



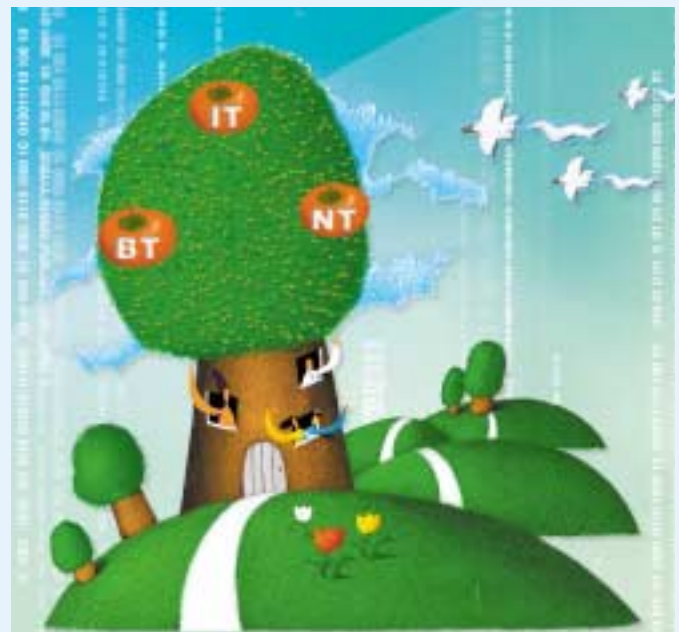
IT-BT-NT Chain

Fusion Tech -- Next-Generation Growth Engine

With recent projections that fusion technology would become the core of future technologies, research into state-of-the-art fusion technologies combining IT, BT, NT, etc. is brisk worldwide.

Development of remote control technology integrating such technologies is underway abroad centering on mobile equipment like PDA, while national projects are also proceeding in order to establish infrastructure capable of linking personal mobile health care systems to an emergency medical system. To build such infrastructure, research is being conducted in Europe following organization of multinational consortiums.

The global market for u-health, the core of the fusion technology revolution, is forecast to reach US\$5.9 trillion in 2012. Among this total, u-digital health is expected to account for US\$380 billion. Above all, the average growth rate of the u-digital health market is likely to be more than three times that of the general health market. Therefore, all IT, BT and NT business communities are focusing their attention on this area.



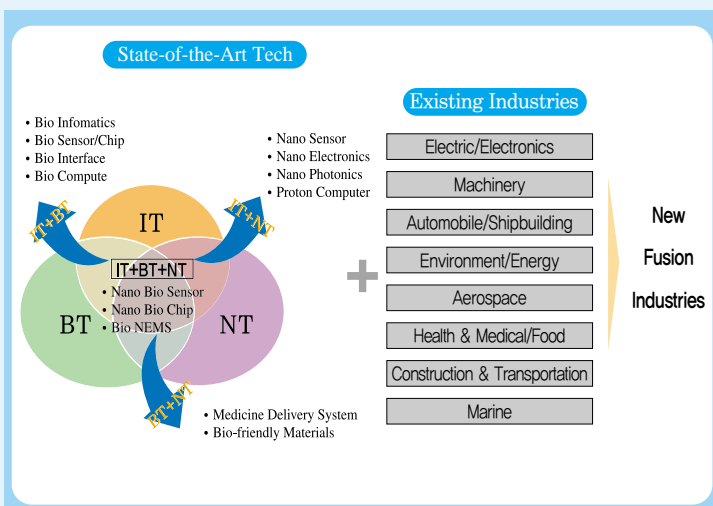
In January 2007, a domestic research group developed a technology enabling diagnosis of liver functions on a real-time basis with linkage to a mobile phone, drawing keen attention at home and abroad.

The key to this technology, which is expected to emerge as a core element to open the u-digital health era, is bio sensor technology that measures liver functions electrically and chemically.

As a device to investigate material properties utilizing the functions of living creatures, bio sensor is highlighted as a future fusion technology that integrates IT and NT into BT. The application areas for bio sensors are innumerable, they not only diagnose and predict various kinds of diseases but also analyze protein structure for development of artificial genes, etc.

Domestic bio-related business circles and research institutes are making all-out efforts for development of bio

● Development Direction for New Fusion Industries



sensors. Infopia has developed a blood glucose diagnostic system required for diagnosis and management of diabetes and is exporting the system as well as selling it on the domestic market. Following the success of this device, Infopia is developing a heart disease diagnostic kit and cancer diagnostic kit, targeting to complete development by end 2007.

KMH, which specializes in medical information system establishment, etc., has also developed a bio sensor to diagnose diabetes. The product developed by this company is the world's first continuous non-invasive blood glucose diagnostic device, which will go into mass production this year.

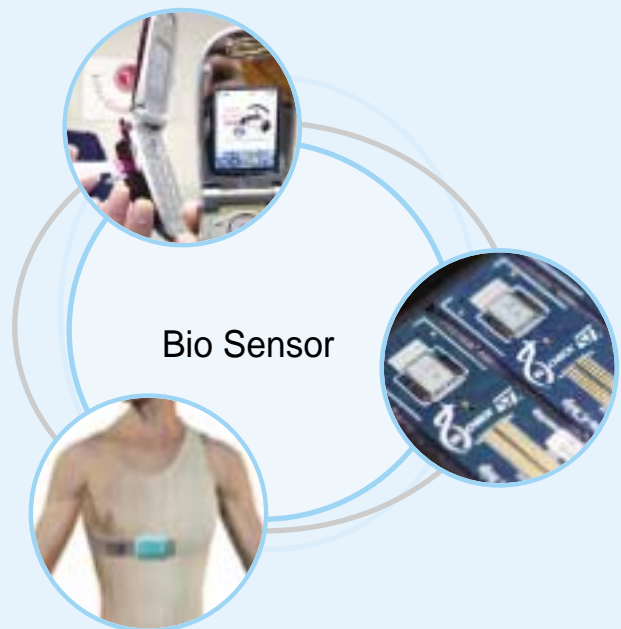
IT, BT and NT research institutes like Korea Research Institute of Bioscience and Bioindustry (KRIBB), Korea Electronics Technology Institute (KETI), Korea Advanced Institute of Science and Technology (KAIST), etc., are also developing bio sensor technologies and their patent applications for research results are becoming increasingly active.

Patent applications for bio sensors, which stood at only 106 cases until 2000, showed rapid growth, including 327 cases filed since 2001. Patent applications for nano-related bio sensors, bio sensor technologies utilizing carbon nanotubes, zinc oxide-based nanorods, etc., also are brisk, reflecting the fact that bio sensor technologies are being developed through IT, BT and NT fusion technologies.

If this trend continues, it is projected that based on IT, where Korea has a comparative advantage, the nation will commercialize BT and NT-grafted bio sensors on a broad scale. As new markets related to material analysis are expected to be explored in diverse areas as well as the medical field, efforts to secure patent rights at an early date also are required.

On December 12, 2006, a domestic venture company, Digital Bio Technology, developed 'Lab on a Chip' to monitor blood information with a single mobile blood diagnostic device.

'Lab on a Chip' is a fusion-type NT and BT device that enables the conduct of lab research work utilizing a nail-



size chip and extremely low sample volume. If this technology is commercialized, prompt blood diagnosis at accident sites as well as remote and secluded areas and data transmission also will become possible.

Digital Bio Technology developed a core technology to carry out a pre-treatment process by mixing samples, blood, etc., and reagents in a constant ratio and reacting them on 'Lab-on-a Chip.' It has filed a patent application for this technology.

With development of blood pre-treatment technologies together with measurement of micro-fine fluid components, signal measurement and micro-chip filter, the company has acquired patented technologies required for utilization of Lab-on-a-Chip as a field diagnostic device and prepared the foundation for commercialization.

Although large domestic enterprises and research institutes have thus far pursued development of Lab-on-a-Chip-utilizing diagnostic devices, it is the first time that the technology enabling the mounting of a pre-treatment process onto a small mobile device was accomplished.

'KEA Spring 2008' to Be Held in Daegu

On June 13, KEA, Daegu Metropolitan City and Gyeongsangbuk-do province held an MOU signing ceremony at Hotel Inter-Burgo in Daegu and agreed to cooperate in organizing 'KES Spring' at Daegu EXCO (Exhibition & Convention Center) starting next spring.

As Korea's representative electronics and information-communication exhibition, gaining a strong reputation at home and abroad, KES (Korea Electronics Show) has been held annually in October at KINTEX (Korea International Exhibition Center) in Goyang City, Gyonggi-do. A total of 607 companies, including 196 foreign firms, are expected to participate in the upcoming KES 2007 slated for October this year, along with about 250,000 visitors.

Electronics and information-communication industries are being pointed to as areas that can create synergy effects if Daegu's business infrastructure and Gyeongsangbuk-do's robust manufacturing foundation are combined, adding weight to 'KES Spring 2008,' which will be held May 14-17 next year. Daegu City and the province have pursued inducement of the show from the perspective of an economic integration campaign.

After deciding to develop 'KES 2008 Spring' into an international specialized business and trade exhibition, Daegu City and Gyeongsangbuk-do plan to promote participation of world-famous domestic and foreign electronics companies, including Samsung, LG, Sony and Sharp, in the show on a large scale and also to invite buyers



of electronics product distribution chains in the United States, China, etc. through reinforcement of overseas marketing.

During the exhibition period, the city and the province also plan to hold auxiliary events, such as trade discussion session, technology seminar and creativity contest, making the spring show an integrated trade exposition that will draw international attention.

Director Bae Young-Chul of International Trade Team at Daegu City said : "We regretted that we had no specialized exhibition, although Daegu and Gyeongsangbuk-do have the best export competitiveness in the electronics and IT fields. Since KES is different from previous exhibitions in terms of quality, KES Spring 2008 will become a representative brand for the future scale of EXCO."

Contributor Prize Application for Electronics Day

KEA successfully implemented the '1st Electronics Day' event in October 2006, which was held to celebrate the takeoff of Korean electronics toward a global industry as well as becoming the nation's top export industry, thereby stimulating the morale of electronics industry personnel and enhancing the position of the industry.

On the occasion of the upcoming '2nd Electronics Day' in October this year, KEA plans to present awards (orders, medals, prizes, etc.) to outstanding contributors to the development of the electronics industry.

The awards presentation ceremony is scheduled to be held at 12:00 on October 9 at the Grand Ballroom of KINTEX, the venue for Electronics Day events.

Recipients of the awards will be managers and employees, including foreigners, of electronics firms and employees of electronics industry-related organizations and research institutes. Applications for the awards are being accepted at Planning & General Affairs Team, KEA,

Tel: 02-553-0941, ext. 210/212.

Address: 648, Yeoksam-dong, Gangnam-gu, Seoul.

Korea's IT Exports Grow Nearly 8 % in First Half



Korean exports of information technology (IT) goods grew nearly 8% in the first half on increased overseas shipments of mobile phones, semiconductors and flat panels, according to the Ministry of Commerce, Industry and Energy.

Korean companies exported a total of \$57.32 billion worth of IT goods during the January-June period, up 7.8% from

a year earlier.

During the same period, IT imports amounted to \$30.6 billion, up 6.7% from a year earlier, bringing the nation's IT trade surplus to \$26.2 billion.

The ministry attributed the first-half growth of IT exports to brisk sales of major IT goods such as mobile phones, chips and flat panels.

"The performance comes despite a flurry of negative market conditions such as price declines of major IT goods, intensifying competition and the local currency's ascent against the U.S.

dollar," the ministry said.

Semiconductors led the export expansion, with their exports rising 12.9% to \$18.97 billion, boosted on increased demand for computer memory chips.

Mobile handsets saw their overseas shipments expand 3.9% to \$12.84 billion, while flat panel exports expanded 20.1% to \$9.18 billion, the report showed.

The ministry forecast that IT exports will expand further in the second half on additional seasonal demand for major IT products.

Korea's e-Commerce Expected to Grow in Q3: Survey

Business confidence of Korea's e-commerce operators remained in positive territory for the third quarter, fueled by the expectation of continued economic growth, a government survey report said July 2.

The survey found that more companies predicted e-commerce conditions would improve rather than deteriorate in coming months, the Ministry of Commerce,

Industry and Energy said.

The business survey index (BSI) conducted by the state-run Korea Institute for Electronic Commerce of 600 companies, revealed a growing preference by firms to conduct on-line transactions and the likelihood of economic recovery in the coming months, as key reasons for the upbeat forecasts.

The Korean economy is expected to

grow by 4.5% this year. This is a drop from the 5% gain posted for 2006, but government policymakers are claiming that consumer sentiment is making a steady comeback, which is good for business.

The ministry said the index for the business-to-business (B2B) firms reached 116.8 for the new quarter. A reading above 100 means optimists outweigh pessimists.

Korea Aiming to Secure Own Space Technologies

Korea plans to spend 3.6 trillion won over the next decade to secure its own satellite and rocket technologies, the government said Wednesday (June 20).

The 10-year space development and promotion plan aims to build satellites and rockets with minimum outside help and to develop the country's know-how and infrastructure in the aerospace sector.

Korea has sent into orbit six multipurpose, observation and scientific satellites aboard foreign rockets since the

1990s, with two still in operation. It is currently developing six more satellites.

"In satellite technology, the space development plan calls for longer operational life and more public-demand oriented machines compared to the past," a spokesman for the Science Ministry said.

The money will also be channeled into gaining knowledge of how to build an indigenous rocket able to take satellites into space.



The state-run Korea Aerospace Research Institute is currently building the two-stage Korea Space Launch Vehicle 1 (KSLV1) with Russian help. The rocket will be launched from the Naro Space Center in Goheung late next year.