

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



Week of 17 - 23 November 2002

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Equity Market Indicators					
Index	Closing Level (11/22/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/2002	% Change 2001 Low
S&P 500	930.55	2.3%	-27.5%	-18.9%	-1.2%
Dow Jones Industrial Avg.	8,804.84	2.6%	-17.3%	-12.1%	9.7%
NASDAQ Composite	1,468.74	4.1%	-35.9%	-24.7%	5.8%
The Street.com Net	98.95	6.6%	-63.9%	-48.7%	-9.9%
Japan Nikkei 225	8,772.56	3.2%	-35.9%	-16.8%	-7.6%
Japan TOPIX	859.05	2.3%	-32.9%	-16.8%	-14.3%
Korea KOSPI Composite	692.87	3.0%	33.0%	-0.1%	48.9%
Korea Kosdaq	48.46	0.9%	-13.0%	-32.9%	5.3%
Taiwan Stock Exchange	4,707.61	-2.2%	-4.6%	-15.2%	34.2%
Singapore Straits Times	1,423.61	0.6%	-24.9%	-12.3%	16.8%
Hong Kong Hang Seng	10,065.32	2.0%	-32.3%	-11.7%	12.5%
Hong Kong GEM	113.42	1.1%	-63.0%	-43.1%	-30.8%
China Shanghai (A-Share)	1,458.55	-4.6%	-34.4%	-14.8%	-8.3%
China Shenzhen (A-Share)	416.22	-6.0%	-39.9%	-16.7%	-10.0%
China Shanghai (B-Share)	117.23	-5.3%	31.4%	-31.7%	50.7%
China Shenzhen (B-Share)	188.03	-1.3%	35.3%	-29.2%	50.9%

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Technology, Media, Telecommunications and Life Sciences Market Activity

NASDAQ/NYSE TMT and Life Sciences IPO Filings

File Date	Issuer	Industry Sector	Size (\$MM)	Description	Book-Runner	Co-Manager
N/A						

NASDAQ/NYSE Equity Markets: TMT and Life Sciences IPO Pricing

Pricing Date	Issuer (Exchange)	Description	Size (US\$MM)	Offer Price	Price on 8/2/02	% Change From Offer
11/19/02	IMPAC Medical Systems, Inc. [IMPC.US] (Nasdaq)	Provides integrated clinical and administrative management systems for cancer specialists	\$32.8	\$15.0	\$18.75	25.0%

Asian Equity Markets: TMT and Life Sciences IPO Pricing

Pricing Date	Issuer (Exchange)	Description	Size (US\$MM)	Offer Price	Price on 8/2/02	% Change From Offer
11/18/02	Marvelous Entertainment Inc. [7844.JP] (Jasdaq)	Plans, produces, and sells visual software such as music CDs and DVDs	\$3.4	¥220,000	¥165,000	-25.0%
11/18/02	Carry Computer Eng. Co., Ltd. [3054.TT] (Taipei Stock Exchange)	Manufactures and markets various kinds of flash card readers	\$5.8	TWD78.0	TWD107.5	37.8%
11/19/02	ZION, Ltd. [2338.JP] (Tokyo Stock Exchange)	Provides Internet-related consulting services	\$2.3	¥93,000	¥99,500	-6.5%
11/20/02	Chengdu Xuguang Electronics Co., Ltd. [600353.CH] (Shanghai Stock Exchange)	Develops and manufactures electronic vacuum components and high-low voltage electricity distribution devices	\$28.3	RMB7.8	RMB16.7	113.4%

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Weekly Highlights

International

Software

- **Novell pushes new strategy in Greater China** that would make it more competitive against Microsoft. Novell's initiatives will harness the capabilities of its two most recent acquisitions, Web application specialist SilverStream Software and consultancy Cambridge Technology Partners. Novell's new vision entails the creation of "software solutions" that addresses all types of networks.

Hardware

- **Wireless mobility is the dominant theme of COMDEX Fall 2002.** Microsoft Chairman Bill Gates set the stage for the mobility-oriented exhibition. Under the theme of "DigitAll inspiration," Samsung secured a significant portion of the exhibition floor and sported its mobile handset armed with a built-in digital camera, a 46-inch LCD TV, a 63-inch PDP (plasma display panel) and other electronics.

Japan

Life Sciences

- **Bioventure Post Genome Institute teams up with Daiichi Pure Chemicals** to develop a way to synthesize radioactively labeled proteins for use in animal experiments. Post Genome Institute has the technology for artificially synthesizing proteins in the test tube. The new radiolabeled proteins are made using that technique with amino acids that incorporate a radio isotope that naturally emits beta rays.

Telecommunications

- **PoweredCom and Tokyo Telecommunication Network to merge** on April 1, 2003. The new company will be named PoweredCom, though the surviving entity will be Tokyo Telecommunication Network, known as TTNNet. The new company will offer individuals fixed-line telephone and Internet connection services, as well as IP telephone services.
- **Nippon Telegraph and Telephone to invest almost 300 billion yen over the next five years** to build a state-of-the-art communications network that can transmit higher-quality video through broadband communications lines with greater reliability. The company will offer the network to group and nongroup firms as new broadband communications infrastructure.

Mobile / Wireless

- **Matsushita Electric Industrial and Nokia to jointly develop technology** for connecting cell phones and home electronics over the Internet. They plan to commercialize products using proprietary technology starting around fiscal 2003. Matsushita Electric will devise specifications for home electronics products, while Nokia will handle the cell phone side of the joint project.
- **NEC to develop a wireless data transmission system with throughput of 1.5 gigabits per second**, about 30 times that of a regular wireless LAN system. The system can transmit data over a distance of about 10 meters. When fitted onto railroad tracks or installed along roads, the new system can transmit moving images to trains and cars. The company plans to begin sample shipments to firms next year.

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Software

- **Oracle to carry out drastic reform of its marketing operations, as the IT boom that fueled the firm's rapid growth has ended.** The company will concentrate efforts to earn 30% of software sales from the medical and public institution sectors by fiscal 2004. For the application software business, it intends to target customers of database software operations it has been serving for years.

Internet

- **Entertainment Plus teams with NTT Data to offer a new type of e-ticket** that doubles as an e-cash card used to purchase souvenirs, food and beverages at the event. The new e-ticket will come in the form of a contactless smart card that also incorporates the Edy system of electronic cash promoted by bitWallet.
- **More than one in three Japanese Internet users get their Net access via broadband transmission systems such as the ADSL service.** The survey found 37.1% of people who use the Internet on PCs at home were getting broadband high-speed, large-capacity access. Most of the broadband users were getting the ADSL service, partly because of its low price, making up 22.1% of the 37.1%.

Semiconductors

- **NEC and Hitachi to invest a combined \$365 million to increase production of memory chips** at their joint venture. The companies, which have already invested 52 billion yen in the venture called Elpida Memory, will spend the funds by March. Elpida will also seek outside investors. To compete with bigger rivals such as Samsung Electronics, Elpida needs to expand capacity to achieve economies of scale.

Venture Capital / Investments

- **A record 281 M&A deals involving listed start-ups conducted in the first 10 months of this year,** up 13 from the total for all of last year. Some new ventures took over the unprofitable subsidiaries of large companies as well as promising unlisted firms, while struggling start-ups were acquired by major corporations.

Hardware

- **Teac to launch a new sales firm for computer peripherals in Shanghai, China.** The new base will sell DVD drives and other peripherals to Taiwanese suppliers under an OEM agreement and provide services as well. The company aims to rake in 10 billion yen in sales in fiscal 2006. The new firm is expected to be capitalized at 250,000 dollars for a total investment of 357,000 dollars.
- **Dell Computer KK to tie up with Microsoft** as early as the end of November to strengthen sales of computer systems to small and midsize companies. The two firms will share customer information and offer low-priced sets of their products. Dell aims to command the largest share of the PC server market for small and midsize companies by the end of the current fiscal year by linking up with Microsoft.

Media, Entertainment and Gaming

- **Sega and RealNetworks to offer classic Sega games on the PC.** The two companies will offer a number of games from Sega's early 1990s' Genesis game console through RealOne Arcade, RealNetworks' gaming service. Among the notable titles available at launch are "Sonic the Hedgehog" and "Ecco the Dolphin."

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- **Nintendo device allows users to play its Game Boy software on GameCube console** to boost flagging sales. Nintendo will sell the GameCube device, called "Nintendo GameCube Game Boy Player," in March in Japan, and in May in the U.S., at a recommended price of \$41.

Korea

Telecommunications

- **Broadband subscribers passes the 10 million threshold**, just four years after introduction of the services in June 1998. The Korean IT industry accounted for 12.9 percent of the national GDP and 30 percent of total exports. Several government policies directed at establishing an "e-Korea" led initiatives to build an e-government and carry out nationwide digitalization programs.

Mobile / Wireless

- **Hyundai Motor and IBM teaming up in a venture to provide wireless services** to Hyundai vehicles produced for the Korean market. It wasn't immediately known when the vehicles would be available in North America, or how much telematics would add to the cost of a vehicle. Telematics refers to wireless communications products designed into vehicles.

Semiconductors

- **Hynix to sell its flat-panel unit to China's BOE Technology Group for \$380 million**, as creditors of the world's third-largest memory- chip maker sell off assets to help recoup loans. BOE will complete the purchase by the beginning of next month and has offered job guarantees to Hynix workers. Selling the display unit would help bolster the finances of Hynix.

Hardware

- **Exports of digital televisions so far this year have more than tripled by price volume**, according to the Ministry of Commerce, Industry and Energy said. Among these, the PDP-TV was particularly successful, with its shipments jumping by more than 400 percent, the ministry said in its report on the export trend for digital televisions through the first three quarters of this year.

Information Technology

- **Toshiba Information Systems, Cisco Systems KK and Mitsui join** to offer a network security service that operates continuously to monitor, track and minimize damage from illegal network penetrations. Toshiba Information Systems will produce the software for the service, and Cisco will construct the security systems. The actual monitoring will be carried out by a Mitsui unit.

China

Telecommunications

- **China Netcom secures deal to acquire assets from Asia Global Crossing**, in the first such acquisition by a mainland carrier. The fixed-line operator plans to partner with Newbridge Capital and Softbank Asia Infrastructure Fund to create a new firm with \$270 million in equity and bank loans to take over the network's business operations, AGC said in a US filing for bankruptcy.

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Mobile / Wireless

- **Handspring taking a crack at the mainland hand-held market** under a new manufacturing and branding deal with CEC Telecom in China. The United States company will sell its GPRS-enabled mobile-phone PDA combination, the Treo 270, in China with CEC Telecom at a price many would consider prohibitive in the mainland.
- **China Unicom to buy nine mobile networks from its parent for \$2.72 billion**, in a long-awaited move by the mainland Chinese mobile phone operator. The company will pay HK\$4.52 billion and assume HK\$16.7 billion in debt for the purchase. The nine provinces in which it has acquired networks are Jilin, Heilongjiang, Jiangxi, Henan, Shaanxi, Sichuan, Chongqing, Guangxi and Xinjiang.

Hardware

- **Legend Group launches its new generation of "dual mode" systems**, which combines the functions of a regular audio-visual appliance and a personal computer. The new 6010P and 9010P Supremia-series PCs ran on Legend's operating platform Leos. The new PCs come with a keyboard plus a remote control that users can click on to play music or video files on the hard-disk drive.

Media, Entertainment and Gaming

- **CCTV reports a 26 percent increase in revenue for prime-time advertising** next year from this year. An auction of next year's spots between the end of the main evening news at 7.30pm and 8pm raised 3.31 billion yuan. The Company said the main bidders were manufacturers of drinks, pharmaceuticals, mobile telephones, food, household appliances and health products.

Singapore / Malaysia

Telecommunications

- **Malaysia's Time dotCom will begin price negotiations with Maxis Communications** over the sale of its mobile unit once due diligence is completed. In September, Time dotCom signed a conditional agreement to sell its unlisted mobile arm TIMECel to leading operator Maxis for between M\$1.3 billion and M\$1.6 billion.
- **Demand for Internet data management services rising in Southeast Asia**, according to the local units of Japanese giants NTT and Fujitsu said. Malaysia's lower costs and high-quality Internet infrastructure would draw investments away from Singapore, the region's number one data site. Government support was another factor encouraging multinational firms to set up shop in Malaysia.

Mobile / Wireless

- **MobileOne Asia announces it can pay as much as 80 percent of profit as dividends by 2004**, as Singapore's number two cellular company tries to lure wary investors to its share sale. The company said its remaining investment in the 3G mobile technology would be S\$200 million and it had no plans to cut debt. It has already pledged to set aside 52 percent of profit as dividends this year and next.

Semiconductors

- **Start-up Infiniti Solutions secures \$36 million to invest in the chip-testing and assembly.** The year-old company is led by Inderjit Singh, a Singapore member of parliament and Infiniti's chief executive officer. Most of the \$36 million came from 3i and EDB Investments, with the rest from Infiniti's management team. Part of Infiniti's strategy is to grow through acquisitions.

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Media, Entertainment and Gaming

- **SPH forges a deal to supply news to a Shanghai-based newspaper controlled by Xinhua**, the first formal collaboration between the two countries' press arms, both of which are extensively influenced by their governments and are regarded as tools for nation-building. The government has been exhorting Singaporean businesses to exploit the opportunities presented by China's rapid economic growth.

Information Technology

- **DMX Technologies Group files prospectus with the Monetary Authority of Singapore**. The company provides comprehensive network solutions spanning the whole IT spectrum. It has operations in China, Hong Kong, Malaysia and Singapore. The CEO, non-executive chairman and CFO at DMX were formerly employees of Datacraft, until last year a high-flying technology company.

Hong Kong

Telecommunications

- **Three thousand workers at PCCW face an uncertain future** after the telecoms giant announced the formation of a new 100 percent owned subsidiary to employ them. In September PCCW unveiled a voluntary program under which 17 independent companies were formed by about 1,600 staff. Cascade Ltd will take over the services currently undertaken by the Network and Services Business division.

Internet

- **HSBC online foreign-exchange transactions through Hong Kong nears \$10 billion a week**. Officials said they expected Internet-based revenues to increase following the worldwide launch next week of the markets@hsbc electronic trading platform. The online trading platform has generated over \$240 billion worth of forex transactions through 100,000 trades from August 2000 to October this year.

Media, Entertainment and Gaming

- **Tom.com has not yet reached agreement to buy Sing Pao current affairs magazine**. The announcement came after Chinese-language newspapers reported this week that Tom.com would buy the Cup magazine for a token HK\$1. Sing Pao has been trying to sell its poorly performing assets, but has not made any agreement to dispose of stareastnet.com or its other Internet-related businesses.
- **Tom.com expanding its operations on the mainland** by setting up two joint ventures with advertising firms involving a total investment of 21 million yuan. The company will invest 20 million yuan in a joint venture with Charm Art & Advertising, a major advertising agent for CCTV and 1.02 million yuan for a 51 percent stake in a joint venture with Henan Ming Sheng Advertising.

Information Technology

- **Digital China posts higher profits for the six months to September** but said its net margins came under pressure. Digital China earned HK\$89.5 million, against HK\$80.7 million in the same period last year, and promised to distribute a dividend at the end of the year. First-half turnover rose to HK\$5.8 billion from HK\$4.9 billion, a jump of 18.3 percent.

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United States / Canada

Telecommunications

- **Qwest Communications to swap at least half of its \$22 billion in high-yield bonds** for bonds with longer repayment terms in a move that could help the company avoid a cash squeeze that may have pushed it into a bankruptcy-court filing. The swap would allow Qwest to repay its bond debt more slowly at a time when it is expected to have trouble covering debt payments.

Software

- **Microsoft and the Justice Department have agreed on two technology experts** to sit on a three-member technical committee that will help enforce Microsoft's antitrust settlement. Microsoft's nominee was Franklin Fite, Jr., who developed Microsoft's Windows CE operating system for hand-held computing devices. The Justice Department named computer data networking expert Harry J. Saal.

Internet

- **Expedia to start operations in Asia-Pacific by 2004**, giving it access to an online travel market estimated to be worth as much as US\$8.3 billion. The company, based in Bellevue, Washington, said it would establish its regional headquarters in Sydney, Australia's main tourism hub.
- **USA Interactive to acquire Entertainment Publications**, which sells annual memberships for entertainment and shopping discounts, for about \$370 million from a group of investors led by Carlyle Group. USA Interactive, run by entertainment mogul Barry Diller, owns or controls Expedia, Hotels.com, Ticketmaster Inc. and the Home Shopping Network, among other properties.

Semiconductors

- **Intel has embarks on its biggest product launch yet for enterprise systems**, unveiling a dozen new Xeon processors, chipsets and platforms that will run on high-performance computer servers and workstations. Its latest products, now headed to many major computer makers, are designed to bring down the cost of high-performance computing for organizations.

Hardware

- **Sun Microsystems to focus its research on simplifying computing** over the next five years. Sun expects to spend \$10 billion on research, acquisitions and other program such as marketing. That is a cut in research from Sun's heyday during the Internet boom, when the company, which makes computers that manage networks, plowed US\$2 billion annually into research and development alone.
- **Hewlett-Packard shares rise as much as 11 percent in early trading** after the world's second-biggest computer maker reported fourth-quarter profit rose almost fourfold. Hewlett-Packard improved profit as sales topped forecasts in the quarter ended October. 31. Cost savings were 30 percent greater than the company had estimated for the first six months after it bought Compaq Computer.

Media, Entertainment and Gaming

- **Charter Communications to restate two years of financial results** to record an additional \$2.6 billion in expenses and liabilities. The \$1.4 billion in franchise costs and \$1.2 billion of deferred income-tax liability won't change sales or operating cash flow figures for 2000 and 2001, the U.S. cable-television company controlled by billionaire Paul Allen said in a statement.

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Information Technology

- **NCR and copier giant Xerox have announced fresh staff cuts** to trim their operating costs as layoffs in the depressed information technology (IT) sector continue. Over the past few days, Research in Motion, AMD, Agilent Technologies and America Online have embarked on a new round of job cuts.

Europe

Telecommunications

- **Two high-ranking executives at Sonera were arrested** in a growing investigation into whether the company violated the privacy of its workers. Their arrests come just weeks after police began holding three other Sonera employees who worked with corporate security. Police are investigating whether Sonera monitored the call records of its own employees in 2000 and 2001.

Mobile / Wireless

- **Vodafone to launch a wireless service** that gives business users access to their corporate e-mail, calendar and other applications from their laptops while on the move. Called Vodafone Remote Access, it initially will be available in Germany, Italy, Spain, Sweden and the Netherlands and can be accessed across Europe on Vodafone's wireless network.

Internet

- **Bertelsmann sells German-language operations of its struggling online bookseller bol.com** to German rival buch.de internetstores AG for shares and cash. Bertelsmann's Direct Group unit will receive a 25.1% stake in buch.de and \$800,000 in cash in exchange for bol.com's German, Swiss and Austrian customer base and Internet domains.

Venture Capital / Investments

- **Deutsche Bank in talks to sell venture capital investments worth three billion euros** to a team of its own managers. Deutsche said it was in exclusive talks with a team of managers at its DB Capital Partners unit led by chief executive Ted Virtue and European managing partner Graham Clempson about direct investments in established businesses worth 1.5 billion euros.
- **NTT DoCoMo will not buy new shares** that Dutch telecom company KPN Mobile NV plans to issue as part of a debt-equity swap. That decision will result in NTT DoCoMo's 15% stake in KPN Mobile being diluted to under 5%, Japan's mobile-phone giant is expected to formally announce its decision on whether it will invest about \$2.48 billion to keep its current minority stake in KPN Mobile.

Hardware

- **Palm is selling its latest low-cost personal organizer** through more than 20 new European retail chains, including supermarkets and petrol stations. The move marks a departure from Palm's previous distribution strategy of selling its products through electronics and mobile-phone retailers. The new organizer, dubbed Zire, is available in five European supermarket chains.

Media, Entertainment and Gaming

- **Vivendi Universal shares surge after rejecting an unsolicited offer** for its entertainment assets and was nearing a partial sale of its utility stake. Oil billionaire Marvin Davis and a group of private-equity

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companies were ready to bid \$15 billion, and assume \$5 billion of debt, for the entertainment assets of the world's second-largest media company.

Information Technology

- **ABN Amro to cut about 2,000 jobs from its wholesale banking arm** by transferring them to EDS as part of an outsourcing deal. ABN Amro expected to sign the \$1.5 billion deal with EDS by the end of the year and would reap the benefits of cost savings by 2004. Under the arrangement, EDS will run a portion of ABN Amro's technology operations at its wholesale division.

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Other Economic Data

Currency Exchange Rates						
Currency	Units	Current Rate (11/22/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/ 2002	% Change Last 12 Mth.
Japanese yen	¥/US\$	122.8100	-1.9%	7.4%	7.2%	1.1%
Hong Kong dollar	HK\$/ US\$	7.7989	0.0%	0.0%	0.0%	0.0%
Chinese renmenbi	RMB/ US\$	8.2772	0.0%	0.0%	0.0%	0.0%
Singapore dollar	S\$/ US\$	1.7692	-0.4%	2.1%	4.3%	3.9%
South Korean won	KRW/ US\$	1211.9500	-0.2%	-4.0%	8.4%	5.2%
New Taiwan dollar	NT\$/ US\$	34.7515	-0.5%	5.0%	0.6%	-0.8%
Australian dollar	US\$/A\$	0.5636	0.0%	0.8%	10.6%	8.8%
New Zealand dollar	US\$/NZ\$	0.5027	0.7%	13.2%	20.7%	22.5%
Philippine peso	PHP/ US\$	53.8500	-0.9%	7.7%	-4.2%	-3.4%
Euro	US\$/€	0.9966	-1.3%	5.8%	12.0%	13.5%
British pound	US\$/£	1.5803	0.0%	5.6%	8.6%	12.1%

Fixed Income Prices and Yields							
Note	Currency	Current (11/22/2002)		1 Week Ago		4 Weeks Ago	
		Price	Yield	Price	Yield	Price	Yield
US 30-year	US\$	105.2969	5.10%	107.0469	4.91%	103.0938	5.17%
Japan 30-year	¥	109.1115	2.02%	108.5765	1.75%	104.3370	1.96%
Hong Kong 10-year	HK\$	121.3160	6.16%	120.9187	4.08%	119.4665	4.32%
China (10/2027)	US\$	114.0791	6.57%	114.9779	6.30%	110.6600	6.62%
Singapore 10-year	S\$	113.2129	4.09%	114.0179	2.59%	111.9445	2.88%
South Korea 10-year	US\$	122.0658	7.27%	122.6963	4.14%	120.7618	4.54%
Australia 15-year	A\$	107.0125	6.07%	108.4680	5.43%	104.4620	5.93%
New Zealand (07/2009)	NZ\$	103.8754	6.74%	104.6849	6.13%	103.1041	6.42%
Philippines 20-year	PHP	122.6292	14.88%	121.0336	14.98%	122.8932	14.74%
India 20-year	INR	137.9733	7.76%	135.5702	7.11%	131.2084	7.47%
UK 30-year	£	94.6100	4.49%	96.1568	4.49%	95.1612	4.55%
Germany 30-year	€	105.5600	5.21%	106.3001	5.07%	105.4155	5.13%

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