbrella in the rains of online crime & frauds.



Finally



Number of Online US and Worldwide Purchasers, 1998 - 2000

(Millions)	1998	2000	2002
US Purchasers	21.10	41.20	60.40
Global Purchasers	31.00	72.00	134.00

Source: Donaldson, Lufkin & Jenrette



Online Purchase Revenues 1999 - 2004 (in US dollars)

Year	B2C	Total Web Sales	
1999	20 bn	80 bn	
2000	45 bn	190 bn	
2001	90 bn	330 bn	
2002	180 bn	590 bn	
2003	220 bn	900 bn	
2004	300 bn	1400 bn	
Source: Keenan Vision			





Protect Yourself from Internet Frauds!