

**ANNUAL SURVEY ON INFOCOMM USAGE IN
BUSINESSES FOR 2004**

EXECUTIVE SUMMARY

June 2005

EXECUTIVE SUMMARY OF ANNUAL SURVEY ON INFOCOMM USAGE IN BUSINESSES FOR 2004

KEY FINDINGS

Usage of Infocomm Appliances¹

- Overall, the usage level of infocomm appliances in companies² remained at 83% in 2004, the same level as 2003.
- 98% of companies with 10 or more employees used infocomm appliances³ in 2004, compared with 97% in 2003.
- However, only about 71% of companies with less than 10 employees used infocomm appliances in 2004, compared to 70% in 2003.

Usage of the Internet

- Overall, three-quarters (76%) of companies made use of the Internet in 2004, similar to 2003.
- 95% of companies with 10 or more employees made use of the Internet in 2004, compared to 93% in 2003. About 60% of companies with less than 10 employees made use of the Internet in 2004, compared to 59% in 2003.
- Broadband uptake in companies increased from 54% in 2003 to 59% in 2004, while narrowband penetration declined from 40% to 33% over the same period. In 2004, broadband penetration in companies with 10 or more employees, at 82%, was twice that of companies with less than 10 employees.

¹ Infocomm appliances refer to personal computers, laptops, workstations terminals, personal digital assistants (PDAs) or WAP-enabled mobile phones.

² Unless otherwise stated, for the rest of this executive summary, "companies" refer to all businesses and companies registered or incorporated in Singapore.

³ "Companies Using Infocomm" refers to companies using at least one infocomm appliance.

- Companies using broadband rated “greater productivity”, “faster turn-around and time-to-market”, and “lower costs and overheads” as the top three benefits of using broadband.

Wireless Technology

- Among companies using infocomm in their business, those that used wireless LAN increased from 26% in 2003 to 27% in 2004; the percentage using GPRS increased from 14% in 2003 to 16% in 2004.

INTRODUCTION

The Annual Survey on Infocomm Usage in Businesses for 2004 is the fifth in the annual series to gauge the usage of infocomm appliances and technologies by all companies in Singapore.

This Executive Summary provides an overview of the survey findings which includes usage of infocomm appliances and technologies in companies, especially the adoption of Internet technologies (broadband in particular). Findings on motivations and barriers affecting the take-up of these infocomm technologies are also presented.

METHODOLOGY

a. Scope and Coverage

A stratified random sampling method was used to ensure the survey respondents were representative of the major economic sectors in Singapore. More than 2,000 responses were received at the end of fieldwork.

b. Sampling Frame

The profiles of the companies surveyed are illustrated in Figure 1 and Figure 2 below.

Figure 1: Profile of Companies Surveyed by Economic Sector

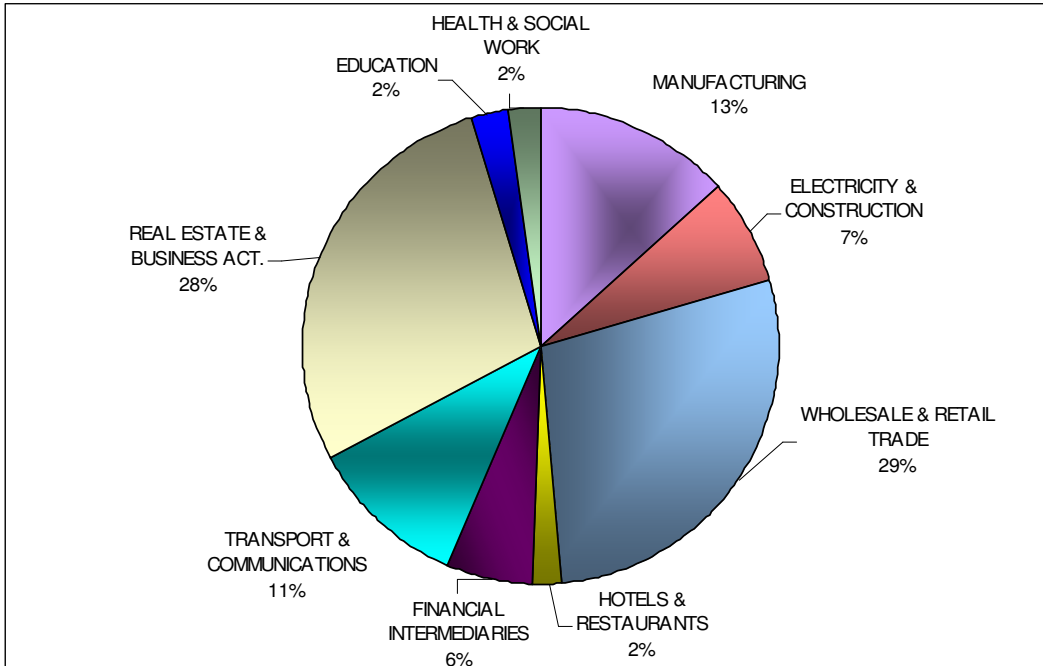
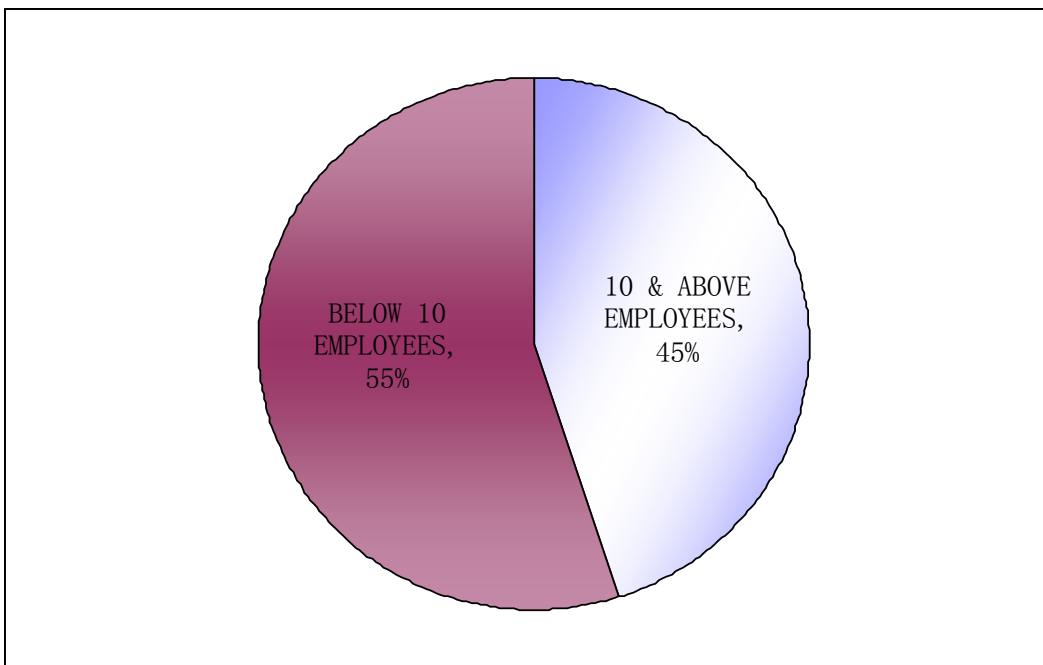


Figure 2: Profile of Companies Surveyed by Employee Size

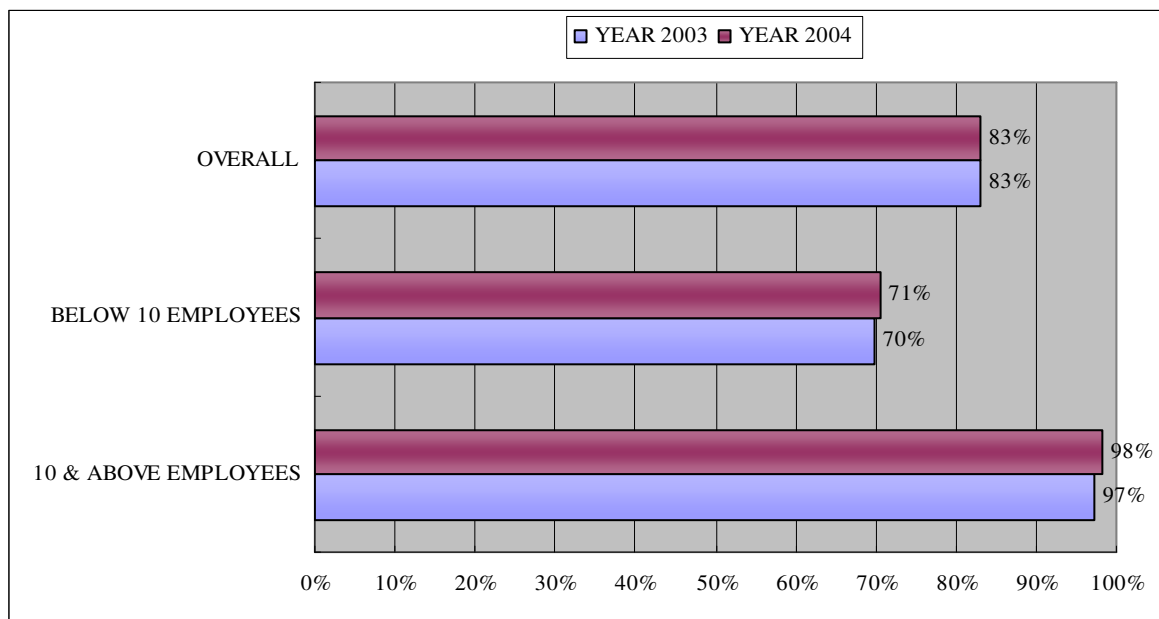


ALL COMPANIES

a. Usage of Infocomm Appliances

- Overall, the percentage of all companies using infocomm appliances in 2004 was 83%, similar to that of the previous year (Figure 3).
- The usage of infocomm appliances by companies with less than 10 employees was about 71% compared with almost all (98%) for companies with 10 or more employees.

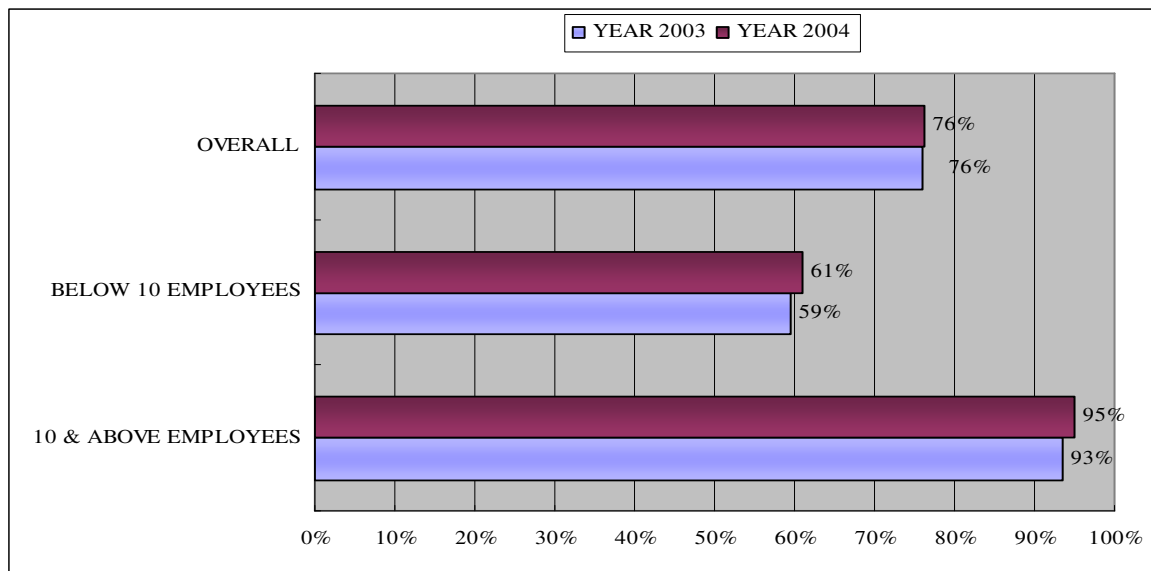
Figure 3: Usage of Infocomm Appliances (2003 to 2004)



b. Usage of Internet

- Overall, the usage level of Internet technologies (both broadband and narrowband) in all companies had remained constant at around 76% (Figure 4).
- For companies with 10 or more employees, Internet usage penetration remained fairly constant around the 95% mark.
- The adoption of Internet by companies with less than 10 employees had remained constant in 2004, hovering at around the 60% level.

Figure 4: Usage of Internet (2003 to 2004)



- For 76% of those companies that used Internet in 2004, their top three uses were for “Online Research” (72%), “Internal Communications” (61%), and as a “Platform to Deliver Content” (55%).
- More companies are using the Internet for delivery of content in 2004 instead of just as a tool for marketing and promotion. (Table 1)

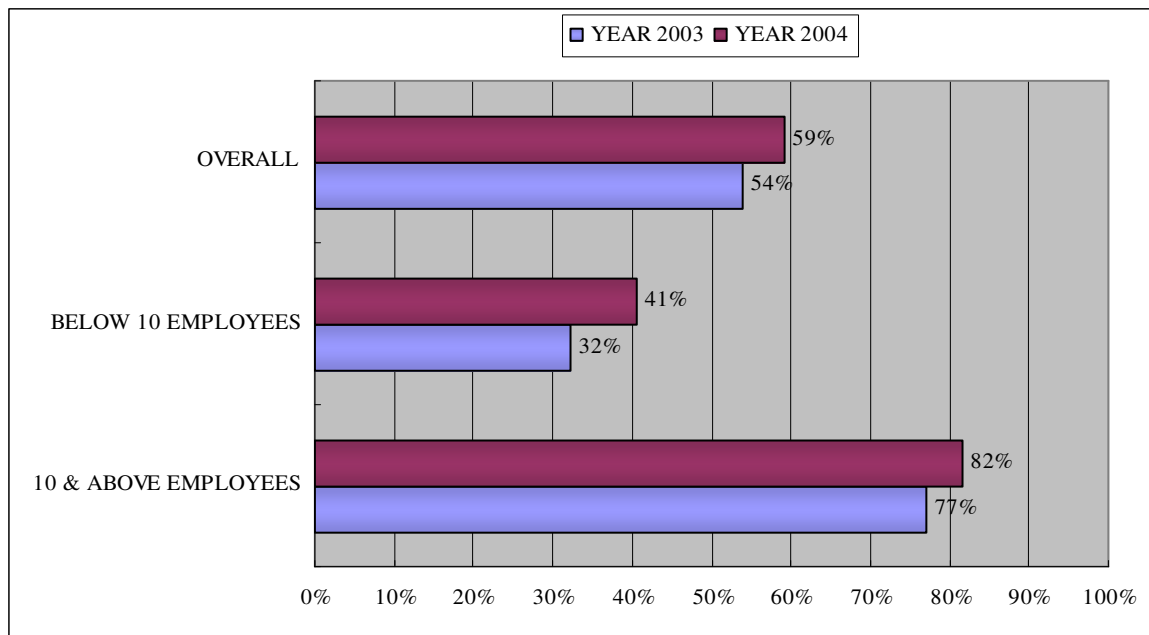
Table 1: Uses of Internet

Top 3 Uses of Internet	2004	2003
Online Research	72%	70%
Internal Communications	61%	62%
Platform to Deliver Content	55%	-
As a Tool for Marketing / Promotion	-	55%

c. Usage of Broadband

- Overall, broadband usage level in companies increased from 54% in 2003 to 59% in 2004 (Figure 5).
- Broadband Internet usage level in companies with 10 or more employees were consistently at least twice that in companies with less than 10 employees for the past two years.

Figure 5: Usage of Broadband (2003 to 2004)



- For 59% of those companies that used broadband in 2004, the top three uses were “Hosting and Hubbing” (19%), “Video-conferencing” (13%) and “Video-Streaming” (7%). These were also the main uses of broadband Internet in 2003. (Table 2)

Table 2: Uses of Broadband

Top 3 Uses of Broadband	2004	2003
Hosting and Hubbing	19%	20%
Video-conferencing	13%	14%
Video-Streaming	7%	-
Video-Streaming & Internet Data Centre Services	-	7%

- In 2004, the most important factors for companies deciding to use broadband, with a rating of 3 or more on a scale of 1 to 5 (where 5 is the most important), were “Reliability/Stability” (97%), “Ease of Use” (95%) and “Affordability” (93%). (Table 3)

Table 3: Factors Determining Adoption of Broadband

Top 3 Factors Determining Adoption of Broadband (% Rating 3 & Above)	2004	2003
Reliability/Stability	97%	96%
Ease of Use	95%	94%
Affordability	93%	93%

- On the same scale and importance rating of 3 & above, companies rated achieving “Greater Productivity” (86%), “Faster Turn-Around And Time-To-Market” (77%) and “Lower Costs and Overheads” (74%) as the three most important benefits achieved with using broadband in 2004. (Table 4)

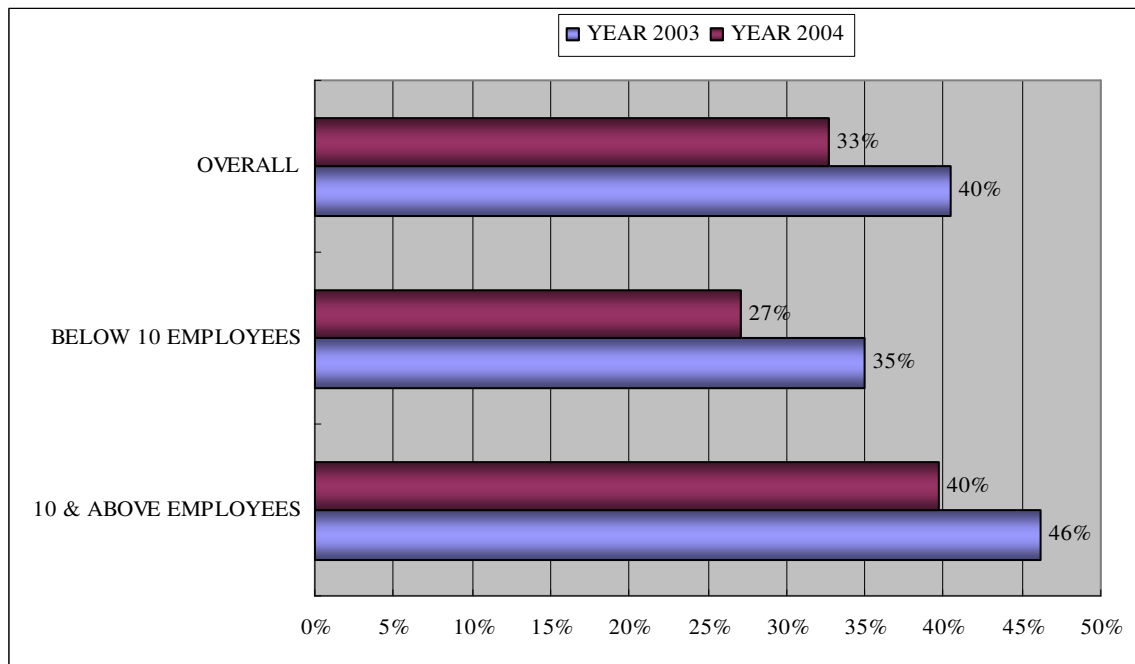
Table 4: Benefits of Using Broadband

Top 3 Benefits of Broadband (% Rating 3 & Above)	2004	2003
Greater Productivity	86%	86%
Faster Turn-Around And Time-To-Market	77%	79%
Lower Costs And Overheads	74%	76%

d. Usage of Narrowband

- On the other hand, percentage of companies using narrowband Internet decreased from 40% to 33% between 2003 and 2004 (Figure 6).
- This could be partially due to companies shifting from narrowband to broadband Internet

Figure 6: Usage of Narrowband (2003 to 2004)



e. Motivations & Barriers to Infocomm Usage

- Companies indicated that the most effective methods to encourage infocomm usage were “Assistance in Skills Development and Knowledge Acquisition” (82% rating 3 or more, on a scale of 1 to 5, with 5 being the most important) and “Financial Assistance and Grant for IT Implementation” (81%). “Assistance in Needs Analysis for Infocomm Usage” was third on the list with 77% rating 3 or more. (Table 5)

Table 5: Motivations to Infocomm Usage

Top 3 Motivations to Infocomm Usage (% Rating 3 & Above)	2004	2003
Assistance in Skills Development and Knowledge Acquisition	82%	81%
Financial Assistance and Grant for IT Implementation	81%	80%
Assistance In Needs Analysis For Infocomm Usage	77%	76%

- In 2004, companies were most concerned about the “Cost of Implementation” when deciding to use infocomm. On a scale of 1 to 5 (with 5 being most concerned), about 86% indicated a rating of 3 or more for this concern. “Security Issues” was the next highest concern (83% rating 3 and above), followed by “Difficult to Keep Pace With Changes in Technology” (82% rating 3 and above).
- While “Technical Problems” used be an important barrier to infocomm usage in 2003, this was not among the top 3 concerns in 2004. (Table 6)

Table 6: Barriers to Infocomm Usage

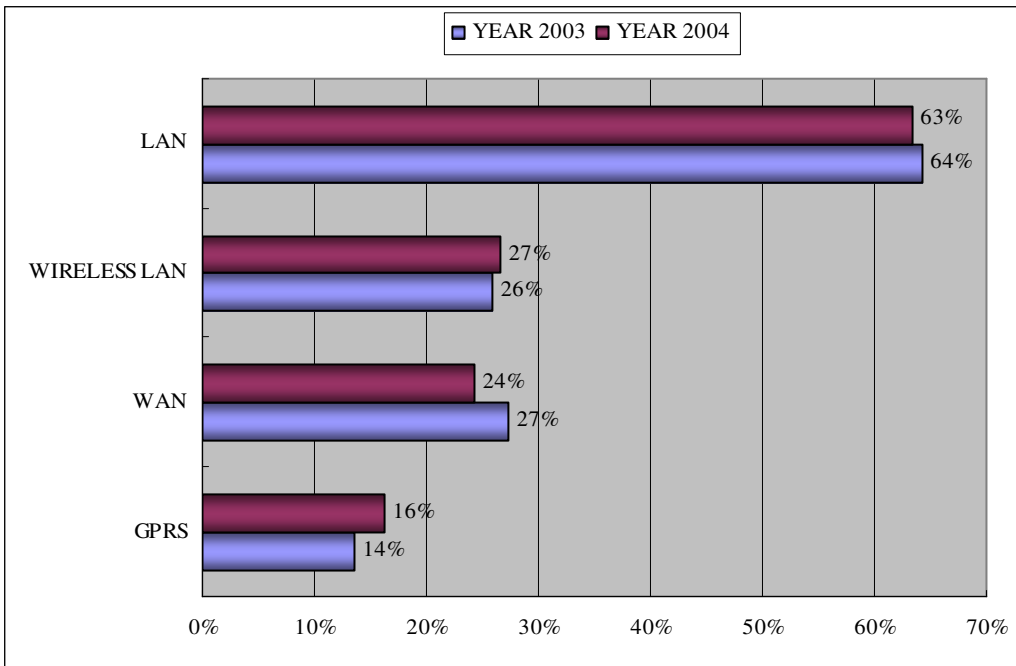
Top 3 Barriers to Infocomm Usage (% Rating 3 & Above)	2004	2003
Cost of Implementation	86%	83%
Security Issues	83%	78%
Difficult To Keep Pace With Changes In Technology	82%	-
Technical Problems	-	76%

COMPANIES USING INFOCOMM (83% of all companies)

a. Usage of Infocomm Network Technologies

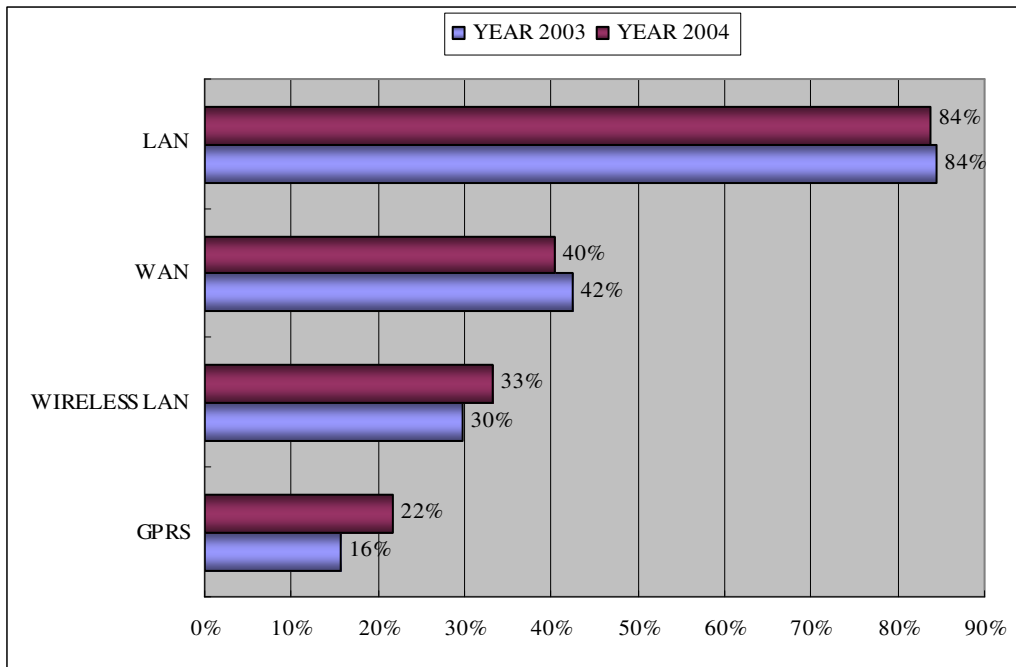
- Overall, the percentage of companies using different types of infocomm network technologies remained at the same level from 2003 to 2004 (Figure 7).
- The most commonly used infocomm network technologies were LAN (63%) followed by wireless LAN (27%) and WAN (24%).

Figure 7: Usage of Infocomm Network Technologies (2003 to 2004)



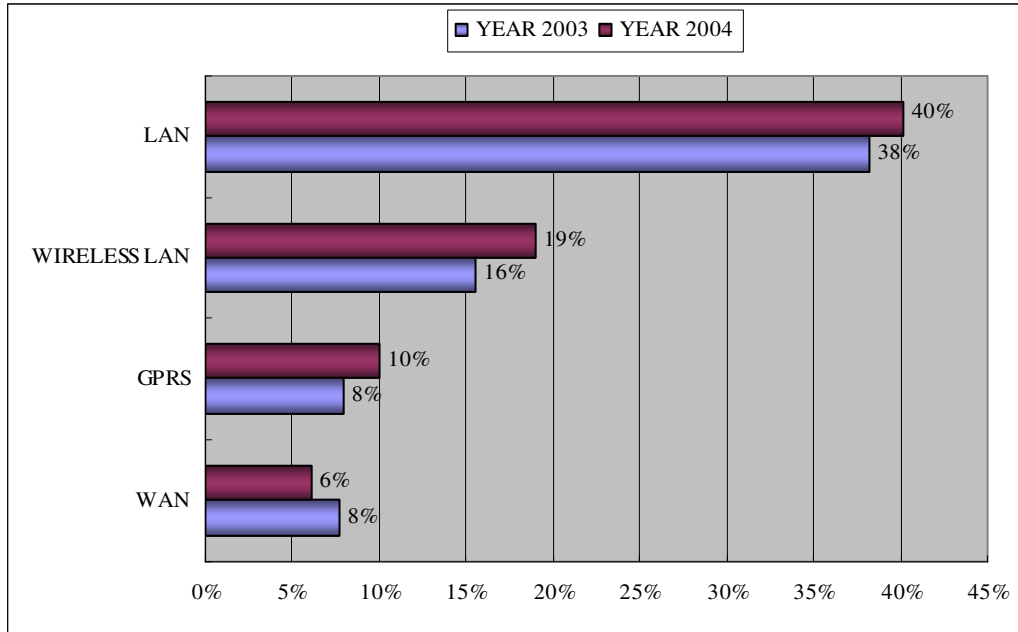
- The three most commonly used infocomm network technologies among companies with 10 or more employees in 2004 were LAN (84%) followed by WAN (40%) and wireless LAN (33%). (Figure 8)

Figure 8: Usage of Infocomm Network Technologies (10 & Above Employees - 2003 to 2004)



- The three most commonly used infocomm network technologies among companies with less than 10 employees in 2004 were LAN (40%), followed by wireless LAN (19%) and GPRS (10%). (Figure 9)
- Due to the smaller sizes of these companies, WAN was less widely used than in those companies with 10 or more employees.

Figure 9: Usage of Infocomm Network Technologies (Below 10 Employees - 2003 to 2004)



b. Security & Trusted Services

- In 2004, the most commonly used forms of identity management and perimeter defence services were “Content Screening/Anti-Virus” (63%), “Firewall/Gateway” (50%) and “Intrusion Detection/Prevention” (33%).

Table 7: Usage of Identity Management and Perimeter Defence Services

Top 3 Identity Management and Perimeter Defence Services Used	2004	2003
Content Screening /Anti-Virus	63%	56%
Firewall/Gateway	50%	47%
Intrusion Detection/Prevention	33%	-
Virtual Private Network / IP Security Infrastructure	-	28%

CONCLUSION

Overall, 8 in 10 companies used infocomm appliances in 2004, the same level as in the previous year. Of these, nearly all companies with 10 or more employees (98%) used infocomm appliances, while 7 in 10 companies with less than 10 employees did so.

The uptake of broadband among companies accessing the Internet had increased rapidly and replacing narrowband as the prevalent form of Internet access.

The increased usage figures for wireless technologies also suggested that more companies were accepting newer technologies such as wireless LAN and GPRS in their business operations.

As companies rely ever more on the Internet, security technologies such as “Content Screening / Anti-Virus”, “Firewall / Gateway” and “Intrusion Detection / Prevention” were used to secure their corporate assets. Increasing awareness of the importance of infocomm security prompted more companies to adopt security technologies.

“Cost of Implementation”, “Security Issues” and “Difficult to Keep Pace With Changes in Technology” were the top barriers to infocomm adoption. Companies indicated that they would be encouraged to use infocomm if they were given “Assistance in Skills Development and Knowledge Acquisition”, “Financial Assistance and Grant for IT Implementation” and “Assistance in Needs Analysis for Infocomm Usage”.