



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

Week of 24 March - 31 March, 2008

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Equity Market Indicators					
Index	Closing Level (3/24/2008)	% Change 1 Week Ago	% Change Month to Date	% Change 1/1/2008	% Change 1/1/2007
S&P 500	1,315.22	-1.1%	-1.2%	-10.4%	-7.3%
Dow Jones Industrial Avg.	12,216.40	-1.2%	-0.4%	-7.9%	-2.0%
Dow Jones Tech. Index	394.83	0.6%	-0.9%	-14.0%	-4.3%
Dow Jones Telecom. Index	273.07	4.1%	-1.5%	-12.9%	5.0%
NASDAQ Composite	2,261.18	0.1%	-0.5%	-14.7%	-6.4%
The Street.com Net	248.67	-0.3%	0.4%	-11.8%	0.6%
Japan Nikkei 225	12,820.47	2.7%	-5.8%	-16.2%	-25.6%
JASDAQ	64.84	3.7%	-0.3%	-10.2%	-24.8%
Japan Mothers	630.37	6.1%	-9.3%	-19.5%	-43.2%
Korea KOSPI Composite	1,701.83	3.4%	-0.6%	-10.3%	18.6%
Korea Kosdaq	636.67	3.4%	-2.9%	-9.6%	5.0%
Taiwan Stock Exchange	8,623.48	1.2%	2.5%	1.4%	10.2%
Singapore Straight Times	3,031.90	7.3%	0.2%	-12.5%	1.5%
Hong Kong Hang Seng	23,285.95	10.3%	-4.3%	-16.3%	16.6%
Hong Kong GEM	839.60	4.6%	-20.8%	-37.8%	-31.4%
China Shanghai (A-Share)	3,756.12	-5.7%	-17.7%	-32.0%	33.4%
China Shenzhen (A-Share)	1,197.75	-3.0%	-17.2%	-21.3%	110.3%
China Shanghai (B-Share)	261.49	0.0%	-15.8%	-28.5%	101.0%
China Shenzhen (B-Share)	567.30	2.9%	-10.7%	-20.1%	30.9%

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Technology, Media, Telecommunications and Life Sciences Market Activity						
NASDAQ/NYSE TMT and Life Sciences IPO Filings						
Filing Date	Issuer	Industry Sector	Size (US\$MM)	Description	Book-Runner	Co-Manager
N/A						

NASDAQ/NYSE Equity Markets: TMT and Life Sciences IPO Pricing						
IPO Date	Issuer (Exchange)	Description	Size (US\$MM)	Offer Price	Price on 2/15/08	% Change From Offer
N/A						

Asian Equity Markets: TMT and Life Sciences IPO Filings						
Filing Date	Issuer	Industry Sector	Size (US\$MM)	Description	Book-Runner	Co-Manager
N/A						

Asian Equity Markets: TMT and Life Sciences IPO Pricing						
IPO Date	Issuer (Exchange)	Description	Size (US\$MM)	Offer Price	Price on 2/15/08	% Change From Offer
N/A						

Asian Markets: TMT and Life Sciences Convertibles						
Issuance Date	Issuer [Equity Ticker]	Description of Issuer	Maturity Date	Size (US\$MM)	Per US\$10,000 converts to	Convertible Until
N/A						

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Weekly Highlights

International

Internet

- **Pent up demand for mobile Internet in emerging markets in Asia would boost growth of WiMax, a new super high speed wireless technology, according to industry executives.** There were 1.5 million WiMax subscribers globally last year and the number should breach five million this year and 36 million by 2011. WiMax, expected to bring new revenues to the telecoms sector, allows users with a WiMAX enabled laptops or mobile devices to download data, songs and movies at distances as much as tens of kilometres. It is a big brother to WiFi, which connects users to networks over short distances. The number of WiMAX subscribers in Asia was expected to rise to more than 11 million by 2011, accounting for 30 percent of the WiMAX subscribers globally.

Hardware

- **Laptops worth US\$300 initially designed for poor children will soon be available to U.S. and European consumers in a move that could further push down computer prices.** PC makers in the U.S. and in Europe will sell a yet to be unveiled, second generation version of the Intel designed Classmate PC for US\$250-350. While the machines are intended for children, the launch will add momentum to the low cost computing movement and will likely mean this year's bargain basement laptops will have more power than in previous years.
- **A shortage of notebook computer batteries is slowing growth in the emerging market segment for ultra low-cost notebook computers and ultra-mobile personal computers.** Following a fire at a plant of LG Chemical, the South Korean battery cell maker, supplies are expected to fall short of demand from battery pack makers, notebook assemblers and notebook vendors at least until June and probably well into the third quarter of this year. The production lines affected at LG Chemical were involved in making battery cells used in laptops. Asustek, the Taiwanese computer company, is already feeling the lack of supply. The company received a boost to its own-brand sales following the launch last year of the EeePC, the first ultra low-cost notebook sold through commercial channels worldwide. But it now expects to miss its shipment target of 1million EeePCs for the first quarter by more than 300,000 units.

Japan

Hardware

- **Toshiba expects to lose 110 billion yen (US\$1.1billion) this year on its now defunct HD-DVD business.** Toshiba lowered its net profit estimate for the year ending March 31 by 31 percent to 125 billion yen (US\$1.3 billion) to reflect the HD-DVD loss as well as plunging prices for Nand flash memory chips, another of its core products. The company announced last month that it would stop manufacturing HD-DVD discs and players at end of March, leaving the field to Sony's Blu-ray format and it had already expected the business to lose 50 billion yen (US\$500 million) due to falling prices for HD-DVD players. Prices have sunk further since it announced the format's demise, and the company now expects an expanded operating loss of 65 billion yen (US\$650 million). It would also take a 45 billion yen (US\$450 million) charge to account for the depreciation of obsolete manufacturing equipment and the scrapping of piled up inventory.

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- **The next update of Sony Corp.'s PlayStation 3 console will include features that let users download games, video and ring tones.** The system update will add Blu-ray Disc Profile 2.0, or BD-Live, capability, to the PS3. It will also let users copy photos and music playlists on to their hand held PlayStation Portable use the PSP as a remote control for playing music on the PS3 and stream linked video files from the Web. This will make the PS3 the first Blu-ray player with access to Internet content and downloads. Matsushita Electric Industrial Co., which owns the Panasonic brand, also plans to ship a BD-Live player this spring. The downloadable content will range from bonus movie scenes and trailers to interactive movie based games. With Blu-ray established as the high definition optical disc standard, more consumers are ready to jump in and take advantage of everything the format offers. The free update also adds a "resume play" feature that enables users to restart Blu-ray discs and DVDs at the point where they stopped even if they take the disk out of the drive.
- **Fujifilm Dimatix, a producer of inkjet printheads for industrial applications, has announced that its cartridge-based Dimatix materials printer has been used in the world's first known demonstration of inkjet technology for manufacturing photovoltaic solar cells.** Konarka Technologies demonstrated the use of inkjet technology to fabricate solar energy cells. The firm has earlier developed and commercialized Power Plastic, a material that converts light to energy. The demonstration confirms that organic solar cells can be processed with printing technologies with little or no loss compared to clean room semiconductor technologies such as spin coating. Inkjet technology is very promising for fabricating photovoltaics because it is compatible with various substrates and it does not require additional patterning. The materials printer is reported to be a turnkey, bench-top materials deposition system that leverages Fujifilm's Dimatix ink jet technology and its Shaped Piezo Silicon microelectromechanical fabrication processes in depositing picoliter-sized droplets of functional fluids on all types of surfaces.

Mobile/ Wireless

- **KDDI Corp said it would recall some 214,000 mobile phones that may overheat and blow up, after several people were injured.** KDDI, known for its "au" brand, will replace battery packs of its W42K model, marketed only in Japan. The firm received 13 complaints from users of the cell phone made by Kyocera Corp about the trouble. Three of them suffered slight burns. The problem lies in the battery packs, which may short-circuit, generate smoke and blow up if their surface is damaged.
- **Kyocera Corp. planned to stop using NEC Token Corp batteries in the future after some ruptured or caught fire, injuring three people.** Kyocera planned to cut future battery orders from NEC Token and procure more batteries from Sanyo Electric Co, which now supplies roughly 80 percent of Kyocera's cellphone batteries. Overheating batteries are hurting cellphone suppliers, even as handset makers press them to lower battery costs. Matsushita Electric Industrial Co is shouldering in the year ending this month the cost of replacing 46 million batteries it made for Nokia.

Semiconductor

- **NEC Electronics Corp. will spend 2 billion yen (US\$20.1 million) to increase its production of automotive semiconductors in Japan.** The chip making unit of NEC Corp. will build facilities at its unit in Oita, in western Japan, that are scheduled for completion in December. The company is stepping up efforts to meet increasing demand for semiconductors used in automobiles.
- **Perry Capital has taken a small stake in NEC, underlining the U.S. investment fund's determination to increase pressure NEC Electronics.** The stake, less than 5 percent, will allow the U.S. fund to take its grievances directly to the parent company, which controls more than 70 percent of NEC Electronics, its listed subsidiary. Perry has a 6 percent stake in NEC Electronics. NEC

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rejected an offer from Perry in July to buy 25 percent of NEC Electronics for 154.4 billion yen (US\$1.5billion), or 5,000 yen (US\$50.4) a share. NEC Electronics' shares closed at 1,950 yen (US\$19.7). The electronics group has refused to meet Perry while NEC Electronics, expecting to report its third year of losses in the year to the end of March, has refused to disclose information regarding its transactions with NEC. Perry's move comes as other investors, in an attempt to improve investor returns, have stepped up efforts to engage with the Japanese companies in which they invest.

Telecommunications

- **The two regional fixed-line units of Japan' NTT Group are expected to comply with a request from the Communications Ministry to reduce the fees they charge other telecom firms to access their fiber-optic lines further.** The two NTT companies are to submit applications that would lower the connection fee to about 4,600 yen (US\$46.00) per month for NTT East, down roughly 10 percent from the current rate, and to about 4,950 yen (US\$50.00) for NTT West, a reduction of around 2.5 percent. NTT East and NTT West both proposed in January more modest cuts to their connection fees, but a ministry telecoms panel recommended that the fees should be trimmed even more, saying that demand from competitors to access the lines may surpass the NTT firms' projections. The deeper cuts are based on higher demand projections. In return for complying with its request, the panel approved a special provision whereby if demand from other telecoms firms to access the lines is weaker than projections, the NTT firms can seek additional charges in fiscal 2011 and afterwards to cover their revenue shortfalls. Some of NTT's competitors, such as Softbank, criticized the idea of leaving the door open to additional charges.

Information Technology

- **Fujitsu, a provider of IT and communications services, has completed an upgrade of the Japan-US Cable Network, a submarine fiber-optic cable system spanning the Pacific Ocean.** Its technology allows the network to carry a capacity of more than 1.28 terabits per second (Tbps), doubling the original design capacity of 640Gbps, to support high-speed, high-capacity trans-Pacific communications. Fujitsu has replaced legacy optical communications equipment with its FLASHWAVE S650 series in six landing points, three each in the US and Japan. The submerged portion of the network remained unchanged.

Korea

Telecommunications

- **S&P has raised its long-term corporate credit rating (CCR) on Hanarotelecom Inc. to BBB- from BB with a positive outlook, after SK Telecom Co. Ltd. (SKT) acquired 38.9 pct in Hanaro from the AIG-Newbridge-TVG consortium.** S&P added it removed the company from positive watch and raised its rating on Hanaro's senior unsecured debt to BBB- from BB. The ratings upgrade was based on an expected improvement in Hanaro's credit risk profile on anticipated support from the parent company and an improving financial risk profile, achieved through debt reduction in the past couple of years. The ratings agency added the positive outlook indicated its expectations that Hanaro's business has room to grow and that its financial risk profile could improve if significant synergies between SKT and Hanaro materialize.

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Hardware

- Samsung Electronics Co. cut its sales forecast for this year, citing global economic woes. Its profit will exceed last year's, helped by earnings growth in key areas such as chips, flat-panels and handsets. Global economic uncertainty is expected to continue this year, affecting the company's management conditions. The world's largest memory chip-maker by revenue, now aims to achieve a 10 percent increase in 2008 sales, which is lower than the 15 percent increase projection made in January. But the executive expects Samsung's profit in 2008 to be higher than last year's as the company focuses on its four key businesses: semiconductors, handsets, liquid crystal display panels and TV sets.

China

Internet

- **Access to Google Inc.'s YouTube inside China was cut off after the Web site was flooded with graphic images from Tibet, including videos of burning trucks and monks being dragged through the streets by Chinese soldiers.** Blocking Western Web sites is routine in China, where the government has tightly controlled the flow of information. But the new YouTube blackout is the latest in a string of clashes between the site and foreign governments in Asia and the Middle East that's forcing the company to grapple with the consequences of its increasingly global reach. The Council denied any knowledge of the blockage and promised to investigate. YouTube remained inaccessible from China except to users who took extra technical steps to circumvent the ban. The site has been blocked in China several times before. YouTube's community guidelines state the site encourages free speech and defends everyone's right to express unpopular points of view. But the site also reserves the right to remove content it deems inappropriate, which gives it significant discretion when it comes to politically sensitive content.

Mobile/Wireless

- **China Central Television (CCTV) program forces Focus Media to stop sending mobile spam advertisements after a CCTV program named it as a major source of spam.** The company's shares dropped more than 25 percent after the program. A subsidiary responsible for mobile advertisements had set up a toll free number for people to report spam following allegations made in the report. It had also established an internal policy to ban sending mobile messages without a telephone user's permission. The database it used for advertising had been based on information received during the normal course of business.

Technology

- **Fujian's Super Computing Center will be built and accessible before June 18, 2008.** Its computing capability will reach 10,000 billion operations and leads the country in super computing technology. As a platform for high quality computing services, the center will improve the quality of education and science and technology innovation in Fujian Province. In addition, it will promote the development of the new, advanced technology industry and upgrade traditional industries.

Telecommunications

- **China Unicom said it is too early for them to overhaul its operations in anticipation of a restructuring of China's telecommunications sector.** The company is tipped to be one of the parties most affected by the restructuring. Rumors have indicated that Unicom's GSM mobile network

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could be merged with China Netcom Group Corp., while its smaller CDMA mobile business could be sold to China Telecom Corp. China Unicom has denied rumors that the company had stopped marketing activities for its CDMA business before a possible sale of assets to China Telecom. Unicom plans 30.95 billion yuan (US\$4.4 billion) in capital spending this year, up 20 percent from 25.72 billion yuan (US\$3.7 billion) last year. Of this, 73 percent would be spent on expanding its GSM network. Net profit for the year to December reached 9.29 billion yuan (US\$1.3 billion), up from 3.8 billion yuan (US\$542 million) in 2006. Revenue increased 4.4 percent to 99.54 billion yuan (US\$14.2 billion), up from 95.34 billion yuan (US\$13.6 billion) a year earlier. The company expects average revenue per user (ARPU) of its GSM and CDMA services to fall again this year. ARPU would continue to decline because of China's adoption of the "calling-party-pays" system and because its newest customers are mostly less affluent people living in rural areas. ARPU for the GSM cellular business decreased to 46.00 yuan (US\$6.60) per month in 2007 from 49.2 in 2006. For CDMA it dropped to 58.1 yuan (US\$8.3) from 65.8. The company has yet to receive any notice from the government about a timetable for restructuring of the telecom industry. Unicom is expected to disappear in the restructuring, with its two cellphone systems being absorbed by China's fixed-line phone operators.

Hardware

- **Beijing's plan to introduce unified manufacturing standards should stop the current flood of low quality batteries into the market.** The quality of cellular batteries on the mainland has been under the spotlight since a man was killed last year when his telephone exploded. The government's plan to unify standards should help better regulate the market following rising public concerns about quality. The government estimates 30 percent of the telephone battery market is held by illegal manufacturers which sell products that have a greater chance of exploding. After the accident, the mid priced to high end batteries sold well as telephone users no longer were willing to pay less for poor quality products.
- **Scud Group acquired 100 percent of Shenzhen-based Chaolitong for about 245 million yuan (US\$34.9 million) in December.** The acquisition paved the way for the company to explore the rural market. Chaolitong was the company's major rival in rural areas. Chaolitong, which sells low end batteries, had a gross margin of about 20 percent while Scud's mid priced to high end ones, had a margin of about 30 percent. The company could have taken two to three years to surpass Chaolitong in the rural market if they had not acquired it.

Semiconductor

- **Semiconductor Manufacturing International Corporation (SMIC) has revived plans to sell a strategic stake to outside investors.** The Shanghai-based company hired Morgan Stanley and Deutsche Bank to help sell a 20 percent stake for an expected US\$500 million. Even though it attracted avid interest from private equity firms, the process stalled by August last year because SMIC's board was undecided about how to proceed. The company has been hammered in past years by continued low prices for the commoditized dynamic random access memory, or Dram, chips, which have pushed chipmakers to expand into more sophisticated products. SMIC posted losses in both 2005 and 2006 because of low Dram prices combined with high depreciation costs.

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Taiwan

Hardware

- **Acer Inc.'s audited fourth-quarter net profit rose 89 percent to NT\$2.4 billion (US\$80 million) from the same period a year ago.** Acer posted a preliminary profit of NT\$2.3 billion (US\$76 million) for the fourth quarter of 2007 in February. For 2007, its audited net profit reached NT\$12.96 billion (US\$426.5 million), up 27 percent from 2006, as it included results from its recently acquired U.S.-based Gateway unit. It expected to ship 40 percent more notebook PCs this year from 2007, while its overall PC shipments should rise by 30 percent to 35 percent.

Hong Kong

Mobile/ Wireless

- **Critical Path, Inc., a provider of messaging software and services, announced that Hutchison Telecommunications (HK) Ltd., has deployed Memova Mobile Critical Path's consumer mobile email solution designed for the mass market.** The new Memova-powered service adds a new dimension to Hutchison's existing mobile email solution. Hutchison wanted to meet growing customer demand for mobile email services. To complement current enterprise email offerings, Hutchison chose Critical Path's mobile push email solution as a cost-effective way to address the mobile email needs of consumers, pro-sumers and SME subscribers. Unlike enterprise solutions, Memova Mobile works on any mobile phone and does not require users to download or install client software.

Internet

- **More than 30 government venues would offer free Wi-Fi internet access before June.** Introducing free Wi-Fi internet access to public places is part of the government's plan to develop more mobile financial and banking services. To consolidate Hong Kong's position as a leader in tourism and logistics, industry players are encouraged to make use of wireless and mobile technologies to provide tourists and logistics management with more useful electronic information. The government would continue to introduce new and innovative services for driving commerce and economic development in Hong Kong.

Telecommunications

- **Hutchison Whampoa's struggling 3G mobile networks unit achieved an elusive profitability target last year and for the first time recorded positive core earnings.** The company's global 3G networks, the largest of which it has built in the U.K. and Italy have been a drag on earnings and its share price for years, offset only by asset disposals at more profitable divisions. Hutchison's net profit increased 53 percent to HK\$30.6 billion (US\$3.9 billion), boosted by a HK\$35.8billion (US\$4.6 billion) gain from a subsidiary's sale of India's fourth largest mobile phone network to Vodafone of the UK. Earnings before interest, tax, depreciation and amortization at Hutchison's perennially loss-making 3G unit, were HK\$1.2billion (US\$154.2 million) in 2007, against a loss of HK\$7.5billion (US\$964 million) a year earlier.

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Singapore/Malaysia/Philippines/Indonesia/India

Mobile/ Wireless

- **Samsung Electronics Co. plans to build a US\$670 million plant to make mobile phone handsets in northern Vietnam.** The world's second largest handset maker has been pushing for the Vietnam plant for nearly a year and submitted the proposal to authorities in Bac Ninh province last month. Once they fill in all necessary papers, the company will grant the investment license right away. The company was considering Vietnam because of its cheap labor.

Hardware

- **Dell India Pvt., the Indian unit of Dell Inc., said revenue at its Indian operations grew 60 percent to US\$700 million in 2007.** The company will soon announce plans to establish retail operations in the country. In India, Dell follows its traditional model of selling computers over the Internet or by telephone. At present, the company is not into retail operations in India, but that is expected to change.

Semiconductor

- **New chip to detect avian flu goes commercial in Singapore.** Singapore's biomedical firm Veredus Laboratories has completed successfully trials and begun marketing a new device that can detect more than ten influenza strains, including the avian flu. The chip, no bigger than a fingernail, can detect various flu strains within two hours in a single test, compared with tests available in the current market which require multiple tests to be carried out. This test can detect flu strains at the start of the infection, and can diagnose not just current viruses but also mutations. The chip can also be modified from its present form to be used in the detection of cancers, infectious diseases and even bio-hazardous material.

Internet

- Auction.ph, an online shopping mall in the Philippines, continues to expand its baseline numbers reaching almost 1.2 million registered members as of March 2008 and with an average of 6,000 posted items daily. The e-commerce site plans to further expand these numbers in 2008 through exciting online events and pro-seller promos. Double Bingo Mania is an online game wherein buyers get a chance to win premium items for a minimum purchase of 500 pesos (US\$12). Users also get a chance to win e-money instantly if they complete a bingo line. Sellers or 'cybermerchants' would find it more attractive to sell their items on Auction.ph with pro-seller programs that subsidize item pricing. The Coupon Mania, for instance, allows buyers to download discount coupons for free which can be used in purchasing items online.

Telecommunications

- **PT Indosat has set an annual coupon of 10.25 - 10.80 percent for 1.08 trillion rupiahs (US\$117.3 million) worth of bonds the company plans to issue.** The bonds will have two series – "A" bonds with a tenor of five years will carry a fixed rate of 10.25 percent, and 'B' with a tenor of seven years will carry a fixed rate of 10.80 percent. It will also issue five-year shariah bonds, based on Islamic principles. The shariah bonds will be offered from April 3 to 7, followed by a listing on the Indonesian stock exchange on April 10. The entire proceeds will be used to finance the company's capital expenditure.
- **In a move that will trigger lower phone call charges, India's telecom regulator will remove a levy imposed on service providers to fund rural connectivity.** Access deficit charges put unfair

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burden on new entrants and distort market conditions, the Telecom Regulatory Authority of India (TRAI) referring to the technical term used for the levy, imposed since 2003. It is also a source of arbitrage and thereby results in grey market operations in the international calls. Domestic calls will be freed from the levy paid to state run Bharat Sanchar Nigam Ltd (BSNL) from April, while international calls will be freed from September. The levy on the international calls has been reduced to just 50 paise (little over one US\$.01) from 1 rupee (US\$0.03) per call. The watchdog also called for the government to pay an annual subsidy of 20 billion rupees (US\$500 million) for three years to BSNL for phones installed by it in rural areas before April 1, 2002.

- **Singapore Telecommunications (SingTel) has completed the acquisition of 160.4 million shares, representing a 3.9 percent stake, in Taiwan's Far EasTone Telecommunications Co. Ltd. in exchange for 980.3 million shares, representing 100 percent of New Century InfoComm Tech Co. Ltd. (NCIC).** SingTel has agreed to exchange its entire shareholding interest in NCIC for new shares in Far EasTone. The shares in NCIC are held through InfoCom Holding Company Pte Ltd., (InfoCom) and SingTel Taiwan Limited (STTL). Upon completion of the transaction, SingTel will hold shares in FET representing approximately 3.98 percent of the issued share capital of FET. FET will issue approximately 160.37 million new shares in exchange for the NCIC Shares. The consideration payable for the NCIC shares will be satisfied in the form of new shares to be issued by FET at an exchange ratio of approximately 6.11 shares of NCIC for each new share.

United States/Canada

Mobile/Wireless

- **Carl Icahn, the billionaire Wall Street investor, sued Motorola as he seeks to access the board and other documents prepared by the company as part of his proxy battle to win four seats on the company's board.** The documents he is seeking include any board and committee minutes and documents related to the service and selection of Motorola's senior officers, and the prospects or strategy of Motorola's mobile devices business. He is also seeking documents on the realignment of the loss making mobile phone division, including its potential spin off. He revealed that he has increased his Motorola stake to 145 million shares or about 6.45 percent, up from 5 percent a month ago. He also renewed his call for the spin off of the mobile phone unit, as a wholly owned separate company with a new chief executive.
- **Motorola will split into two companies in 2009.** One will focus on handset, while the other deals with networks and communications services. CLSA's analyst sees rising long-term uncertainties and negative near-term impacts to Motorola's suppliers due to extended restructuring. It recommended avoiding pure Motorola suppliers including Foxconn. On the other hand, it said the split will accelerate the impetus for Motorola's handset division to work with another business partner in order to regain market share and improve flexibility. CLSA cited rumors of an acquisition of the Motorola brand by ZTE Corp., which now has the financial resources and strong support from the Chinese government necessary for global expansion.
- **Verizon Wireless unveiled details of how consumers would be able to use handsets and services that the carrier doesn't offer through its own retail network.** Under the new policy, any company that wants to make a mobile device either a cellphone or some other product can bring it to market for Verizon's 65 million customers as long as it meets the carrier's minimum technical requirements, it wouldn't be burdensome. The device makers will be responsible for marketing and

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distributing the devices on their own. Verizon Wireless sold through its retail stores or those of its distribution partners, made the shift in response to growing demands from regulators, consumers and technology companies for more "openness" in the wireless industry.

- **AT&T Inc. plans to begin offering a long-awaited mobile-TV service, using a Qualcomm Inc. network called MediaFlo that broadcasts live video to cellphones.** More time was needed to ensure a high-quality customer experience. Verizon Wireless offers a similar service. Qualcomm concedes that MediaFlo service hasn't been flowing quickly to consumers, but the company blames delays on issues associated with the broader U.S. transition to digital TV technology. MediaFlo, a Qualcomm-operated network that sends TV programming to cellphones, uses frequencies associated with a conventional TV channel that broadcasters must vacate as they shift to digital TV transmission. Until a federal deadline for the shift, MediaFlo has largely been setting up in cities where the channel was vacant, or in some cases has persuaded broadcasters to move early. MediaFlo has already increased the number of markets served to more than 50.

Media, Entertainment and Gaming

- **Electronic Arts has announced the departure of a key figure in its fight to gain control of rival Take Two, publisher of the Grand Theft Auto series of games.** Warren Jenson, chief financial officer for the past six years, was leaving the company and that a successor would be announced shortly. It gave no reason for the change. Mr. Jenson had been leading the US\$2 billion takeover bid for Take Two with John Riccitiello, chief executive, and his departure comes as a surprise.
- **Gibson Guitar Inc. filed a lawsuit against games retailers MTV Games, Harmonix and Electronic Arts relating to the wildly popular "Guitar Hero" video games.** Gibson claimed that by developing, distributing and promoting the video game "Rock Band," these retailers are violating a virtual reality patent the guitar maker holds. The same 1999 patent is at issue in a separate lawsuit Gibson filed against WalMart Stores Inc. and five other retailers. The real guitar maker claims the stores are violating the patent by selling the Activision Inc. game "Guitar Hero." The games, in which players use a guitar shaped controller in time with notes on a television screen, violate a 1999 patent for technology to simulate a musical performance. Gibson informed Activision Inc. about two weeks ago that its popular "Guitar Hero" video games infringe one of the guitar maker's patents. Activision filed later a lawsuit asking the U.S. District Court for Central California to declare Gibson's patent invalid and to bar it from seeking damages.
- **Electronic Arts has again urged Take-Two to negotiate after the rival video game publisher recommended that its stockholders not tender any of its shares to EA and help its US\$2 billion takeover bid.** Its board had thoroughly reviewed EA's US\$26.00 a share offer for the company and had unanimously determined that it was inadequate. It would explore alternatives, which could include a merger with other companies or remaining independent. The company had wanted to put off any discussions until after the April 29 release of its Grand Theft Auto IV game, a title expected to be the industry hit of the year. The board also adopted a "poison pill" rights-issue agreement designed to thwart attempts to acquire control of the company at "an inadequate price for all stockholders.

Internet

- **Google unveiled Gadgets for Spreadsheets in Google Docs, allowing people to create graphical representations of data in spreadsheets and publish them on Web sites.** New features added provide consumers new ways to look at data in their spreadsheets. Google has put up a gallery of specialty gadget to choose from. They include gadgets to display data on a pie chart, map, time

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chart, funnel chart, Gantt chart, pivot table, and on a heat map if it's geographical data. Users can even create interactive charts like those used by Google Finance and for motion charts. These visuals can also be pushed out to appear on an iGoogle home page or any other site and will be dynamically updated as changes are made to the spreadsheet.

- **Comcast and Time Warner Cable are discussing a plan to finance a new wireless Internet venture that would be run by Sprint Nextel and Clearwire.** The partnership would create a network across the U.S. using WiMax technology, which promises wireless Web-connection speeds for laptops and cellphones that are faster than mobile operators' third-generation networks. Under the plan, Comcast would put up as much as US\$1 billion, while Time Warner Cable would add US\$500 million. Bright House Networks, would contribute US\$100 million to US\$200 million. Sprint Nextel is testing WiMax service in a few markets and Clearwire has its own network based on WiMax technology in some parts of the U.S. The two companies have been working for months on a joint WiMax venture that would attract financing from the WiMax backer Intel.
- **In a move to provide better data to its users, YouTube formally announced that it had added a free feature that will show video creators when and where viewers are watching their videos.** With this, the company hopes to turn YouTube from an online video site into a place where marketers can test their messages. This program, called YouTube Insight, provides a detailed view of a video's popularity, both over time and geographically, broken down by U.S. state. Internationally, YouTube Insight is not as insightful, providing data only on popularity by country. YouTube has provided basic analytical information to creators of videos since its introduction, including the number of views, the viewers' ratings of the video, and the number of comments posted.
- **Yahoo joined Google's OpenSocial initiative for common standards for social networks, increasing the pressure on Facebook to join the movement.** Social networks have emerged as the next big thing on the internet and Facebook took a lead last May with the Facebook Platform, allowing outside developers to offer small applications or "widgets" within Facebook such as games and music services to users. The key feature of OpenSocial is that widget developers can write one application for all networks complying with OpenSocial's specifications. They should be able to create their own networks as users are able to communicate, share interests and play with one another across the different social networks. Neither Google nor Yahoo has been able to establish a major social network. Google has had limited success with its Orkut service and Yahoo has been more successful with services such as the Flickr photo-sharing site.
- **Google Inc.'s short-term outlook has grown increasingly gloomy in the wake of new data showing weakness in the number of consumers clicking on the company's search ads, the source of nearly all of the company's revenue.** The February data from research group comScore Inc. marks the second consecutive month that Google's paid-click data disappointed analysts and investors, who responded by driving the company's shares down 3.1 percent. But analysts were divided about the reasons for, and the impact of, the disappointing data. Some suggested economic weakness could cause Google to fall short of Wall Street's first-quarter estimates, while others argued that efforts by the company to trim the number of clicks which should enable it to increase the amount it charges per click will boost the company's long-term prospects. With no guidance expected from the company, Google shares could remain under pressure until April 17, when the company is expected to report its first-quarter results. Like many analysts, Gene Munster of Piper Jaffray thinks Google might disappoint but that its stock reflects the pessimistic outlook.

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- **Online DVD rental company Netflix Inc. suffered a technology breakdown that knocked out its Web site for about 11 hours.** The trouble blocked access to Netflix's Web site about from about 7 a.m. to 6 p.m. Because the latest problem also disrupted some Netflix distribution centers, many DVDs that normally would have been mailed out may not be shipped.
- **Google gave U.S. regulators a proposal seeking permission to use the airwaves between television broadcast channels for mobile broadband services.** It would propose an enhanced system to prevent wireless devices operating in the so called "white space" between channels from interfering with adjacent channels and wireless microphones. The enhancements will eliminate any remaining legitimate concerns about the merits of using the white space for unlicensed personal/portable devices. The FCC is currently testing equipment to see if it can make use of the spectrum between channels without interfering with television broadcasts. U.S. broadcasters and makers of wireless microphones oppose the idea, fearing that devices would cause interference if used on adjacent airwaves.

Semiconductors

- **Sun Microsystems has found a way to reconnect the chips so they can communicate with each other at such high speeds that computer designers can build a new generation of computers that are faster, more energy efficient and more compact.** The company will explore the high risk idea of replacing the wires between computer chips with laser beams that the Pentagon was paying it US\$44 million to work on the technology, part of the field of silicon photonics. If successful, Sun would eradicate the difficulty of moving The Sun researchers refer to their new system as a macro chip, in contrast to a microchip. The technology would make it possible for computer architects to rethink the organization of circuitry on a computer. The company believed that their alignment technique, which they planned to describe in a scientific paper, would make their systems more compact and easier to manufacture than those of their competitors.

Software

- **Adobe Systems Inc. has begun to create a media player destined for Apple Inc.'s iPhone.** The company had obtained the software developer tools Apple released last month. The tools will let Adobe build a Flash player for the iPhone and it will distribute it through Apple's iTunes online store. The tools Adobe is using are part of a broader effort by Apple to entice third party developers to build and distribute iPhone software add-ons. During its first quarter, records breaking 100 million new cell phone devices were distributed that had Flash on board. Also, Microsoft, which sells a cell phone operating system, recently licensed Adobe's flash player for phones.
- **Adobe Systems launched Photoshop Express, a free software that allows users to edit, store and share photos online.** User comments will be taken into account for future upgrades. Photoshop Express will be completely Web-based so consumers can use it with any type of computer, operating system and browser. And, once they register, users can access their accounts from different computers. Web-based software was increasingly popular, and Adobe it had to board that train.

Hardware

- **Apple is considering a plan to upend its iTunes business by offering unlimited free access to the music library.** However, the deal would only push through should consumers be willing to pay more for the iPod and iPhone devices. Apple would risk creating an accounting nightmare and alienating some artists if it started giving away songs on its iTunes online store. Meanwhile, Apple's rivals are experimenting with new ways to distribute music online including giving it away. Apple was

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negotiating with record labels over a deal to offer a monthly music subscription for the iPhone, as well as an unlimited music bundle for both the iPod and iPhone. Only about 10 percent of Apple's revenues come through iTunes amounting to US\$2.5 billion last year. The store however, has been a critical tool for driving the more lucrative iPod sales and helping musicians get paid for their work.

- **Xerox and accounting firm KPMG are to pay US\$750 million to settle a lawsuit that alleged stockholders were victims of fraudulent accounting practices at the company.** It had received preliminary court approval to settle a securities lawsuit that dates back to 2000. Carlson vs. Xerox was a class-action lawsuit on behalf of shareholders holding stock between 1998 and 2002. In 2002, Xerox paid a record US\$10 million fine to settle Securities and Exchange Commission allegations of fraud and agreed to restate its earnings. The SEC had alleged that Xerox had accelerated the booking of revenues from equipment on long-term leases. This enabled it to cover up earnings shortfalls at a time when its copier business was in decline.
- **Palm Inc. swung to a fiscal third quarter loss on declining revenue despite strong sales of its new low cost Centro smart phone.** Palm also plans to write down the value of some illiquid debt instruments. The company's stock has fallen more than 50 percent since October, when it launched the Centro, and Silicon Valley private equity firm Elevation Partners paid US\$325 million for a 27 percent stake in the company, quieting speculation that it was a takeover target. The revenue in the quarter ended Feb. 28, 2008 dropped 24 percent, but smart phone sales rose 13 percent to 833,000 units on strong demand for the Centro. Smart phone revenue totaled US\$275.4 million. Centro is off to the strongest start of any smart phone in Palm's history. More than 70 percent of Centro buyers traded up from traditional cellphones.
- **Dell Inc. will source 28 percent more components from China this year to fuel growth in emerging markets.** The company plans to buy US\$23 billion of components from Chinese suppliers this year, up from US\$18 billion in 2007. Dell will purchase US\$70 billion worth of computer related supplies and equipment from China. The company posted revenue of US\$16 billion in the fourth quarter ending Feb 1, 2008, an increase of 10 percent compared with the year earlier period. But its revenue in India, China and emerging markets in Europe, the Middle East and Africa was respectively 57 percent, 32 percent and 44 percent. Dell wants to cut costs by buying more components from China so it can take on rivals like HP, Acer and Lenovo in the emerging markets. Dell held 7.9 percent of China's PC market in the fourth quarter last year behind Lenovo, HP and Founder Technology.

Europe

Mobile/ Wireless

- **Sony Ericsson warned that its pre tax profit for the first quarter of 2008 could be less than half that of last year partly because of a shortfall of sales in its core European markets.** The company indicated that European consumers were buying fewer new mobiles to replace their existing handsets than previously expected. The company is expected to be negatively affected by slowing sales growth for its mid to high priced mobiles. Such mobiles for affluent consumers in European countries have been Sony Ericsson's core strength, rather than cheap handsets for emerging markets. Sony Ericsson's pretax profit for the first quarter of 2008 would be 150-200 million euros (US\$236.4-315.3 million), compared to 362 million euros (US\$570.6 million) in the same period last year. The reduced profit guidance is partly due to increased research and development spending that should enable Sony Ericsson to raise its game in China, India and the US.

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- **Nokia announced a deal with Universal Music Group to give buyers of certain Nokia phones unlimited free downloads of songs from the Universal catalogue.** Real Networks and Microsoft both offer music subscriptions that cost US\$14.99 per month which the companies believe will appeal to customers who are more interested in discovering new music than owning old favorites. The company's subscribers delved deeper into back catalogues and checked out more independent artists than typical in person music store shoppers. Subscribers also buy more MP3s than non subscribers.
- **Passengers on British-registered aircraft could soon be able to use their cellphones to make calls and send text messages.** The plans would be subject to approval by the relevant British and European aviation bodies. The decision had been developed with other European Union countries and that the system could be used in European airspace. Under the plan, airlines would allow passengers to use cellphones once planes reach a minimum altitude of 3,000 meters, or 10,000 feet. But cellphone use would not be allowed during take-off and landing for safety reasons. Last week, Emirates, an airline based in Dubai, became the first to enable mobile voice services on flights. The first users were aboard an Airbus A340 flight from Dubai to Casablanca. Emirates plans to introduce the technology across its entire fleet of more than 100 planes. The system approved by Ofcom would work by connecting the cellphone to an onboard base station to make and receive calls that would then be billed through a passenger's normal service provider.
- **The European Commission has officially endorsed Digital Video Broadcasting Handheld (DVB-H) as the mobile TV technology of choice in Europe, and has told member states to encourage the use of the technology.** Tailored to the specific requirements of handheld, battery powered receivers, DVB-H is an offshoot of the terrestrial DVB-T system already employed by digital TV broadcasters in Europe. The EC is firmly convinced that 2008 is the right time to create conditions favorable to the rapid takeoff of mobile broadcasting.
- **Sony Ericsson warned that first quarter earnings could fall by more than half, adding to growing gloom in the handset sector.** A global economic slowdown is starting to crimp consumer spending and is hurting the whole sector. The market for more expensive phones its traditional stronghold had weakened together with a weaker demand for chips used in higher priced third generation phones. Sony Ericsson had been making steady progress and was threatening to take the No. 3 slot among the four largest mobile companies worldwide. In the fourth quarter, the company beat profit forecasts and gained market share.
- **The European Commission has opened an in-depth investigation into the planned US\$8.1 billion takeover by Nokia of digital mapping company Navteq Corp.** The commission's initial study of the deal showed that the proposed merger raises serious doubts with regards to vertical competition concerns, mainly due to the duopolistic nature of the digital map market, and because of Nokia's strong position in the market for mobile handsets. The European regulatory body now has until August 8, 2008 to decide whether to block or allow the deal. The commission will focus on finding out whether the deal would increase the costs of navigable digital maps for other companies providing similar services, or limit their access to these maps.

Investments/ Ventures

- **3i is abandoning early stage investing in start up companies, its worst performing activity since the technology bubble burst, to focus on buy outs, growth capital and infrastructure.** The European venture capital has underperformed other parts of the private equity market, which includes big leveraged buy outs, mid market deals and growth capital. 3i's decision also illustrates the depth of its own transformation since early 2000, when it managed 750 technology investments valued

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at 2.4 billion pounds (US\$4.8 billion). Half of its portfolio competes with the top venture capitalists in Silicon Valley. 3i's venture capital division would be folded into its growth capital unit.

Media, Entertainment and Gaming

- **Computer games companies have warned the government that the proposed overhaul of the classification system could impose an unfair economic burden on the industry.** An independent review by Tanya Byron, a child psychologist, called for the games sector to reform its age rating system, and bring it in line with film classifications. However, the industry is concerned that the British Board of Film Classification (BBFC) would not be able to cope with rating games fast enough, slowing production and putting the country at a disadvantage. The BBFC rates only games for over 18 year olds, handling about 100 titles a year. Another estimated 500 are handled under the industry's voluntary ratings system, the Pan European Game Information or Pegi. Ms. Byron has called for a move to a single system.

Internet

- **Google lost another bid to gain trademark protection across the European Union for Gmail.** The Gmail name is too similar to an existing German trademark and Google has been blocked from getting the EU rights to the name because of the trademark for a slogan that includes the name "Gmail." Google can appeal the decision to the European Court of First Instance in Luxembourg. The company would expect them to appeal until they have no more legal recourse. Should the company fail, it will have to create a separate brand. The trademark agency rejected Google's argument that there was no risk of confusion with its Gmail name when looking at Giersch's slogan as a whole. The main element of his trademark is the word "Gmail." The second part of the slogan and the black and yellow colors, which are different from Google's colors, are of secondary importance.

Software

- **Goldman Sachs and hedge fund GLG Partners are among a host of big names that have contributed to the US\$100 million of funding secured by SpinVox, the speech recognition technology group.** The group also secured backing from BlueMountain, and ToscaFund, the hedge fund run by activist investor Martin Hughes, as it completed its third round of venture capital funding. SpinVox, whose software converts voicemail messages into text with a 97 percent accuracy rate, is building a reputation as one of the U.K.'s fastest growing companies. Investors committing funds in earlier rounds of financing also contributed. SpinVox has been in discussions with both and Microsoft over its speech technology, but the company has so far been unwilling to sell. The money raised will be used to expand in North America and Latin America, as well as deliver additional languages.
- **Fast Search & Transfer ASA (FAST) has received a search platform contract from the Japanese restaurant information website Gourmet Navigator.** The contract covers the deployment of FAST's enterprise search platform FAST ESP. It is based on software license and maintenance fees. FAST, headquartered in Oslo, Norway, is a data search solutions developer with some 750 employees and annual sales of US\$162 million. The company is currently in the process of being acquired by Microsoft. FAST is listed on the Oslo Stock Exchange and traded under the ticker FAST.

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Other Economic Data

Currency Exchange Rates

Currency	Units	Current Rate (on 3/24/08)	% Change 1 Week Ago	% Change Month to Date	% Change 1/1/2008	% Change 1/1/2007
Japanese yen	¥/US\$	99.1200	-0.5%	-4.5%	-11.9%	-16.8%
Hong Kong dollar	HK\$/ US\$	7.7807	0.1%	0.003%	-0.3%	0.04%
Chinese renmenbi	RMB/ US\$	7.0115	-0.6%	-1.4%	-4.0%	-10.2%
Singapore dollar	S\$/ US\$	1.3805	-0.4%	-1.1%	-4.5%	-10.2%
South Korean won	KRW/ US\$	992.7000	-1.0%	5.8%	6.1%	6.7%
New Taiwan dollar	NT\$/ US\$	30.3870	-0.4%	-1.7%	-6.5%	-6.8%
Australian dollar	US\$/A\$	0.9176	1.8%	-1.3%	4.9%	16.4%
New Zealand dollar	US\$/NZ\$	0.7954	0.5%	-0.3%	2.8%	13.0%
Philippine peso	PHP/ US\$	41.8500	1.1%	3.7%	1.6%	-14.6%
Euro	US\$/€	1.5800	2.4%	4.1%	7.4%	19.7%
British pound	US\$/£	1.9952	0.7%	0.4%	0.1%	1.9%

Fixed Income Prices and Yields

Note	Currency	Current (on 3/24/08)		1 Week Ago		4 Weeks Ago	
		Price	Yield	Price	Yield	Price	Yield
US 30-year	US\$	100.51	4.34%	103.54	4.17%	99.05	4.43%
Japan 30-year	¥	102.64	2.35%	102.84	2.34%	102.67	2.35%
Hong Kong 10-year	HK\$	107.53	2.65%	110.23	2.35%	108.69	2.53%
China (06/16)	US\$	109.45	3.36%	109.50	3.36%	110.71	3.21%
Singapore 10-year	S\$	110.70	2.34%	112.27	2.15%	111.9	2.21%
South Korea 20-year	KRW	10,188.61	5.37%	9,766.00	5.61%	9,766.00	5.61%
Australia 15-year	A\$	92.89	6.15%	94.18	5.98%	92.61	6.18%
New Zealand (12/17)	NZ\$	97.27	6.38%	97.26	6.38%	96.89	6.43%
Philippines 20-year	PHP	100.27	8.51%	100.22	8.51%	102	8.55%
India 30-year	INR	99.59	8.36%	102.28	8.12%	106.47	7.76%
UK 30-year	£	105.89	4.40%	106.45	4.37%	98.09	4.37%
Germany 30-year	€	90.85	4.58%	93.52	4.40%	93.62	4.39%

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