



# The Scope of the Spam Problem

*Enrique Salem*



## Understanding Spam

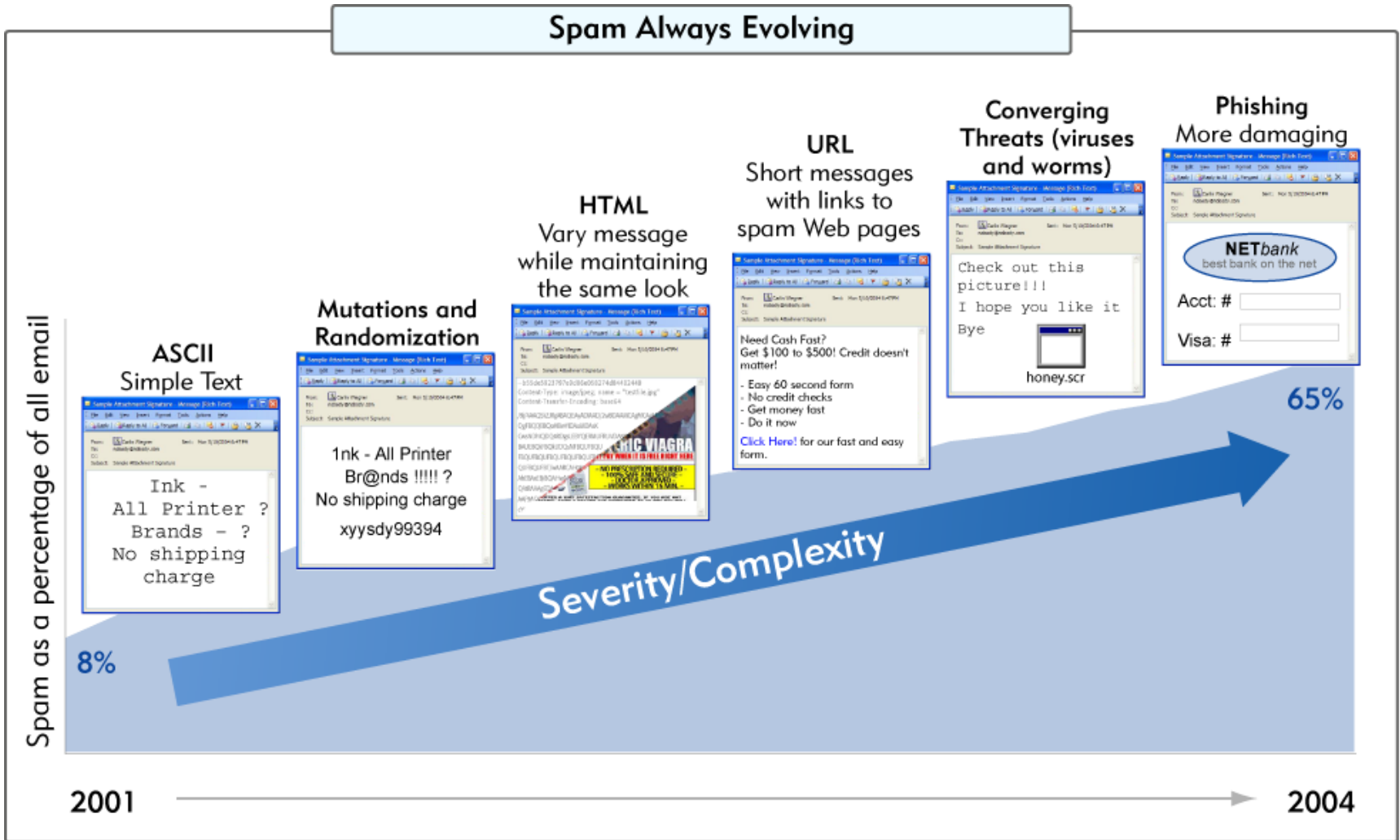
Legal definition of spam: Anti-spam laws exist in a number of countries around the world

- Currently no universally accepted definition of 'spam'

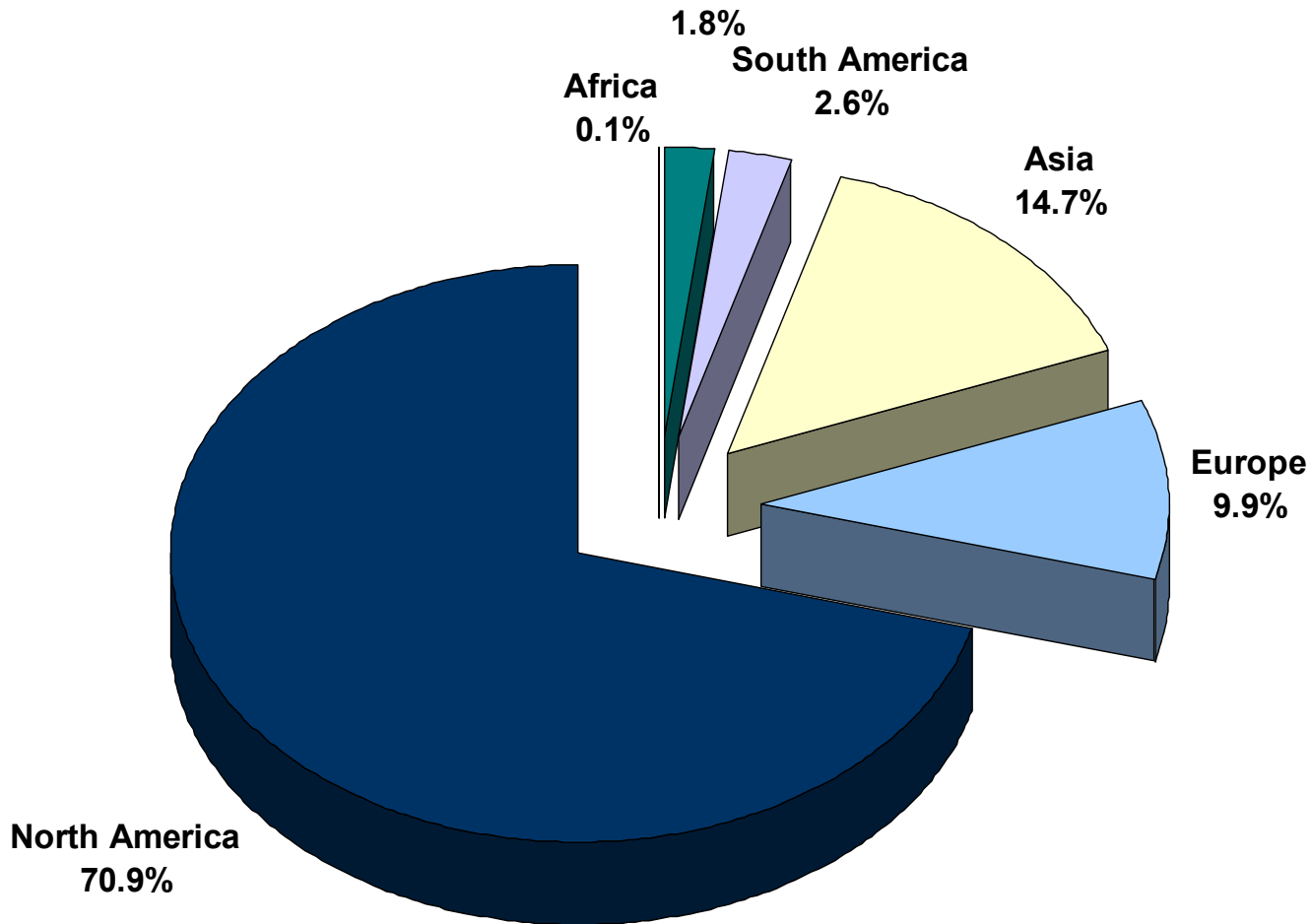




# Spam Continues to Grow and Evolve

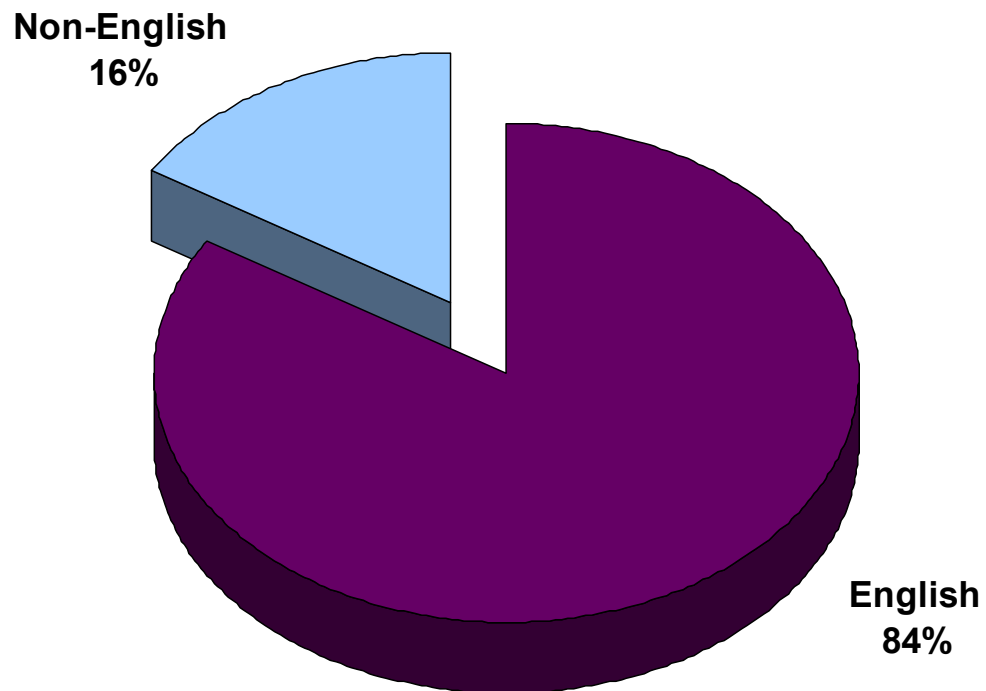


## Claimed Region of Origin



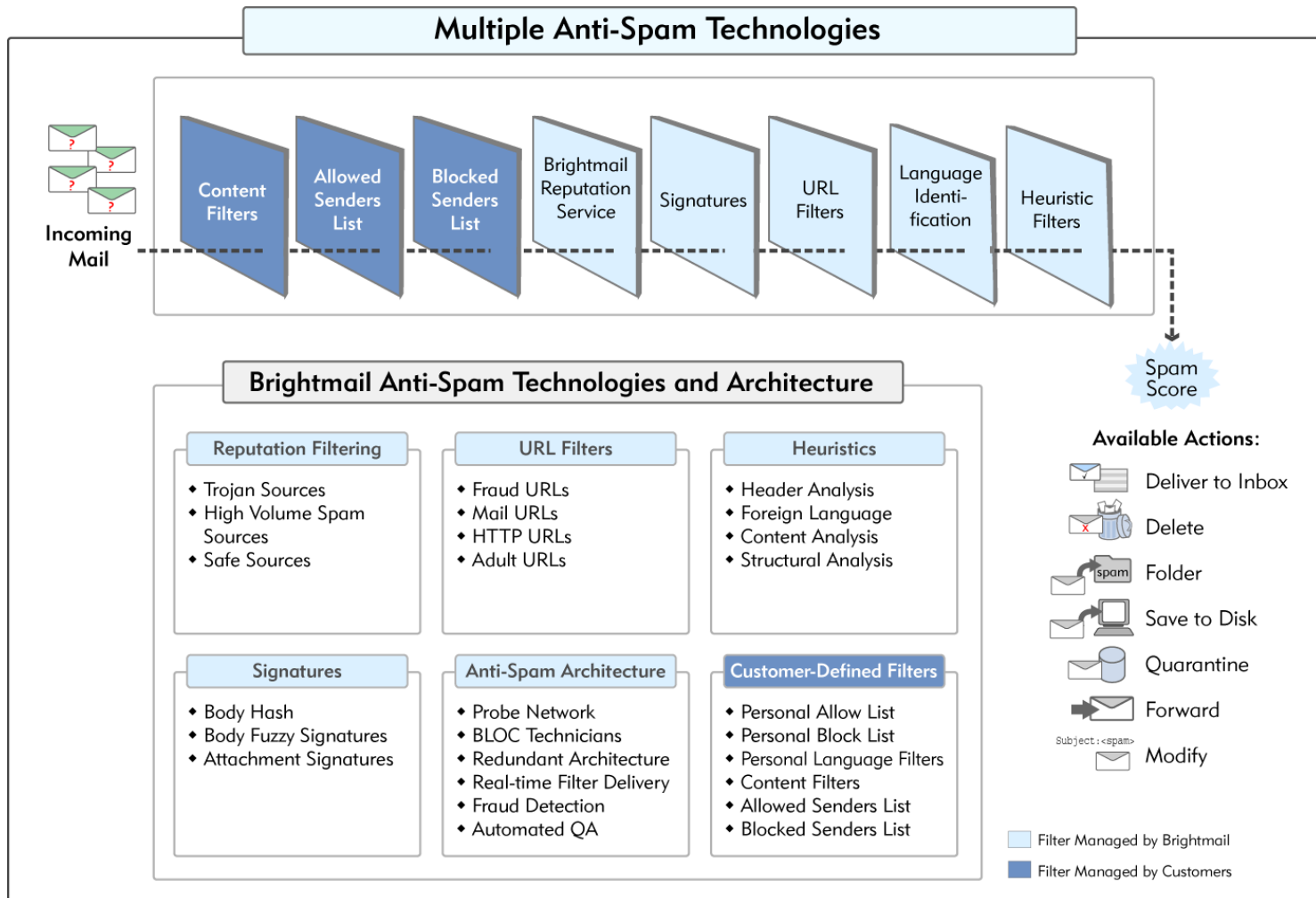
*Note: Claimed region of origin indicates the region from which the message claims to originate.*

## Non-English Spam is not Insignificant





# Solution to Spam? Multi-Layered Approach





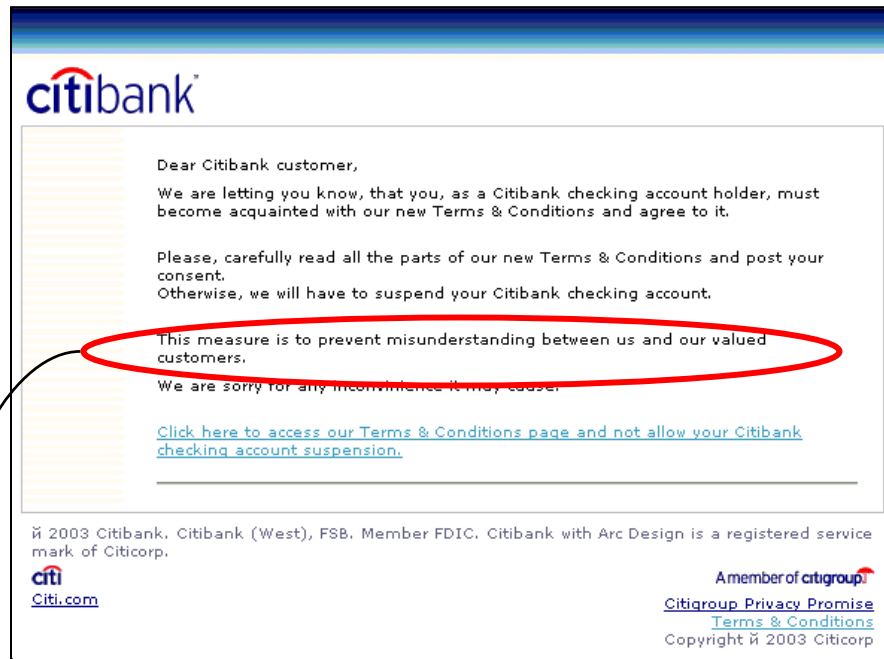
## Fraud is Bigger Threat than Spam to Email Security

	Spam	Fraud
<b>Range of Damage</b>	Internal	External
<b>Asset Attacked</b>	IT Resources	Brand
<b>Group Targeted</b>	Employees	Customers and potential customers
<b>Key Threat</b>	Ability to use email as a communication medium	Ability to do business online



## Messages Are Deceptive

*Email: Messages appear legitimate ... except for fraudulent URLs*



**citibank**

Dear Citibank customer,

We are letting you know, that you, as a Citibank checking account holder, must become acquainted with our new Terms & Conditions and agree to it.

Please, carefully read all the parts of our new Terms & Conditions and post your consent. Otherwise, we will have to suspend your Citibank checking account.

**This measure is to prevent misunderstanding between us and our valued customers.**

We are sorry for any inconvenience it may cause.

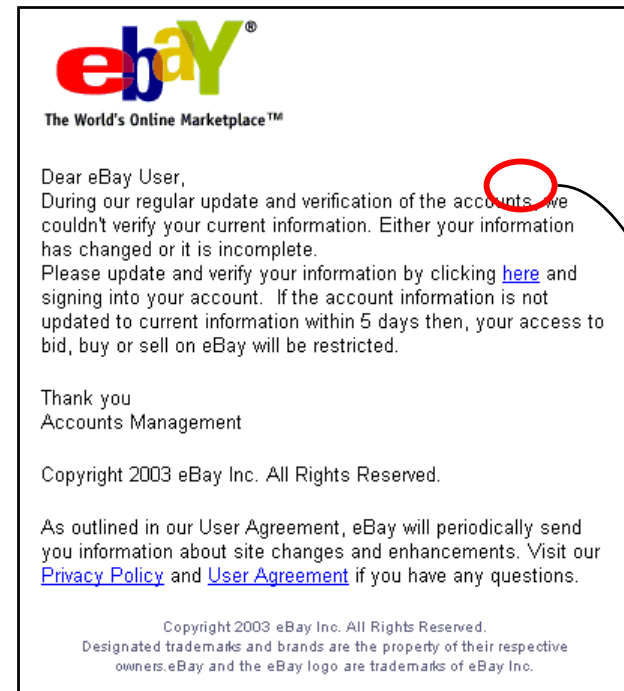
[Click here to access our Terms & Conditions page and not allow your Citibank checking account suspension.](#)

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[www.citibank.com:ac%398HAAA9UWDTYAZJWVWAAAA9pYWwgc2l6ZT00PjxTVgc2l6ZT00PjxT3Aac%398HAAA9UWDTYAZJWVWAAAA9pYWwgc2l6ZT00PjxTVgc2l6ZT00PjxT@211.155.234.84](http://www.citibank.com:ac%398HAAA9UWDTYAZJWVWAAAA9pYWwgc2l6ZT00PjxTVgc2l6ZT00PjxT3Aac%398HAAA9UWDTYAZJWVWAAAA9pYWwgc2l6ZT00PjxTVgc2l6ZT00PjxT@211.155.234.84)



**ebay**  
The World's Online Marketplace™

Dear eBay User,

During our regular update and verification of the **accounts** we couldn't verify your current information. Either your information has changed or it is incomplete. Please update and verify your information by clicking [here](#) and signing into your account. If the account information is not updated to current information within 5 days then, your access to bid, buy or sell on eBay will be restricted.

Thank you  
Accounts Management

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As outlined in our User Agreement, eBay will periodically send you information about site changes and enhancements. Visit our [Privacy Policy](#) and [User Agreement](#) if you have any questions.

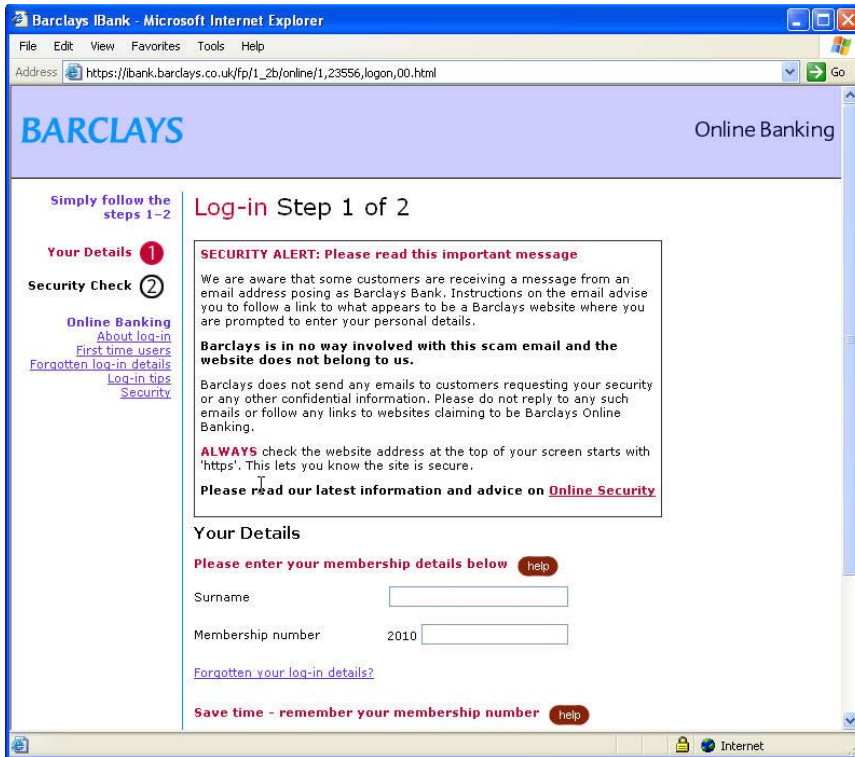
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<http://205.214.89.85/ebay.html>

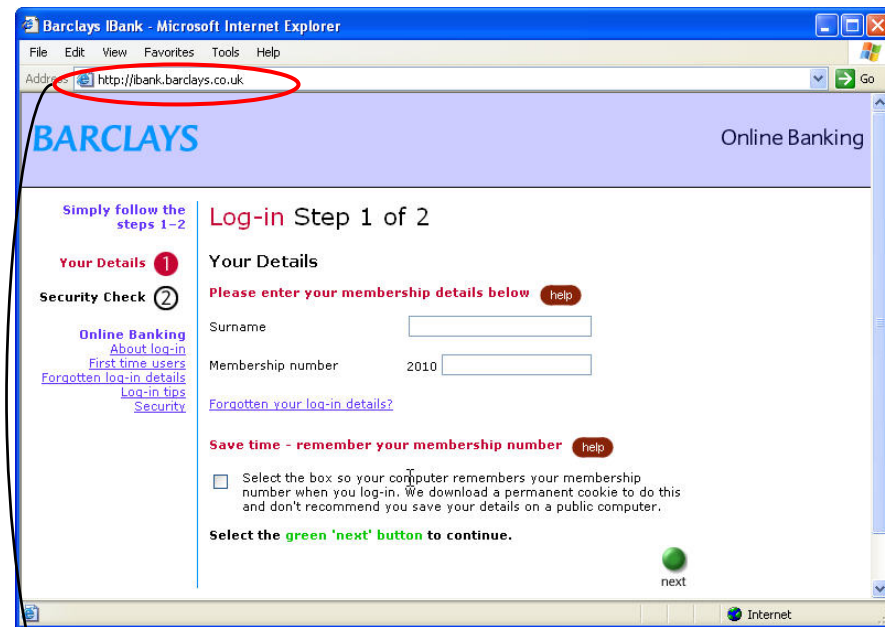


# Websites Are Also Deceptive

*Websites: Fraudulent sites often look more “real” than the legitimate sites*



**Legitimate Site**  
*(with warning)*



*Exploits Microsoft I.E. “%01” vulnerability to display a legitimate URL*

**Fraudulent Site**



## Growth and Impact of Email Fraud

Cost	Description	Source
<b>\$60 Billion</b>	Cost of Identity Theft in last 5 years in US	FTC
<b>600 hours</b>	Individual time spent recovering from Identity Theft	Identity Theft Resource Center
<b>3.4%</b>	US Population fallen victim to Identity Theft	Gartner
<b>3%</b>	Estimated number of people reporting fraud to FTC	FTC
<b>3.5 million</b>	Number of FDIC fraud messages caught by Brightmail in one week in January 2004	Brightmail

High Profile Attacks	
<b>Financial Services</b>	Citibank, Visa, Fleet Bank, Barclays Bank, NatWest, Lloyds TSB, Nationwide, Halifax, Bank One, Bank of America, Wells Fargo, Bank of Montreal, Schwab...
<b>Consumer</b>	EBay, Best Buy, PayPal, Microsoft, Sony, Target, UPS, Fedex, British Airways, Monster.com, 1-800-Flowers.com...
<b>Service Provider</b>	Yahoo, Earthlink, AOL, AT&T, MSN, MSNTV...