

IRG Technology, Media and Telecommunications and Life Sciences Weekly Market Review



Week of 20 June - 26 June 2004

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International

Hardware

- **LG Philips LCD reduced the size of its planned initial public offering and now expects to raise US\$1.4 billion.** LG Philips LCD, a 50-50 joint venture between South Korea's LG Electronics Inc. and Philips Electronics NV of the Netherlands, previously estimated that it would raise US\$2.0 billion. The company shares are slated to start trading next month in both South Korea and the United States. The world's No. 2 maker of flat, liquid crystal display screens plans to sell 43.9 million shares, according to a filing with Seoul's Financial Supervisory Service. LG Philips LCD will issue 9.6 million common shares in Seoul and 34.3 million American depositary shares in New York. Of that 34.3 million, 10.3 million will be existing shares currently held by LG Electronics and Philips.

Internet

- **A mysterious Internet virus being spread by hundreds and possibly thousands of infected websites may be aimed at stealing credit card and other valuable information.** The infection appears to take advantage of three separate flaws with Microsoft Corp. products. Microsoft said software updates to fix two of them had been released in April, but the third flaw was newly discovered and had no patch to fix it yet. Experts said the infection was unusually broad but was not substantially interfering with Internet traffic.

Mobile / Wireless

- **Mexican mobile carrier Telcel has signed an interconnection pact with InphoMatch that allows its clients to exchange text messages with wireless users throughout North America.** The agreement with InphoMatch allows Telcel customers to send short, typed messages to millions of wireless users in the U.S. and Canada. InphoMatch has deals with Verizon Wireless, Cingular and most other North American providers. Financial terms for the deal were not disclosed. Telcel is the Mexican unit of America Movil SA, Latin America's largest mobile carrier with 43.3 million customers as of March. America Movil's biggest market is Mexico, where the company has 24.6 million customers, or roughly 78% of the market.

Semiconductors

- **The Asia Pacific semiconductor industry will grow at a world-fastest rate of 27.4 percent to reach US\$90.8 billion this year,** fuelled by demand in China, according to research house Gartner. Over the next four years, the industry is expected to average 14.3 percent annual growth to be worth US\$138.8 billion, up from US\$71.3 billion in 2003. In China, which is the third largest semiconductor market, Gartner forecasts demand will grow 33 percent this year to US\$39.7 billion and then see average 18.2 percent annual growth until 2008. The South Korean market is forecast to reach US\$26.5 billion by 2008 with an annual growth rate of 15.3 percent, while Taiwan is expected to be worth US\$18 billion in four years with 9.0 percent growth.

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Japan

Hardware

- **Toshiba Corp. has developed new optical wireless communications technology for connecting personal computers and digital audiovisual equipment.** Compared with current wireless LAN technology, Toshiba's transmits data roughly 30 times faster, at 1.5 Gbps, using infrared laser light. This is fast enough to transmit images from high-definition TV broadcasts and high-resolution PC images without compressing data. Because light travels straight, transmitters and receivers must be aligned likewise in optical wireless communications. This requirement has made devices for such communications impractical for use at home. Toshiba overcame this hurdle by developing an optical wireless system that can exchange data even if the transmitter and the receiver are up to 2 meters out of alignment over a 10 meter distance.
- **Toshiba said it has developed the world's smallest methanol fuel cell for use in wireless headsets** and other wearable electronics devices. The prototype direct methanol fuel cell (DMFC) is roughly thumb size, measuring 22 millimeters by 45 millimeters and weighs 8.5 grams. It is "small enough for integration into a wireless headset for mobile phones but still efficient enough to power an MP3 music player for as long as 20 hours on a single two-CCs charge of highly concentrated methanol." Toshiba expects to commercialize DMFC for handheld devices in 2005 and has yet-to set retail prices.

Mobile / Wireless

- **Net-2Com Corp., a start-up firm that was spun off by Fujitsu Ltd. will put on the market this autumn wireless IP telephone handsets that can automatically choose the most suitable communications system for each call.** The phone, developed jointly with Fujitsu Laboratories Ltd., will switch to a mobile phone or other telephony system in places where a user cannot access a wireless local area network. Existing wireless IP telephones can only be used near a ground station, limiting their use primarily to a company's internal lines. The firm intends to sell the phone to corporate customers, pitching its low calling charges and usability outside a LAN. Net-2Com will make the handset, with Fujitsu Laboratories providing the software. Users can program the phone to automatically choose the cheapest telephony system as well as install business application software in the handset.

Semiconductors

- **Renesas Technology expects its sales to rise slightly this fiscal year, while its operating profit will get a boost from more restructuring and solid orders for its semiconductor products.** The world's third-largest semiconductor maker by sales said it's targeting group wide sales of ¥1.1 trillion (US\$10.2 billion) in the fiscal year through March, up from ¥985.6 billion (US\$9.1 billion) last year. The joint venture comprised of the customized chip businesses of Hitachi Ltd. and Mitsubishi Electric Corp. aims to post a group operating profit of ¥60 billion (US\$556.5 million) this fiscal year, up from ¥45 billion (US\$417.4 million) last year. Renesas plans to cut its capital investment to ¥90 billion (US\$834.7 million) in the current year from ¥120 billion (US\$1.1 billion) a year earlier.

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Korea

Hardware

- **Hansol LCD Co., a Korean flat-panel screen manufacturer, reported its second-quarter revenue fell 2.6 percent on-year to 131.5 billion won (US\$113 million).** In a public disclosure to the stock market, the company returned to the black with a net profit of 2.5 billion won (US\$2.2 million). Hansol LCD's operating profit was 5.5 billion won (US\$4.8 million) for the April-June quarter, compared to a loss of 2.9 billion won (US\$2.5 million) a year earlier. Hansol LCD is a late bloomer in the fast-growing market for LCD screens, which are used for flat-panel televisions and computer monitors.

Internet

- **KT Corp., the country's largest fixed-line and broadband operator, will open an Internet portal site next month,** with aspirations toward reviving its fading its online business, company officials said. The site, paran.com, will begin services July 17 and provide subscribers with e-mail, online communities, games, homepage-making and other functions. KT had been operating two portal sites, hitel.co.kr and hanmir.net, but both lag significantly in popularity compared to other major portals such as daum.net or naver.com. KT plans to take hitel.com and hanmir.com off the web with the launch of the new portal, but will allow subscribers of the two sites access to paran.com without changing their identification codes and passwords.

Media, Entertainment and Gaming

- **Korean handset makers are set to challenge Japan's current lead in the camera-phone market by strategically increasing shipments.** Korean companies now account for about 14 percent of the world's camera-phone market, led by Samsung Electronics Co. with 11.8 percent, LG Electronics Co. with 1.4 percent and Pantech & Curitel Co. with 0.8 percent. In comparison, Japanese companies accounted for nearly 60 percent of the market last year. However, the Koreans' combined market share is expected to reach as high as 40 percent as they plan to ramp up production focusing on high-end phones. Companies plan to add camera features to about half of their models destined for shipment as part of a strategy to strengthen their upscale brand image and capitalize on the fast-growing demand for camera phones.
- **More than 1.3 million SK Telecom Co. subscribers switched services through this month to the two smaller mobile-phone operators** in accordance with number portability, according to the Ministry of Information and Communication. According to statistics tracked by the mobile carriers through June 13, KT Freetel Co., the country's No. 2 carrier, attracted 768,125 subscribers from SK Telecom, accounting for 58 percent of the mobile-phone users that changed service providers.

Mobile / Wireless

- **LG Electronics Inc. has expanded its supply agreement with U.S.-based Cingular Wireless, to provide mobile handsets based on GPRS technology.** Financial terms of the deal were not disclosed. GPRS, or general packet radio service, is a faster version of the global system for mobile communications, which speeds up data reception and transmission for e-mail and web browsing. LG Electronics will provide two additional GPRS handset models, both in clamshell designs -- C1300 and L1200 -- to Cingular, a joint venture of SBC Communications Inc. and BellSouth Corp., with functions that allow global roaming services, multi-messaging and wireless Internet services.

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Telecommunications

- **Hanaro Telecom Inc. announced plans to expand its share of the long-distance and international telephone services market.** Hanaro, which received a government license to market long-distance and international phone services starting in July, will bundle its inner-city, long-distance and international phone services under the name "Hanafone." Subscribers will be offered 50 percent discounts on international calls for three months.
- **The Korean government plans to introduce the "mobile virtual network operator" model to the local telecom industry, with the objective of stimulating market competition** and generating new revenue streams through the expansion of data-driven mobile services. The Ministry of Information and Communication and the state-run Korea Information Strategy Development Institute began a joint research project last week to discuss the direction and phasing in of MVNO. The group expects to submit its final report to the ministry by the end of November. The ministry will make the final decision on whether and when to adopt the MVNO model.

China

Hardware

- **Hitachi Global Storage Technologies, the hard-drive venture between Hitachi and IBM, unveiled plans to build a US\$500 million plant in China.** Hitachi Global Storage Technologies is the world's second-largest disk drive maker by revenue after Seagate Technology. The new plant, to be built in Shenzhen, will produce 10 million disk drives in its first year of production starting from the fourth quarter of next year. Ultimately, the facility would have the capacity to make more than 30 million disk drives ranging in size from 3.5 inches to 2.5 inches and 1.8 inches to one inch. The new facility, which will boost the company's employee numbers to 11,500 from 4,500 now, was expected to help Hitachi Global Storage Technologies cut production costs by 15 percent to 20 percent initially.

Internet

- **The Chinese government is calling on Internet service providers (ISPs) to sign a "self-discipline pact" meant to stop the spread of information that could harm national security** as defined by Beijing. The country already requires Internet firms to police their online content and weed out any criticism of the central government. It also tries to block sites it deems politically sensitive or otherwise unacceptable. The new pact was initiated by the China Internet Association, a government-run industry group. Firms that sign on must promise not to spread information "threatening the national security, social stability or containing superstitious or erotic content," the agency said. Internet service providers must also make sure they do not provide links to other sites with inappropriate material. The pact calls on Internet cafes to direct web users to "healthy online information," and it urges respect for intellectual property rights.

Media, Entertainment and Gaming

- **A lengthy delay in granting third-generation (3G) cellular licenses in China may spur more mainland consumers to obtain multiple mobile phone service subscriptions.** Demand for dual-platform mobile phones that work on both xiaolingtong and GSM (global system for mobile communications) networks is also expected to climb. It was common for China Mobile users to cross over and take advantage of heavy handset subsidies - especially free phones and bonus usage minutes -

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offered by rival China Unicom, while keeping their old accounts. A new DBA survey of China Mobile subscribers in selected mainland cities found that 36 percent of its subscribers also used the low-cost xiaolingtong service provided by fixed-line network operators China Telecom and China Netcom.

Mobile / Wireless

- **Samsung Electronics Co. will begin supplying mobile-phone handsets based on Sun Microsystems Inc.'s Java technology to China Unicom Ltd. next month.** The company did not disclose financial terms of the agreement. Samsung, the world's third-largest maker of mobile phones behind Nokia Corp. of Finland and Motorola Inc. of the U.S., said its SCH-X859 model Java phone will be the first phone supplied for the UniJa project. Sun formed an alliance with China Unicom and ZRRT, a service provider in China, to develop and promote Java-technology-based wireless applications and services under the name UniJa.

Semiconductors

- **Nanotech Corp., the first Chinese semiconductor manufacturer to obtain its equipment from industry giant Intel Corp., plans to spend as much as US\$650 million on a chip factory to begin production late next year.** Nanotech announced it had reached a deal to purchase used equipment from Intel for the new plant, to be built in the Chinese city of Changzhou, about 140 kilometers (85 miles) northwest of Shanghai. Intel also will transfer manufacturing technology and provide training to Nanotech employees as part of the agreement. The deal marks the first time Intel, the world's largest semiconductor manufacturer, has sold manufacturing technology and equipment to a Chinese chip company, and highlights the continuing expansion of China's nascent semiconductor industry. Nanotech joins an expanding group of Chinese chip makers aiming to serve the country's fast-growing chip demand. The leader is Shanghai-based Semiconductor Manufacturing International Corp., which listed on the New York Stock Exchange in March. Foreign chip companies also are establishing footholds in China, including Taiwan Semiconductor Manufacturing Co., which expects to start production this year at a US\$898 million Shanghai facility.

Taiwan

Semiconductors

- **Japan's Dai Nippon Printing Co. will provide advanced 90-nanometer technology masks used in semiconductor production to computer memory chipmaker ProMOS Technologies Inc. of Taiwan.** ProMOS signed a long-term agreement with Dai Nippon on advanced technology masks, but it did not specify the level of technology beyond 90 nanometers, nor did the company disclose financial details of the deal. Semiconductor masks are a key part of the chip production process and can cost as much as US\$1 million each for newer ones used in state-of-the-art 12-inch chip plants. A chip's transistor components and the spaces between them are measured in nanometers.

Singapore / Malaysia / Philippines / Indonesia

Mobile / Wireless

- **The number of mobile telephones in the Philippines is expected to hit 30 million by the end of this year.** The Philippine market could become one of the major contributors to his company's growth

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in the Asia-Pacific region, adding that Alcatel would double its business in the region in the next three years. Industry leaders estimate that there are about 25 million cell phones in use in the Philippines currently. SMS or mobile phone "text" messages are wildly popular and are made possible by second generation mobile technology while 3G or third generation technology would enable full multimedia access including Internet telephony and video.

Telecommunications

- **International data carriers and companies they serve say Singapore is taking too long to implement a December ruling forcing the city-state's dominant local phone company to lower access charges.** A senior executive at one of the carriers said the companies "are approaching an apoplectic state of concern. How can we have had six months of absolute silence on such an important issue?" Companies such as AT&T Corp., MCI Inc. and Cable & Wireless PLC first complained to Singapore regulators in October 2002 about the rates that Singapore Telecommunications Ltd. charges them for local leased lines -- access to the cables that link buildings in the city center to global data networks. As in most major cities, one company controls the final cable links to homes and buildings.

Hong Kong

Information Technology

- **The Hong Kong government has launched a four-month consultation to solicit public's views on measures to combat spam.** Secretary for Commerce, Industry and Technology said the consultation would look into unsolicited electronic messages, or junk messages, in general, including e-mails, faxes, short messaging services (SMS) and multi-media messaging services (MMS).

Mobile / Wireless

- **Hutchison Whampoa Ltd. has written to Hong Kong's telecommunications regulator seeking a five-year extension to its second-generation CDMA**, or code-division multiple access, mobile-phone license, which is due to expire next year. The Office of the Telecommunications Authority completed its consultation last week on what to do with two licenses set to expire from existing second-generation mobile-phone operators and third-generation licensees Hutchison and CSL.
- **Hutchison Whampoa may not achieve operational break-even for its third-generation mobile business by the end of next year**, according to credit rating agency Moody's Investor Service. In an update on the conglomerate's 3G operations, the agency reaffirmed Hutchison's A3 debt rating due to an improved risk profile, while the outlook remains negative due to uncertainty over whether Hutchison will "achieve its plans for commercializing its 3G business". Having signed about 712,000 new 3G users since March this year - or about 1.7 million worldwide as of last month - Moody's doubted Hutchison could sustain subscriber growth and spending levels.

United States / Canada

Hardware

- **Best Buy Co. Inc. will promote Roxio Inc.'s Napster as its leading digital music service and market a co-branded version of Napster through BestBuy.com.** Electronics retailer Best Buy will receive up to US\$10 million in Roxio stock over the term of the multi-year pact. Napster will engage

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with Best Buy in jointly funded marketing, which will include comprehensive in-store events as well as broadcast, print and online advertising.

Internet

- **EBay Inc. shareholders voted down an investor proposal that would have required the Internet auction company to treat employee stock options as an expense on its income statements.** Based on a preliminary count of votes at a shareholder meeting, the company said 59% of participating shareholders rejected the option expensing proposal by the International Brotherhood of Electrical Workers Pension Benefit Fund, with 39% voting in favor of the proposal and 2% abstaining. EBay and other high-tech have resisted calls to voluntarily expense employee stock options, which companies are currently required to mention in footnotes in financial statements. The nation's accounting standards-setting body is expected to issue a final rule by the end of the year requiring companies to expense options, a move proponents of the change believe will more accurately represent companies' earnings. Had eBay expensed its stock options, the company's first quarter earnings would have been US\$185 million, 8% less than the US\$200 million it reported. For 2003, the change would have lowered its earnings by 44%.
- **In its first major acquisition since it bought Time Warner in 2001, America Online agreed to acquire online direct-marketing services provider Advertising.com Inc. for US\$435 million.** The deal, which AOL hopes will give it a new source of advertising revenue, also highlights Time Warner Inc.'s evolving approach to what is now its AOL division. In the past two years, as AOL's profits fell and its online advertising business faltered, Time Warner executives pondered whether they should get rid of the underperforming unit. Last month, however, the Time Warner board decided to hold on to the business for now and try to turn it around.
- **Microsoft's Hotmail will become the latest web-based e-mail service to increase the amount of storage space** available for its free accounts, following similar moves by rivals. Beginning later this summer, the company plans to increase the amount of storage for its free Hotmail account inboxes to 250 megabytes, up from two megabytes. Users also will be able to send larger attachments, up to 10 megabytes.
- **eBay is buying Baazee.com, India's most popular online shopping site, for US\$50 million to extend its reach** in the world's second most populous country. The deal is expected to be completed by September. Internet usage is low in India, a country of more than 1 billion, with only 4 million Internet connections but eBay is betting on the future. Baazee, based in India's financial hub, Bombay, claims it has one million registered users. All items listed on eBay would eventually be made available to Indians through Baazee. Similarly, eBay customers in 28 countries will be able to buy goods from India. Citing studies, Baazee reported there are 17 million Internet users in India and the number is expected to rise to 30 million by 2006. Many Indians who do not own computers visit cyber cafes to browse the Internet. Most online shoppers buy mobile phones, railroad tickets, clothes, toys, books and compact discs. India's National Association of Software and Service Companies estimates that online shopping by individuals will reach US\$500 million in India by 2006 and grow each year by 79 percent.
- **Salesforce.com Inc., in a sign of interest in its approach to marketing software as a web-based service, priced shares in its long-awaited initial public offering at US\$11,** above the range of US\$9 to US\$10 a share it estimated earlier. At US\$11 a share, the company would have a market value of more than US\$1.1 billion. In April, the company estimated the offering price for the shares at US\$7.5 to

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US\$8.5 a share. The company is selling about 10 million shares, raising a total of US\$110 million. Salesforce.com gained more than 56 percent from its initial offering price in its market debut.

Semiconductors

- **Intel Corp. confirmed that a "limited" number of its new Grantsdale chipsets were affected by a manufacturing glitch.** Intel said the faulty chipsets have not reached consumers and that the problem has been fixed. According to the spokesman, the glitch occurred in the manufacturing process and caused systems to fail during the boot-up process. The spokesman said the problem was not a design error, but rather that some of the thin film placed on the chip during manufacturing was not fully removed. He declined to say how many chips were affected. Grantsdale, Intel's newest chip, which was released earlier this week, is designed to enhance the way its microprocessors handle video, audio, animation and data storage.

Software

- **Microsoft Corp., facing intense competition from rival Linux products in the developing world, is readying a new version of its Windows software for release in Asia,** possibly as early as this September. The new operating system, to be called "Windows XP Starter Edition," is designed for first-time computer users. It will be available through government programs that offer personal computers to citizens at reduced prices, including existing programs in Thailand and Malaysia. But the beginners' software could wind up in many other countries, as Microsoft has been in discussions with several governments in the developing world about supplying low-price products.

Telecommunications

- **Qwest Communications International Inc. announced it will launch a new Internet calling service for business customers in mid-July.** The service, which will be available in major cities across the nation this year, will allow users to route calls through the Internet from laptops while on the road and forward voicemails to e-mail. It will also offer standard features such as call waiting and caller identification, 911 service and speed dial. The Internet calling service will run mostly over Qwest's long-haul and local network and comes with unlimited local and long-distance service. The service will initially be available to business customers in Boise, Idaho, Denver, and Minneapolis, though it will also reach two dozen other cities including Los Angeles, New York, Seattle and Washington, D.C., by the end of 2004. The following year, the service is expected to expand to more cities.

Europe

Information Technology

- **The European Union and the U.S. will sign a groundbreaking agreement on satellite technology,** clearing the way for Europe to develop an independent presence in space, the EU's top transport official said yesterday. Europe wants to end its reliance on the U.S. Defense Department-controlled Global Positioning System because the military operator gives no guarantee of maintaining an uninterrupted service. After a long debate, the EU in 2002 approved its own US\$3.6 billion Galileo project, a civilian system, which allows users to determine their exact positions by receiving signals from satellites.

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Internet

- **Terra Networks SA, a Spanish Internet company, is reviewing four offers for its Lycos unit**, but stressed that it has not made a final decision on the unit's future. Terra also has signed an agreement to use Google Inc.'s technology for web searches on Terra's web pages. On its books, Terra values the Lycos business at €80 million (US\$96.8 million). Terra bought Lycos at the height of the Internet boom in 2000, paying US\$12.5 billion for the portal operator.

Mobile / Wireless

- **A start-up founded by videogame industry pioneer Trip Hawkins has agreed to purchase a leading Finnish maker of electronic games, a deal that continues a rush of companies into games played on cellular phones.** Mr. Hawkins' venture, Digital Chocolate Inc., has agreed to purchase Sumea, a software company in Helsinki, Finland. Financial details of the agreement weren't released. The deal gives Digital Chocolate an immediate connection to Europe, which in addition to Japan is a leading market for entertainment delivered over cellular phones. The growing number of cellular subscribers worldwide has sparked a surge in companies developing games that are downloaded to and played over cellular handsets.

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