

# PROSPECTS FOR DIFFERENTIATED GROWTH IN IT INDUSTRY

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## Domestic and external IT industry trends

The world IT industry suffered a slump until the third quarter of 2001, and recently started to recover. The worldwide economic recession and overinvestment in the IT industry caused IT industry growth to record only 1.1% in 2001. The US, which accounts for over 30% of the world IT market, contracted by 2.1%, which was a key factor in the worsened IT industry conditions. After the fourth quarter of 2001, factors such as the increase in DRAM prices are expected to bring an upturn of the IT industry from its two year slump and enter a second boom.

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Table 1. Size of World IT Markets

	2000	2001	Growth Rate
World	9,871	9,980	1.1
Asia Pacific	651	668	2.7
United States	4,411	4,320	-2.1

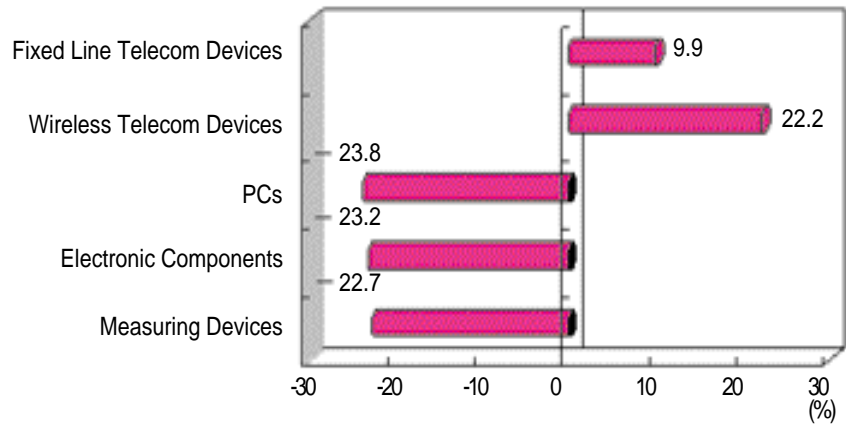
Source: Knowledge Research Group

Domestically, the industry is expected to recover strongly from its deep stagnation. In 2001, the domestic IT market contracted by 14.1% due to the export decline resulting from the world recession as well as less investment by domestic companies in IT. In particular, the export of PCs and electronic components (excluding semiconductors) fell by 23.8% and 23.2% respectively last year, acting as key factors in the IT slump. However, exports of wireless telecom equipment supported the industry by rising 22.2%. Recently, the domestic IT industry has been showing a rapid recovery thanks to an upturn in the domestic economy and increase in DRAM prices. Demand is expected to gradually increase with the release of new mobile phone models and demand for new PCs. Exports are also expected to rise significantly, with higher demand for

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system and network equipment with the expansion of CDMA devices and e-commerce.

Figure 2. Export Growth of Key Domestic IT Products in 2001



Source: Ministry of Commerce, Industry, and Energy

Unlike during the IT boom in the late 1990's, not all IT sectors are expected to see rapid growth in the coming industry recovery. Growth of a sector will be determined by factors such as the market maturity of a product, and the possibility of whether new demand can be created by fusion of technology.

### Rising IT sectors

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“Post PCs”, such as PDAs, smartphones, and thin clients are expected to gradually replace PCs and become the means of communication and information exchange in the 21st century. According to the US market research firm IDC, the market for post PCs in 2010 is forecast to be ten times the size of the PC market. Despite the economic recession, sales of PDAs (personal digital assistant) have grown rapidly, and due to the expansion of wireless Internet, PDA sales are expected to grow by over 30% yearly until 2005.

Smartphones are next-generation mobile telecom devices that combine the functions of CDMA mobile phones and portable PCs, and demand has been created by adding PDA functions as well. A thin client is a computer that connects to a network, without a hard disk or other peripherals. Thin clients are currently enjoying explosive demand from businesses as their price is about half that of PCs.

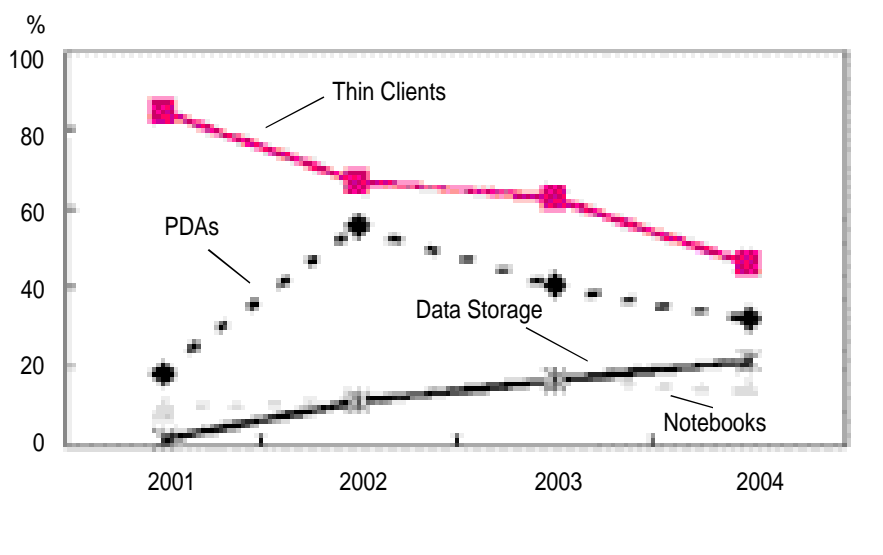
Wireless computer networking uses to devices that transmit and receive data on a wireless basis, and this sector is expected to see rapid growth worldwide during the next five years. In particular, with the expansion of mobile

business, the solutions and contents industry for wireless Internet is also expected to grow rapidly.

Although the market for desktop PCs is now in its maturity, notebook PCs are expected to see a growth rate of over 10% a year. This market expansion is expected to help the share of notebook PCs in the domestic PC market to increase from 14% in 2001 to about 27% in 2004. Meanwhile, the data storage industry is expected to grow at about 15% yearly until 2003, due to greater requirements from software, especially games.

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Figure 2. Expected World Market Growth for Rising IT Products



Source: IDC, Dataquest, TriGem Computer

### Declining IT sectors

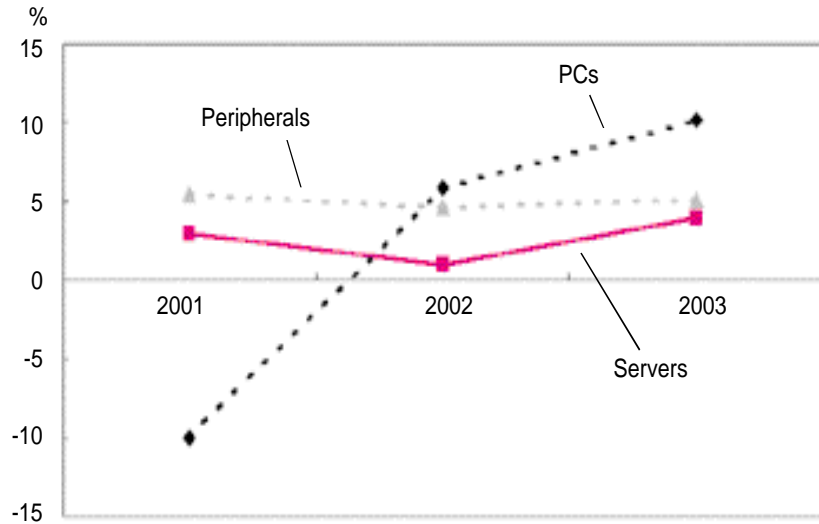
The PC industry, which had grown by more than 15% yearly until 2000, showed negative growth in 2001 and is expected to grow by single-digits after 2002. This is because the PC market is almost saturated due to high distribution rates, and Intel's technology standardization is causing the industry to become a simple assembly industry. In addition, the distribution margin is declining with the expansion of sales through TV and the Internet, leading to lower prices. New demand is also being transferred to post PC technologies such as PDAs which are also slowing the growth of the PC industry. As a result, with the exception of demand to replace obsolete models and demand for notebooks, it is not expected that new demand will be created in the PC industry, which seems to have entered its mature phase.

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Affected by the slowdown of the PC industry, servers and peripherals are expected to show modest growth of about 5% yearly until 2003. Servers in particular are expected to see a slowdown due to a shift in the focus of corporate IT investment from hardware to software such as solutions and contents.

— Figure 3. Expected World Market Growth for Declining IT Products —



Source: Dataquest, KIET, KETI  
 Note: The market growth for PCs excludes notebook computers

**Discussion and Future Tasks**

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With unclear growth prospects for the IT industry, Korea should actively invest in and foster promising IT industries. Some future tasks include: perceiving demand trends for IT products, making mid to long term plans for development of IT technology, and renewed investment in research cooperation between business and academia. First, a meticulous forecast of future demand should be made to predict which IT products will be popular, in order to determine the IT sectors that should be fostered. Second, mid to long term technology development plans should be made to acquire core technology for IT products that are expected to see rapid growth. The US and Japan have already taken this step, with the US announcing its long term plan for developing ten IT industries and six applications in July 2001, and Japan’s implementation of its “IT 21 Plan” in which it aims to become the world’s IT leader. Third, joint research projects between business and academia should be further invigorated to achieve the goals of fostering specialized talent and applying basic technology. **VIP**

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