

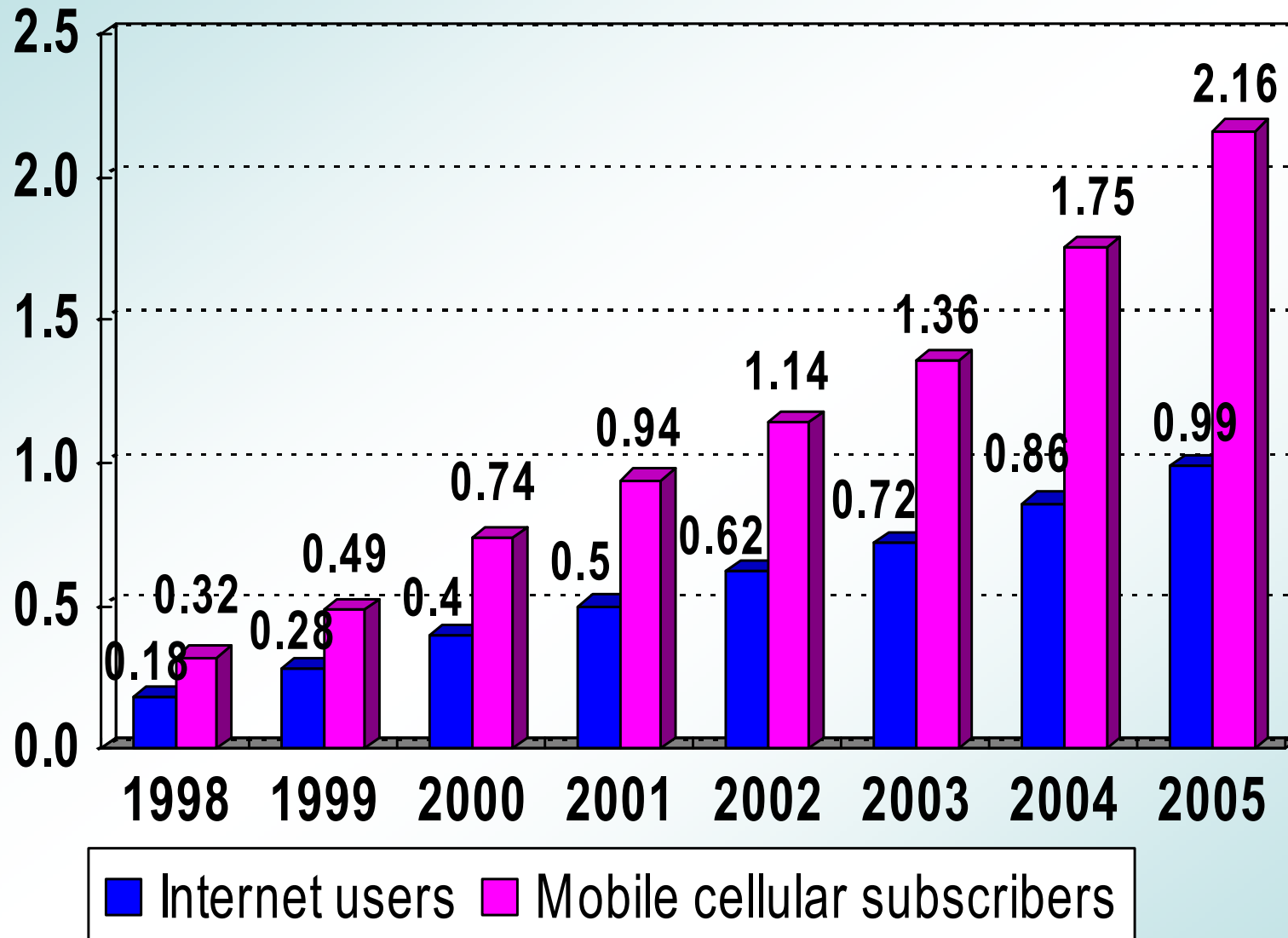
# Technology for Safe and Secure B-to-C E-commerce

November 9, 2007

Hajime Sasaki  
Chairman of the Board  
NEC Corporation

# Trend of Worldwide Internet Users and Mobile Cellular Subscribers

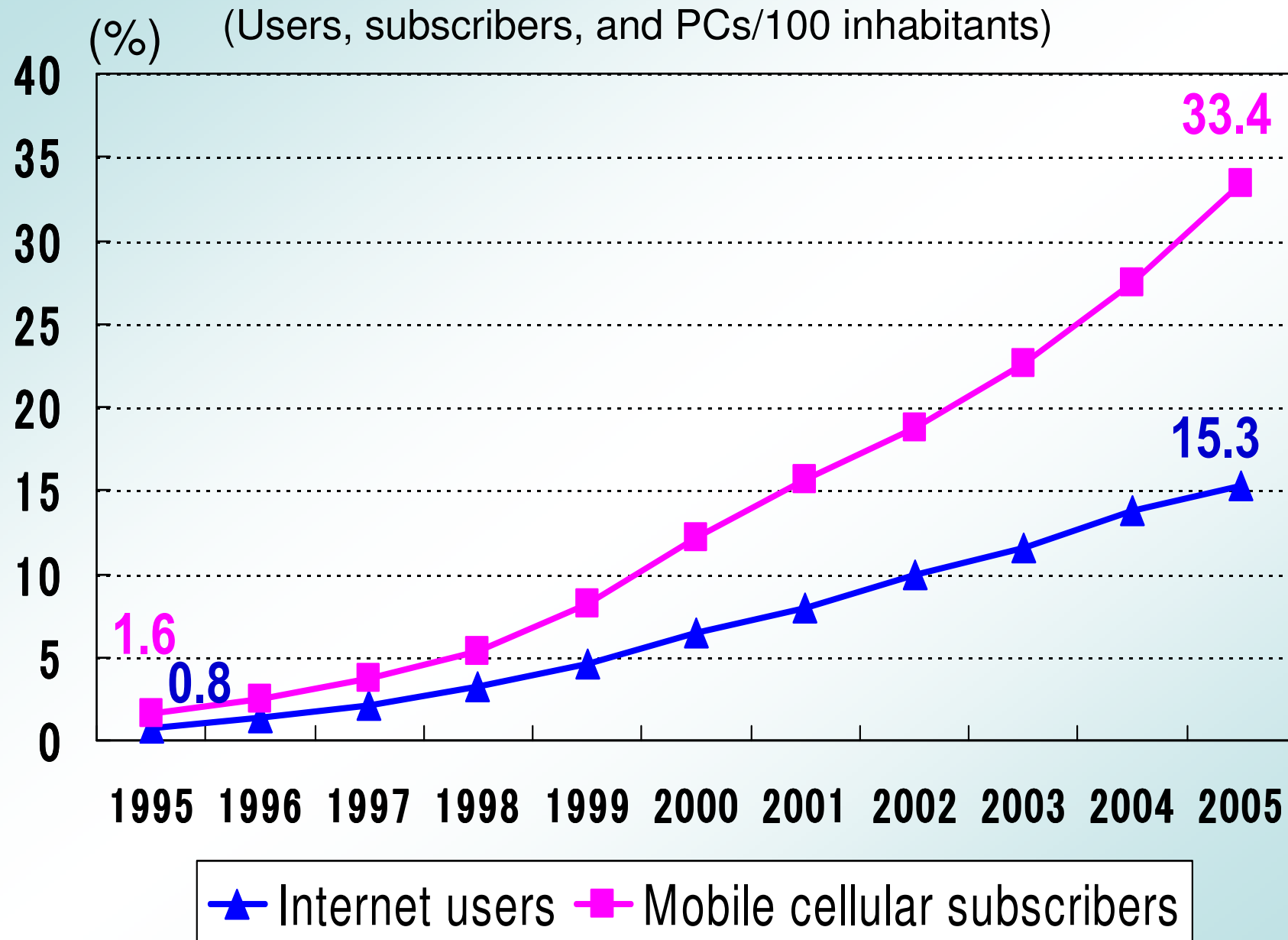
(Billion users & subscribers)



(Source: International Telecommunication Union [ITU])

Copyright: NEC Corporation

# Density of Worldwide Internet Users and Mobile Cellular Subscribers



(Source: ITU)

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## B-to-C E-commerce Market Values in 2005

	(Billion \$)
U.S.A.	188.9
Europe	166.6
Australia	31.5
Japan	30.0
Korea	8.5
China	2.0

(Sources: U.S. Census Bureau; European Information Technology Observatory; Australia Statistics Bureau; Ministry of Economy, Trade & Industry; and other government sources)

## Worldwide B-to-C E-commerce Trends - 1

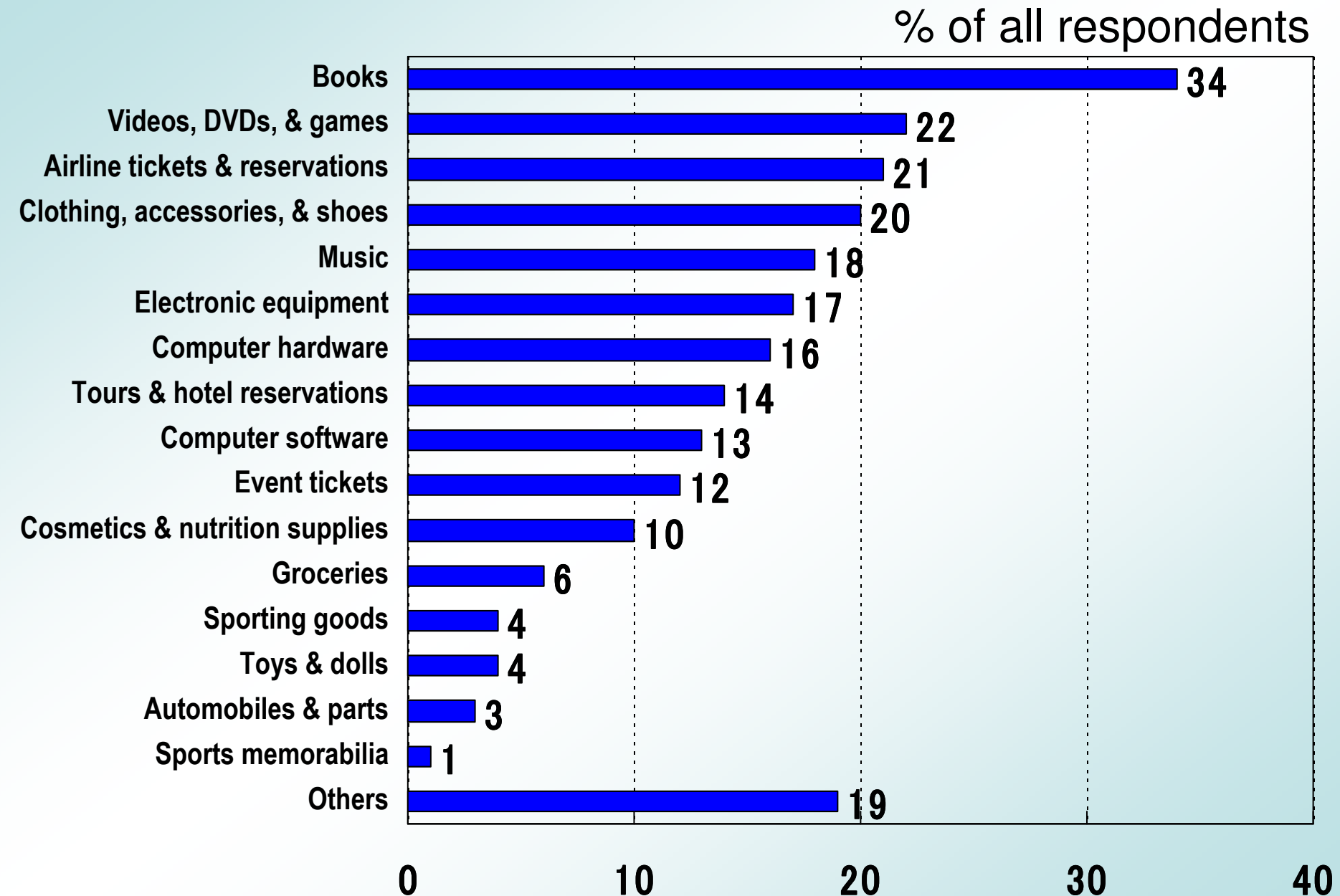
Results of survey on online shopping habits  
(21,261 consumers in 38 countries)

### **Percentage of respondents who have purchased over the Internet**

	<b>World- wide</b>	<b>Japan</b>	<b>U.S.A.</b>	<b>Europe</b>	<b>China</b>
<b>Males</b>	<b>80%</b>	<b>88%</b>	<b>89%</b>	<b>88%</b>	<b>63%</b>
<b>Females</b>	<b>74%</b>	<b>89%</b>	<b>88%</b>	<b>82%</b>	<b>64%</b>

(Source: ACNielsen, 2005)

# Worldwide B-to-C E-commerce Trends - 2: Last 3 Items Purchased

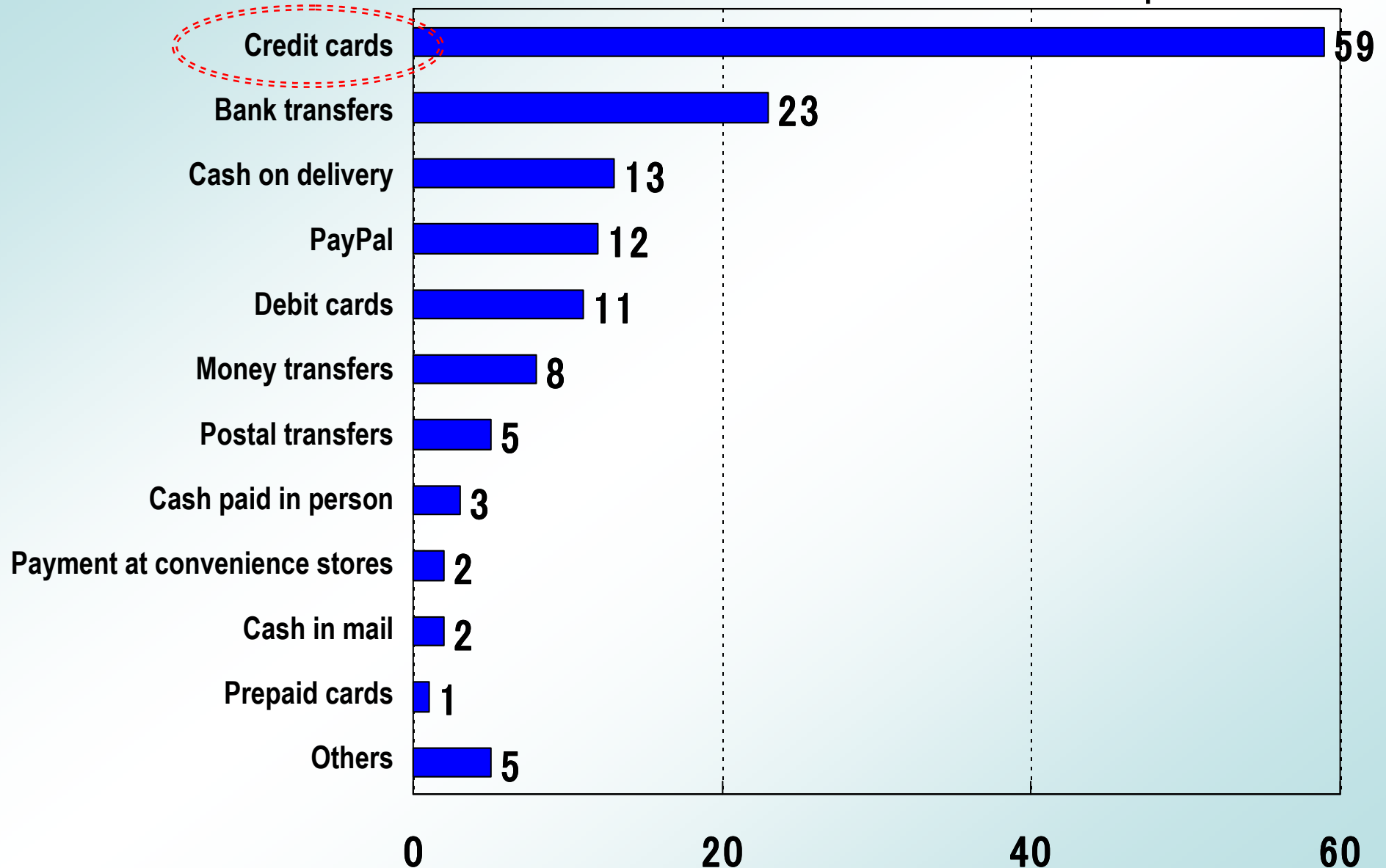


(Source: ACNielsen, 2005)

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# Worldwide B-to-C E-Commerce Trends - 3: Payment Methods

% of all respondents



(Source: ACNielsen, 2005)

Copyright: NEC Corporation

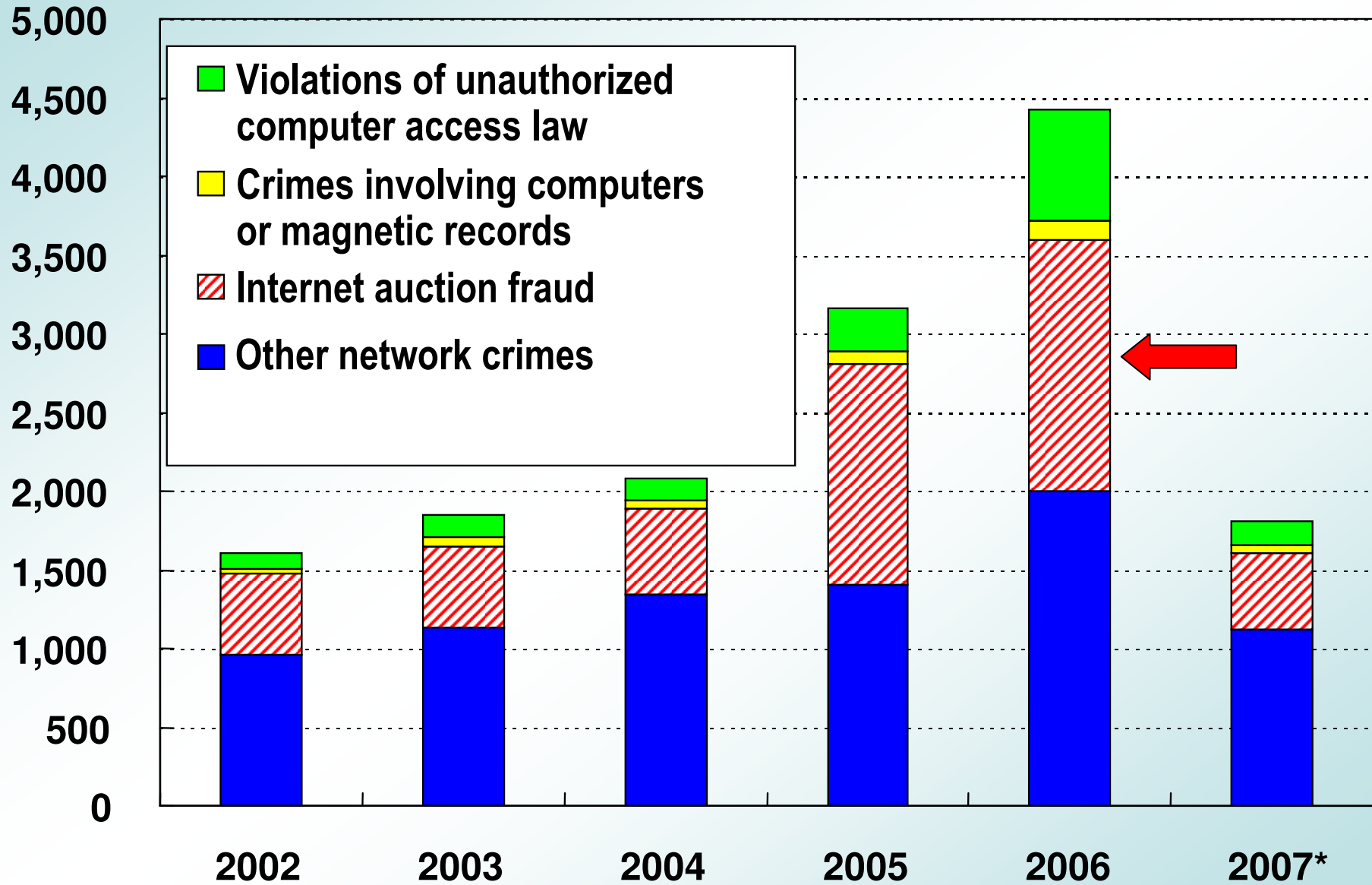
## Satisfaction with the Security of Online Shopping

<b>Percentage of respondents satisfied with the security of online shopping</b>		
<b>Japan</b>	<b>U.S.A.</b>	<b>Korea</b>
<b>16.2%</b> <b>(of 2,042 shoppers)</b>	<b>80.7%</b> <b>(of 1,011 shoppers)</b>	<b>32.2%</b> <b>(of 1,293 shoppers)</b>

(Source: Ministry of Internal Affairs and Communications)

# Trends of Cyber-Crime Arrests

(Cases)



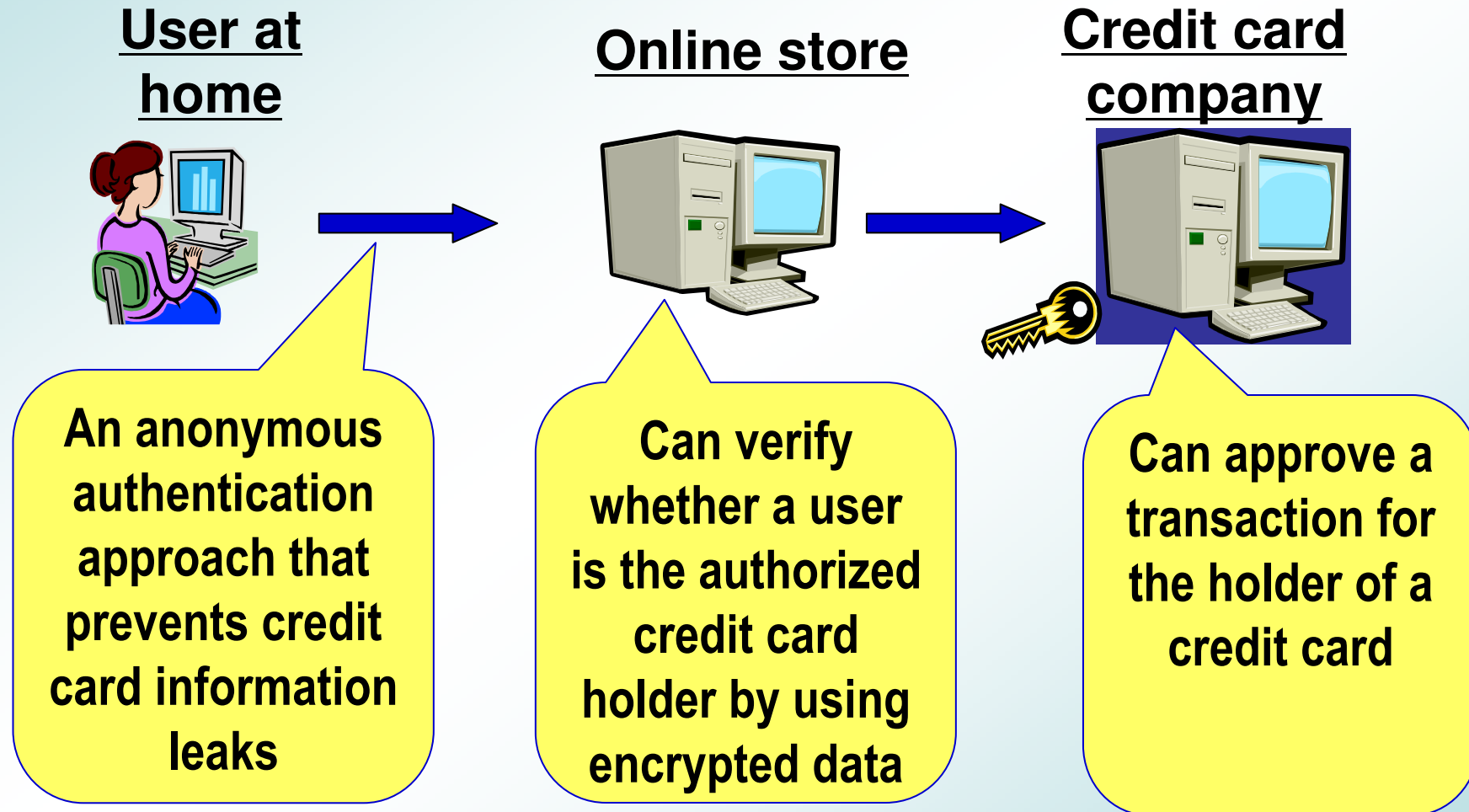
(Source: National Police Agency)

\*Number of cases from Jan. through June

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# World's Most Efficient Approach to Anonymous Authentication

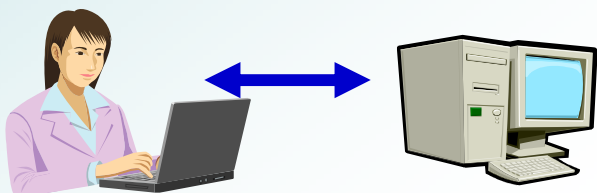
→ Enables verification of individuals belonging to an authorized group, reducing the risk of personal information leaks



## Features of Anonymous Authentication Approach

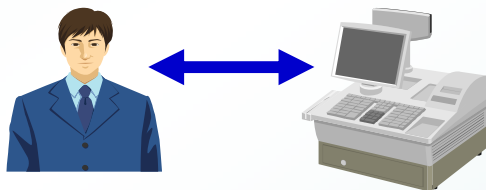
- **Protects user privacy**
- **Reduces the risk of personal information leaks**

### Online shopping



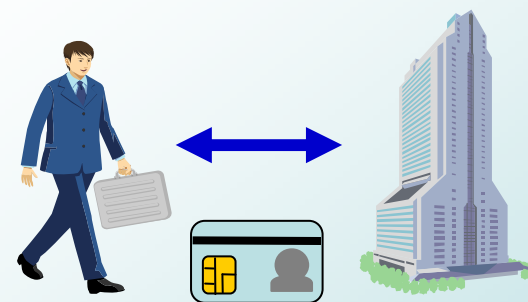
**No risk of credit  
card information  
leaks**

### Rentals of books and other items



**Protection of  
personal  
preferences**

### Entry & exit records

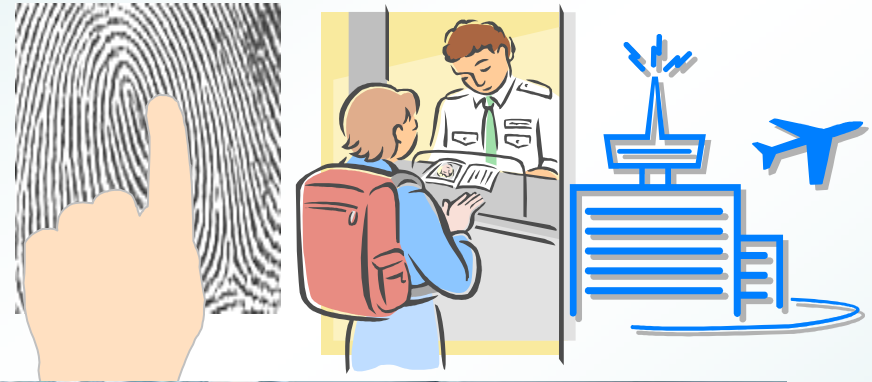


**Protection of  
location  
information**

## Example of Security Solutions

### E-Passport Project

→ Passports containing citizens' biometric information such as fingerprints and irises



# Global Customers of NEC's Biometric Solutions

## ■ Personal Identification

1. Singapore: National ID System
2. Singapore: Automated Border Control Gate
3. Singapore: Foreign Worker Permit Card
4. Singapore: Prison Management System
5. Singapore: Defense Access Control
6. Singapore: Iris Border Control for Motorcycles
7. Hong Kong: Immigration's ID Card Conversion
8. Hong Kong: Prison Verification System
9. Macau: Immigration's National Electronic ID Cards
10. British Home Affairs
11. German Home Affairs
12. South African Home Affairs

## ■ Automated Fingerprint ID Systems (AFIS) Targeting Criminals

Australia

Canada

China

El Salvador

Hong Kong

Indonesia

New Zealand

Saudi Arabia

Singapore

Spain

Taiwan

Thailand

Turkey

USA

## Security Technologies for a Safe and Secure Society

<b>Strategic Priorities for Science &amp; Technology</b>	<b>R&amp;D Targets</b>
<b>Ubiquitous security infrastructure</b>	<b>An environment in which information appliances are connected with networks and can be used inside and outside of homes</b>
<b>Implementation of information security technology</b>	<b>Technologies that protect information systems, networks, &amp; software from new threats, and minimize damages if they occur</b>

(Source: The Council for Science and Technology Policy)

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## Consumer Protection for B-to-C E-commerce

- 1. Transparent and effective protection**
- 2. Fair business, advertising, and marketing practices**
- 3. Online disclosure**
- 4. Confirmation process**
- 5. Secure payment**
- 6. Dispute resolution and redress**
- 7. Privacy**
- 8. Education and awareness**

(Source: Recommendations of the OECD Council Concerning Guidelines for Consumer Protection in the Context of Electronic Commerce)

**Empowered by Innovation**

**NEC**