

CYBER CRIME AND SECURITY

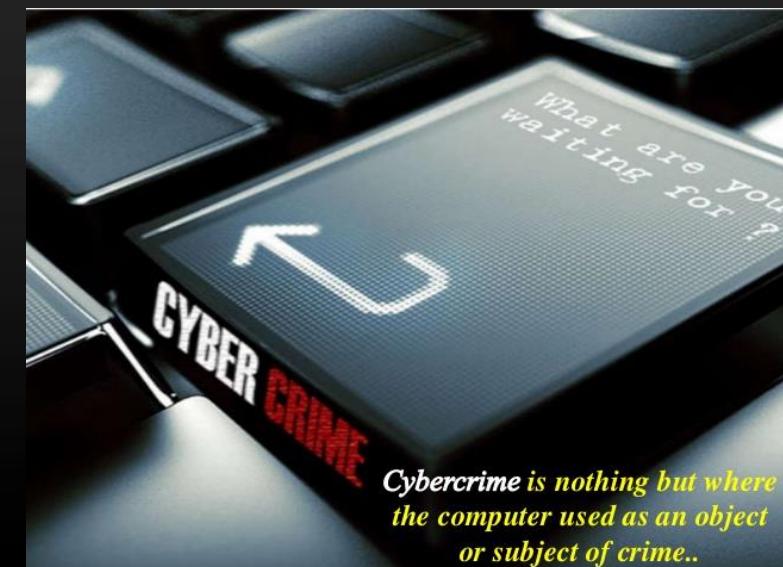


Topics :

- What is Cyber Crime ?
- History
- Categories of Cyber Crime
- Types of Cyber Crime
- Cyber threat evolution
- Gruesomeness of cyber crime & its consequences
- Cyber Security
- Cyber ethics & law
- How to stay safe

What is cyber crime ?

“ Cyber crime encompasses any criminal act dealing with computers and networks . Additionally , cyber crime also includes traditional crimes conducted through the internet and malicious programs .”



History :

- The first recorded cyber crime took place in the 1820 .
- The first spam email (junk email) took place in 1978 when it was sent over the Arpanet .
- The first virus was installed on Apple Computer in 1982 .



Categories Of Cyber Crime :

Against Person

- Example - Cyber Stalking , Spam email .

Against Property

- Example – Unauthorized data possession , Computer Vandalism .

Against Govt .

- Example – Hacking Govt. Websites , Cyberspace .

**NO TO
CYBER CRIME**

Types of cyber crime :

- ✓ Hacking
- ✓ Computer Vandalism
- ✓ DoS Attack
- ✓ Virus Dissemination
- ✓ Software Piracy
- ✓ Net Extortion
- ✓ Phising
- ✓ Spoofing
- ✓ Child Pornography

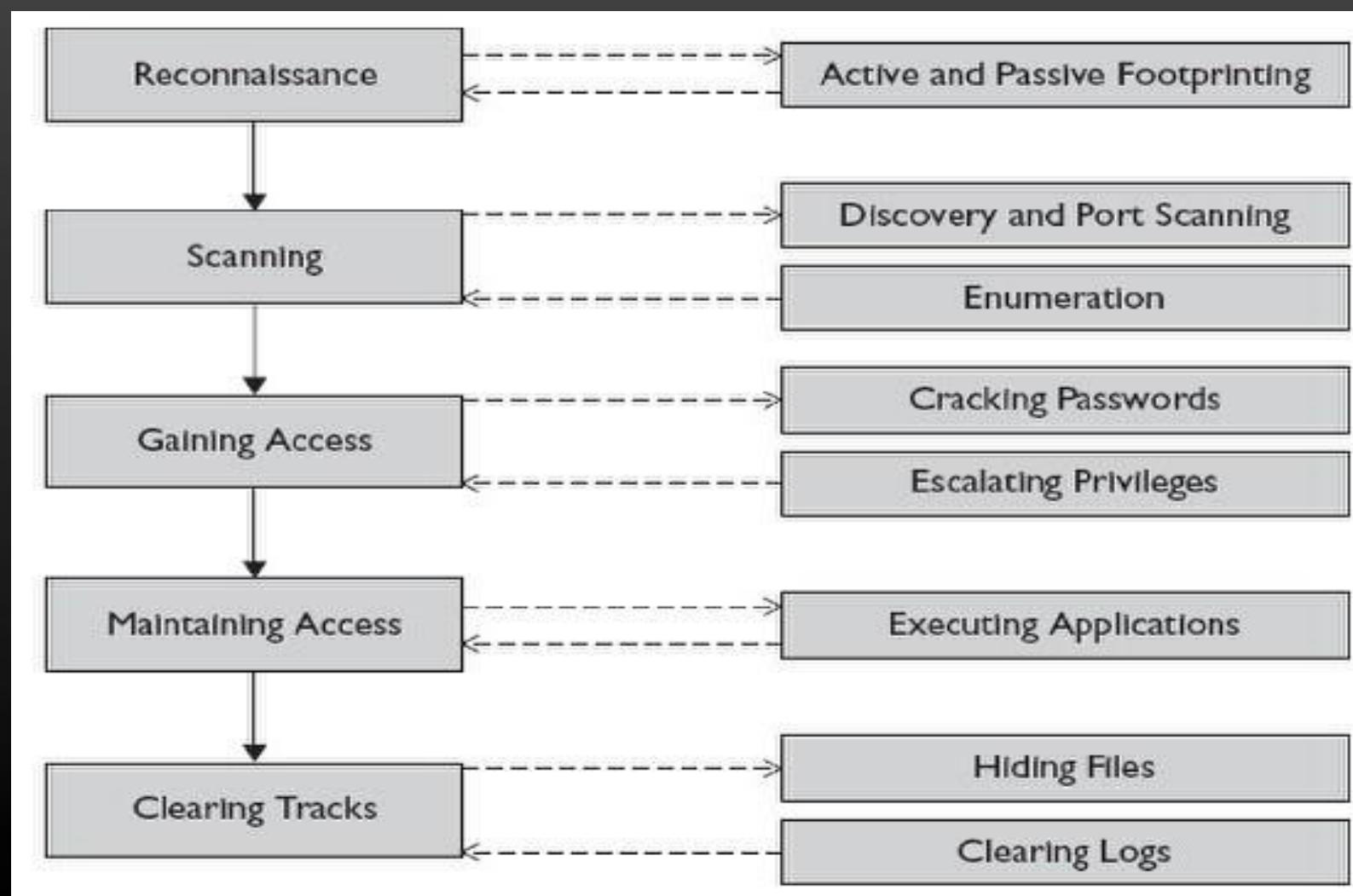


Hacking

- ❖ Mostly happened cyber crime now a days.
- ❖ Illegal intrusion into a computer or a network system which means unauthorized access.



Hacking Steps:



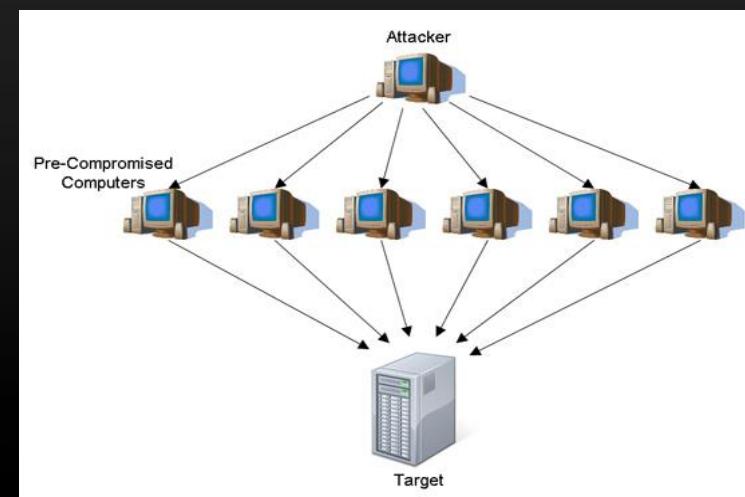
Computer Vandalism

- ❖ Very dangerous type of crime.
- ❖ Accesses into in a database.
- ❖ Damages or destroys data rather than using it.



DoS Attack

- ❖ Floods the bandwidth of the victims network or fills his e-mail box with spam mail depriving him of the services he is entitled to access.
- ❖ Very harmful attacks, cause severe problem to users.



Software Piracy

- ❖ Theft of software through the illegal copying of genuine programs.
- ❖ Making great loss of software development industries.
- ❖ Some people are earning easy money by this illegal act rather than the actual developer of the software.
- ❖ According to Business Software Alliance(BSA) 36% of software are being used is pirated and Bangladesh is in no. 3 on the list of most pirated software users.



Virus Dissemination

- ❖ Criminals uses malicious software.
- ❖ Victim devices gets touch of those software physically or by another device or by internet.
- ❖ These software attaches itself to other virus, worms and trojan houses.
- ❖ It just means deliberately releasing/spreading a computer virus.



Net Extortion

- ❖ a crime involving an attack or threat of attack coupled with a demand for money to avert or stop the attack.
- ❖ It relates copying the companies confidential data in order to extort said company for huge amount of money
- ❖ Basically DoS attack and malicious attack is used .



- Taking property through threats of harm (black mail)

Phishing

- ❖ Act of sending an e-mail to a user falsely claiming to be an established legitimate enterprise in an attempt to scan the user into surrendering private information.
- ❖ Later victim's informations are used for identity theft .
- ❖ Causes different problems for users or victims.



Spoofing

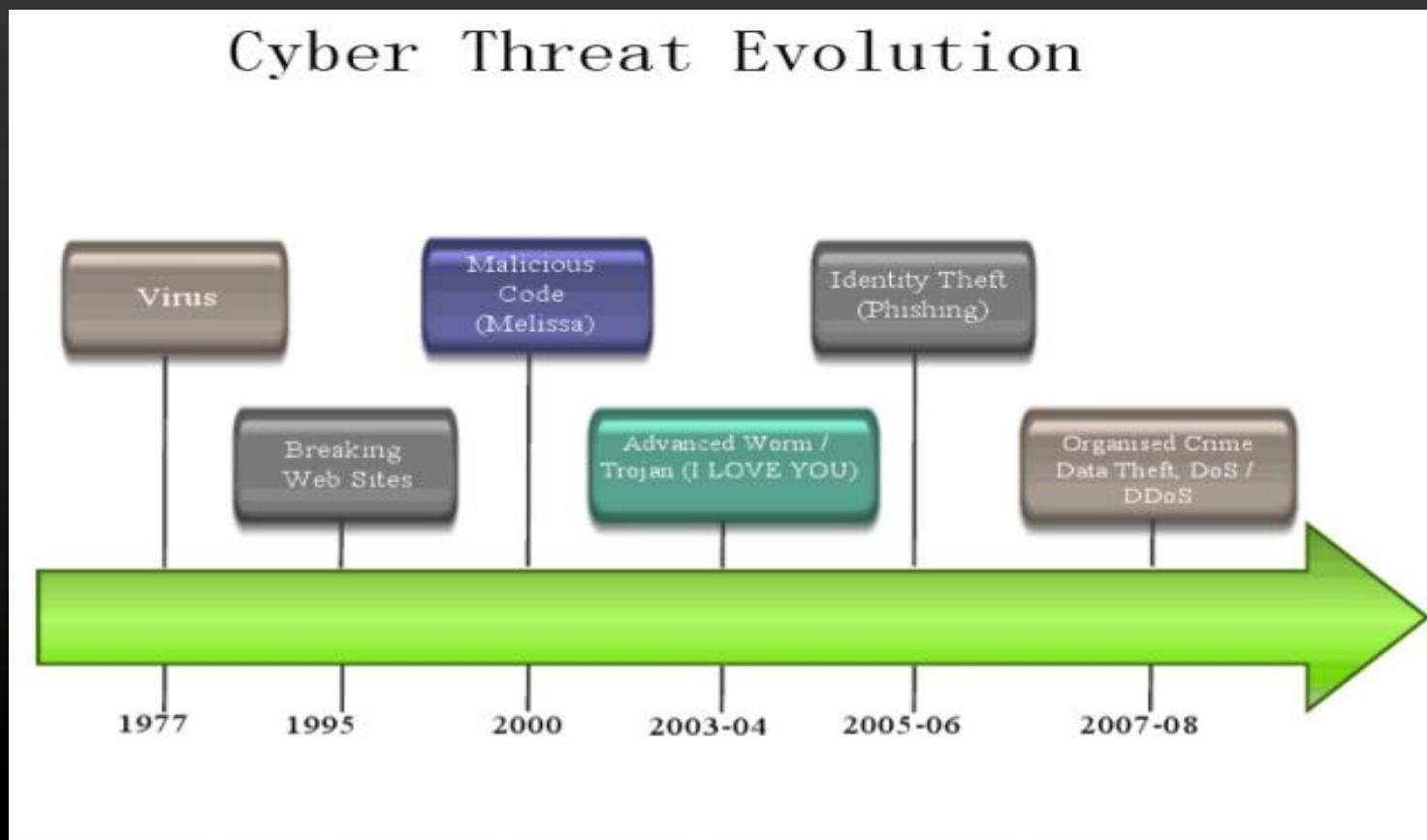
- ❖ Getting one computer on a network to pretend to have the identity off another computer , usually one with special access privileges ,so as to obtain access to the other computers on the network.
- ❖ One of the most tactical cyber crime.

Child pornography

- ❖ Abuse children/teens mentally and sexually.
- ❖ Chances are rising of falling victim to it as number of children using internet is rising everyday.
- ❖ Can cause lose of morality and manner in children.

Cyber Crime threat evolution :

- ❖ Cyber crime is increasing at a rapid speed and it's a great threat to every govt. of every nation even society to personal life .



Gruesomeness of cyber crime :

- The cost of cyber crime for the global economy has been estimated at \$445 billion (£266 billion) annually.
- Using European Union data, which found that 16.7 workers were employed per million Euros in exports to the rest of the world , Europe could lose as many as 150,000 jobs due to cybercrime .

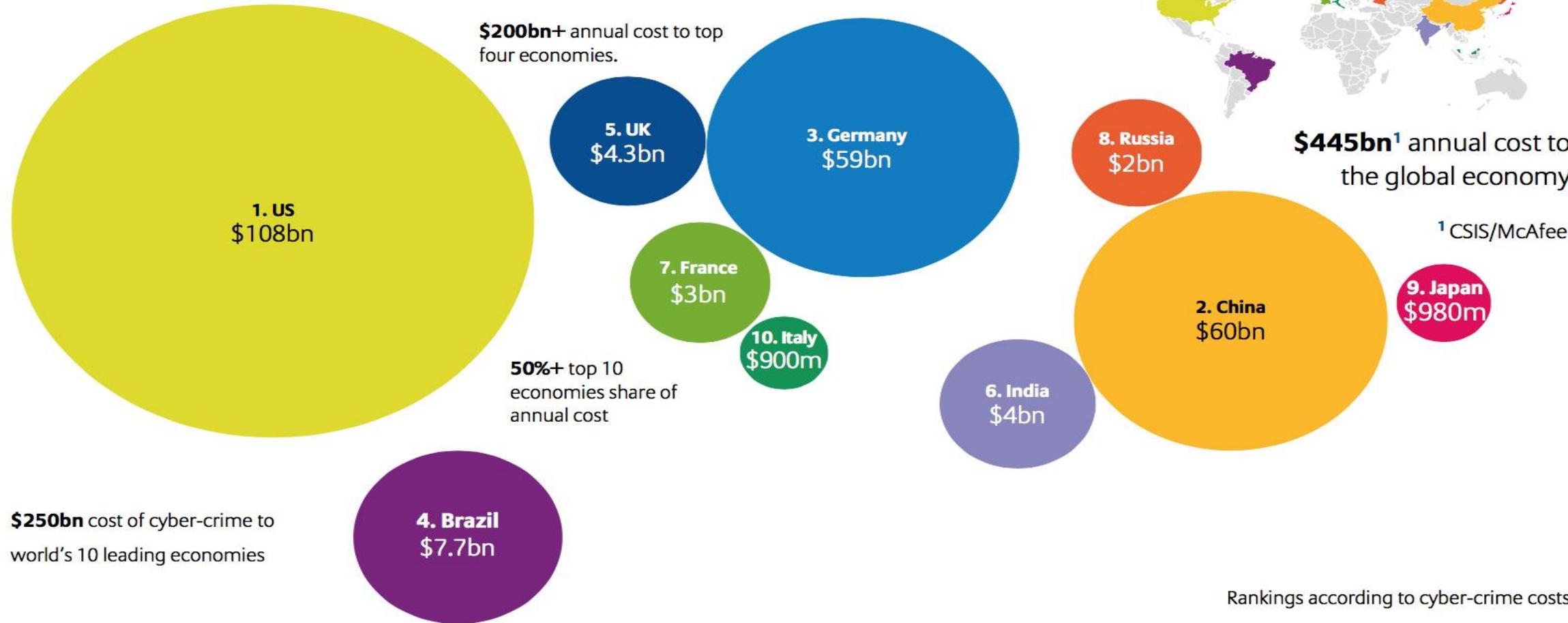
Activity	Cost As % of GDP
Maritime Piracy	0.02% (global)
Transnational Crime	1.2% (global)
Counterfeiting/Piracy	0.89% (global)
Narcotics	0.9% (global)
Cybercrime	0.8% (global)

- The Table is showing enough contribution of cyber crime in loss of GDP

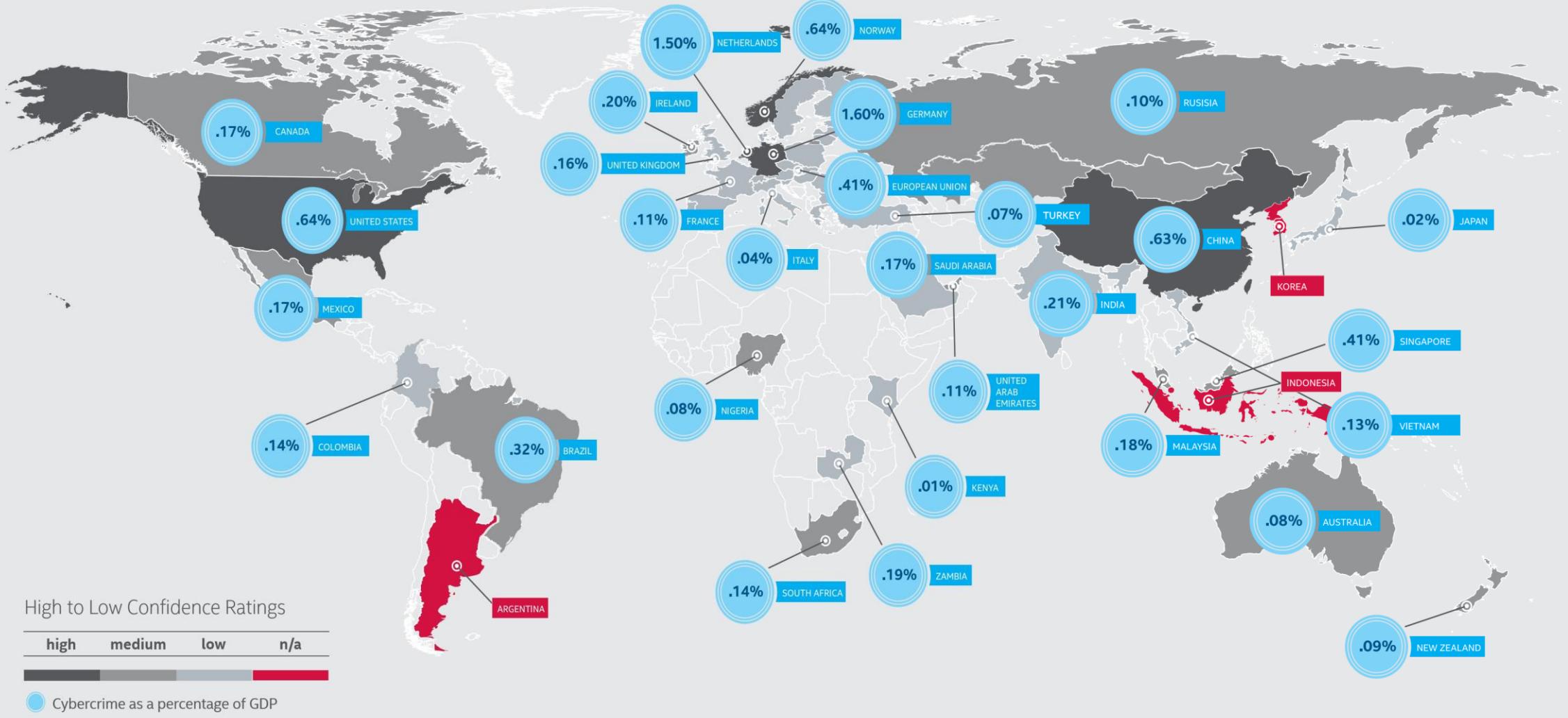


How much does **cyber-crime** cost the world's leading 10 economies?

This **AGCS** atlas examines the estimated total cost to the global economy from cyber-crime per year, with a particular focus on the impact on the world's top 10 economies, according to GDP.



Confidence ranking: Countries current tracking
of cybercrime within their borders



2,500

2,000

1,500

1,000

500

0

1981

1983

1985

1987

1989

1991

1993

1995

1997

1999

2001

2003

2005

2007

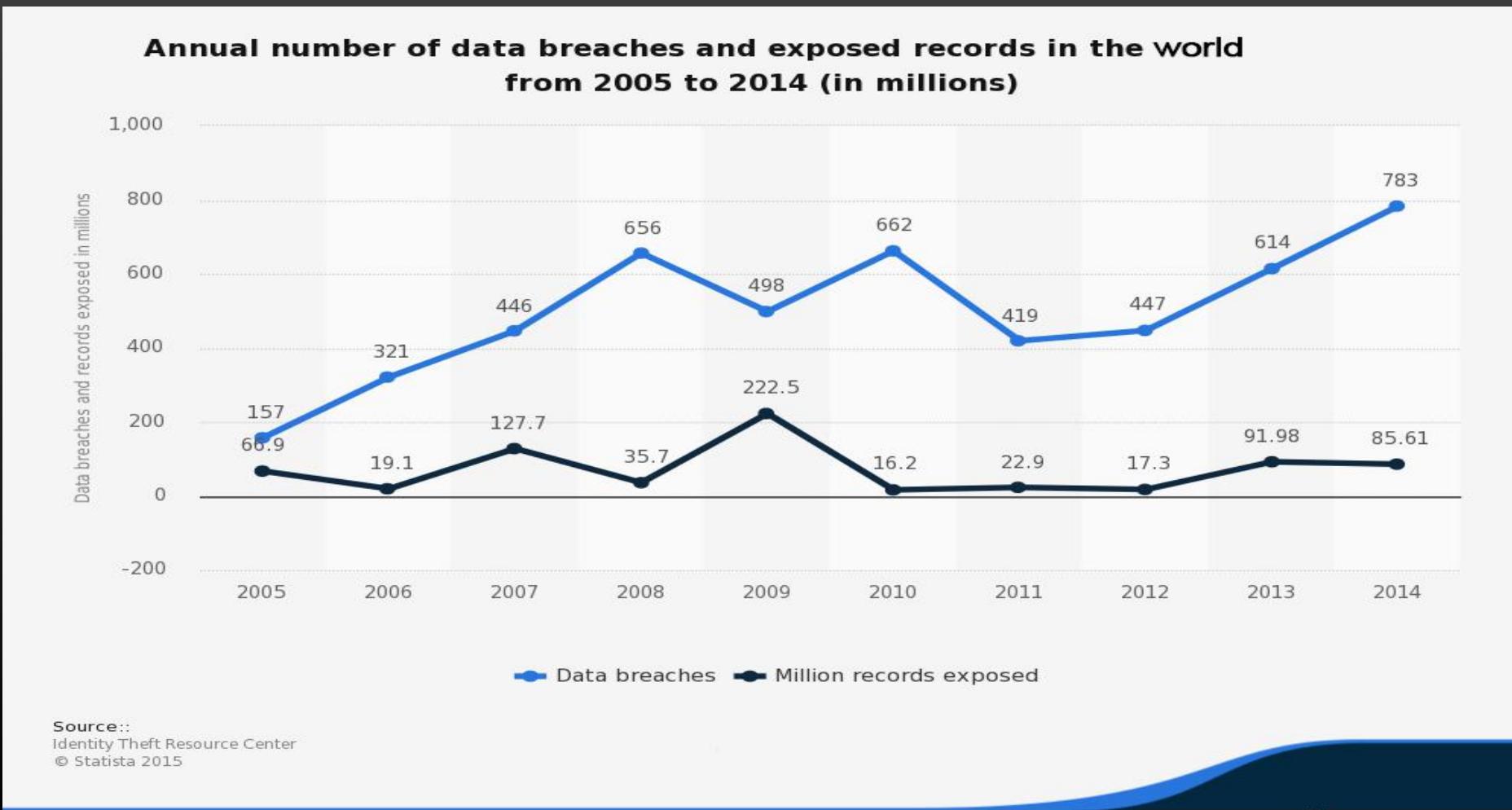
2009

2011

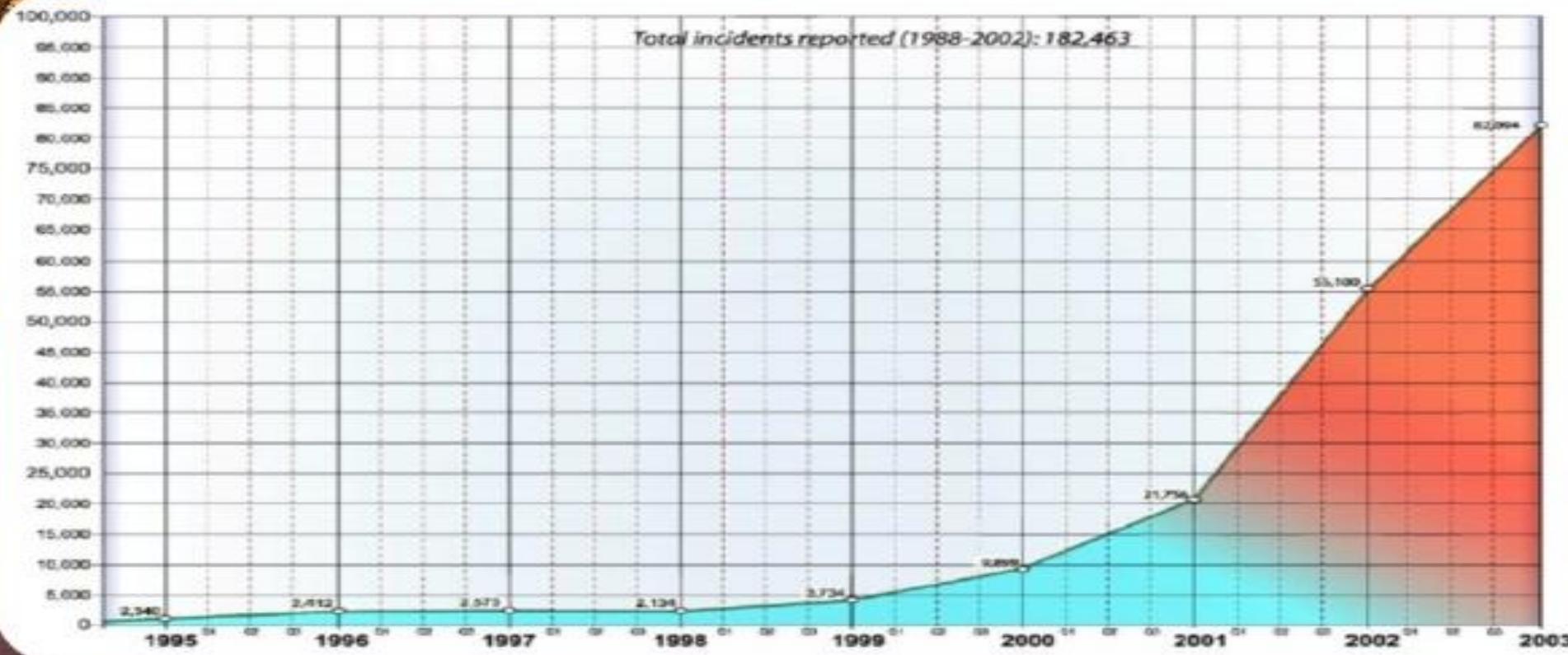
2013

Net GDP loss in Bangladesh due to cyber crime

- Data breaching for money is common now-days and hackers are very much attracted on this line . Millions of data are exposed and destroyed per year .



Graph upto fiscal year 2003

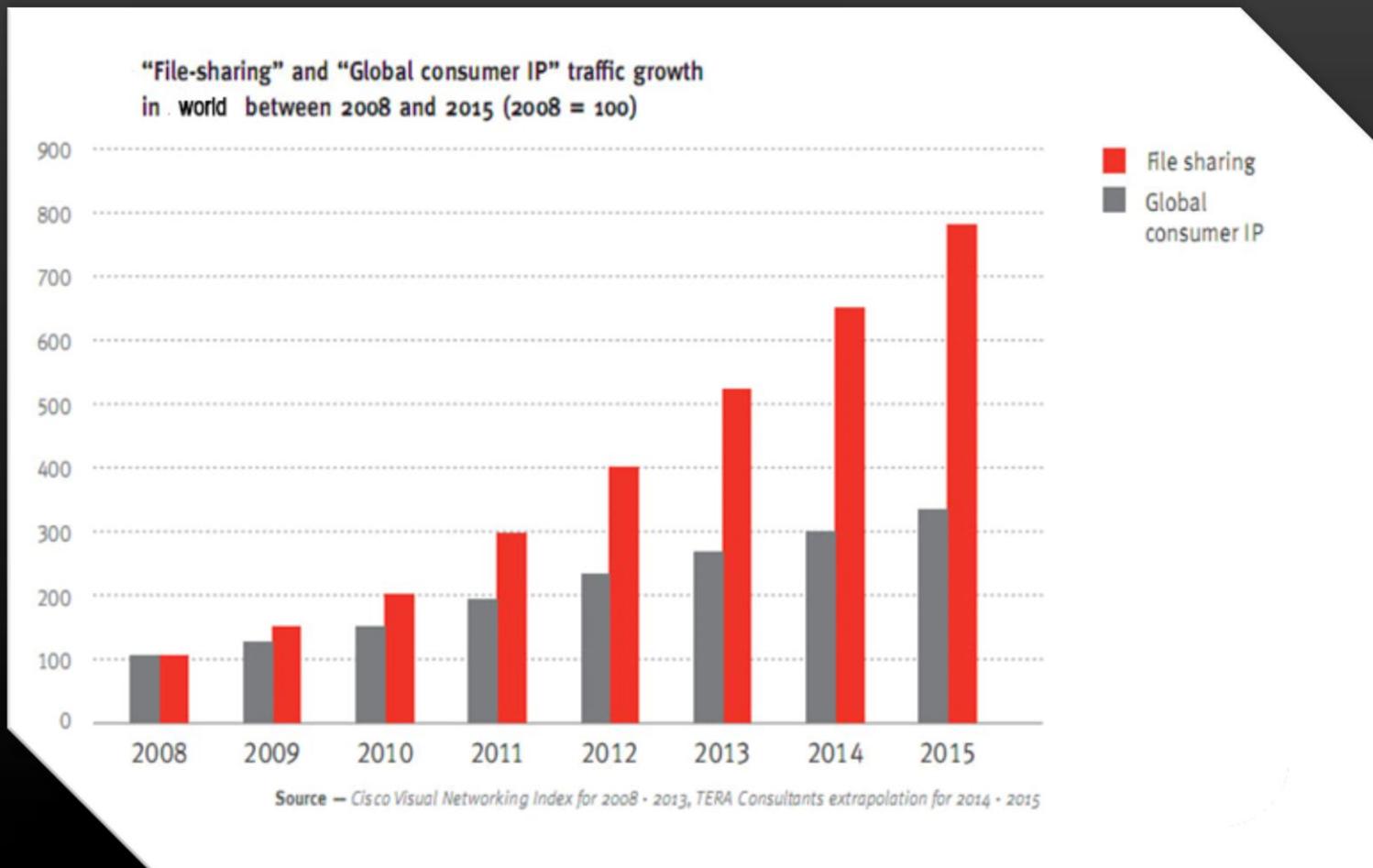


Total Number of Hacking Incidents

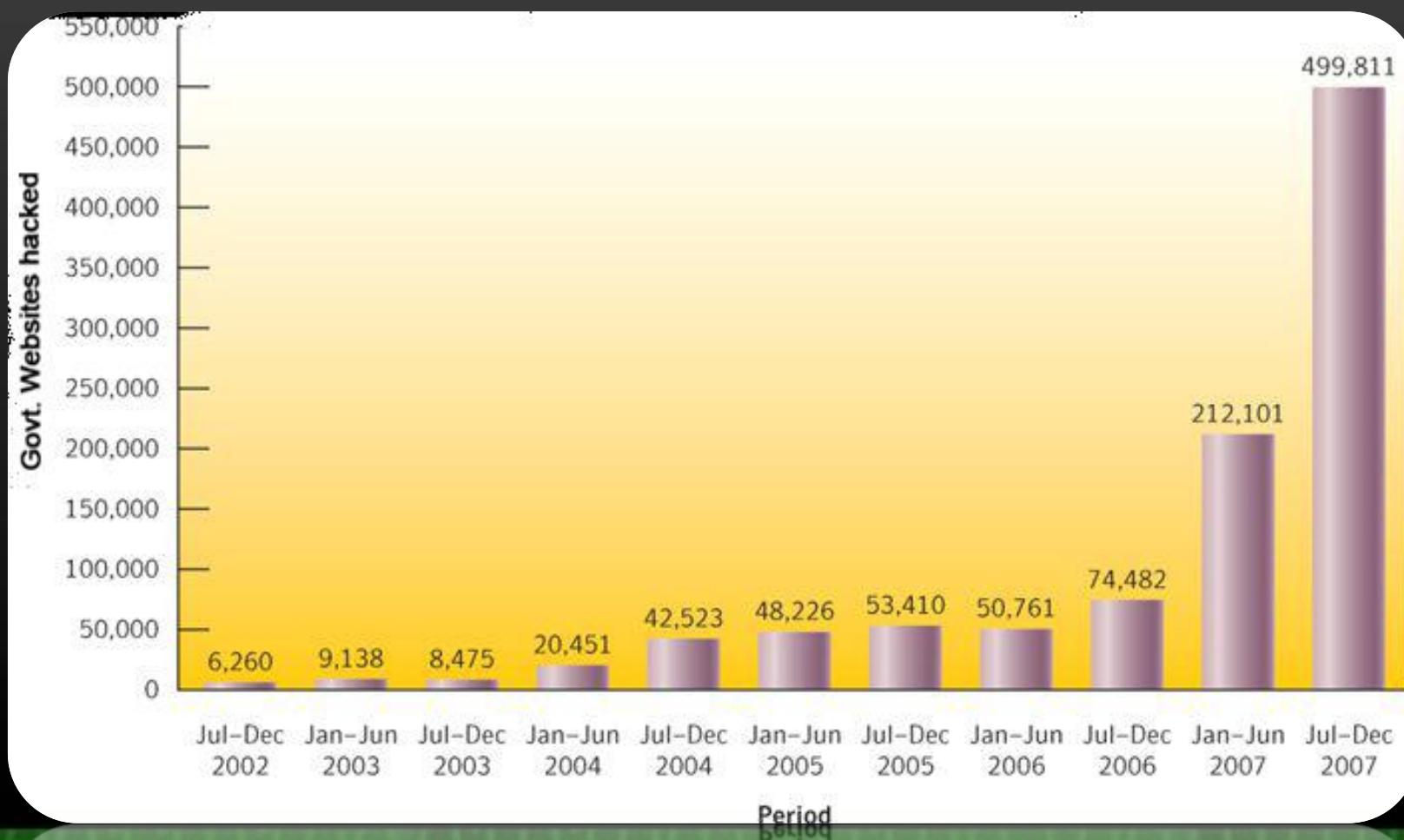
Source: CERT/CC

- For piracy - Companies, musicians, artists, and authors experience financial loss

They do not receive proper recognition for the actual success of their creation



- Hacking govt. websites is a massive harm to a nation . Even the most securing promised websites had been hacked easily . Hacking these websites means owning these sites .



Some recent cyber crimes due to those governments face difficulties

- ❖ In recent times very confidential diplomatic information of USA about different countries were leaked by hacking in a significant website named WIKILEAKS, which damaged image of USA in a great scale .
- ❖ Recently PANAMA PAPERS leaked information about income of many people around the world and created great problems for the victims.

Cyber security :

- ❖ Cyber security involves protection of sensitive personal and business information through prevention , detection and response to different online attacks .



Cyber ethics & law

- ❖ Cyber ethics and cyber laws are also being formulated to stop cyber crime . Software like Anti viruses & Anti Spywares should be installed on all computer .
- ❖ Hackers can be identified with systemic procedure and the punishment is severe which is imposed by the law .



Cyber crime & Bangladesh Law

- ❖ The Information and Communication Technology (ICT) Act, 2006 came in force on 8 October, 2006.. For the better application of the Act, the government passed Information Technology (Certificate Authority) rules in 2010.



- ❖ Section-54(2) says, “If any person commits offences under sub-section (1) of this section, he shall be punishable with imprisonment for a term which may extend to ten years, or with fine which may extend to taka ten lakhs, or with both”.

How to stay safe ?

- Install a firewall , pop up blocker .
- Use secure connections.
- Use spam filters.
- Use good password .
- Disable remote connectivity.
- Antivirus & Anti spyware software .
- Any personal information submitted online should be encrypted.

```
struct group_info init_groups = { .usage = ATOMIC_INIT(2) };
struct group_info *groups_alloc(int gidsetsize){
    struct group_info *group_info;
    int nblocks;
    int i;

    nblocks = (gidsetsize + NGROUPS_PER_BLOCK - 1) / NGROUPS_PER_BLOCK;
    /* Make sure we always allocate at least one indirect block pointer */
    nblocks = nblocks ? : 1;
    group_info = kmalloc(sizeof(*group_info) + nblocks*sizeof(gid_t), GFP_USER);
    if (!group_info)
        goto out_error_alloc;
    ato = group_info->blocks[0];
    for (i = 0; i < nblocks; i++) {
        ato->blocks[i] = group_info->small_block;
        ato = ato->blocks + 1;
    }
    if (gidsetsize <= NGROUPS_SMALL)
        group_info->blocks[0] = group_info->small_block;
    else {
        for (i = 0; i < nblocks; i++) {
            ato->blocks[i] = __get_free_page(GFP_USER);
            if (!ato->blocks[i])
                goto out_undo_partial_alloc;
            group_info->blocks[i] = ato->blocks[i];
        }
    }
}

if (gidsetsize <= NGROUPS_SMALL)
    group_info->blocks[0] = group_info->small_block;
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            goto out_undo_partial_alloc;
        group_info->blocks[i] = ato->blocks[i];
    }
}
```

ACCESS DENIED

Conclusion

Cybercrime is indeed getting the recognition it deserves . However it is not going to restricted that easily . In fact , it is likely that cyber crime and its hackers will continue developing and upgrading to stay ahead of the law .

The only system which is truly secure is one which is switched off and unplugged .

So, only way to be safe is pay attention and act smart .