

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



Week of 24 - 30 November 2002

Contents

Equity Market Indicators	2
Technology, Media, Telecommunications and Life Sciences Market Activity	3
Weekly Highlights	4
International	4
Japan	4
Korea	5
China	6
Singapore / Malaysia	6
Hong Kong	7
United States / Canada	8
Europe	9
Other Economic Data	10
Currency Exchange Rates	10
Fixed Income Prices and Yields	10

This document is provided for information purposes only, and constitutes neither investment advice nor the recommendation to purchase or sell securities of the companies named in this document. IRG Limited, f/k/a iReality Group Limited, and its affiliated companies, make no representation as to the accuracy or completeness of the information contained in this document.

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



Week of 24 - 30 November 2002

Equity Market Indicators					
Index	Closing Level (11/29/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/2002	% Change 2001 Low
S&P 500	936.31	0.3%	-27.0%	-18.4%	-0.6%
Dow Jones Industrial Avg.	8,896.09	0.6%	-16.4%	-11.2%	10.8%
NASDAQ Composite	1,478.78	0.8%	-35.5%	-24.2%	7.3%
The Street.com Net	99.06	0.0%	-63.8%	-48.7%	-9.4%
Japan Nikkei 225	9,215.56	5.1%	-32.7%	-12.6%	-2.2%
Japan TOPIX	892.71	3.9%	-30.3%	-13.5%	-10.2%
Korea KOSPI Composite	724.80	4.6%	39.1%	4.5%	54.1%
Korea Kosdaq	51.90	7.1%	-6.8%	-28.1%	11.8%
Taiwan Stock Exchange	4,646.69	-1.3%	-5.8%	-16.3%	35.2%
Singapore Straits Times	1,391.53	-2.3%	-26.6%	-14.3%	17.2%
Hong Kong Hang Seng	10,069.87	0.0%	-32.3%	-11.6%	14.1%
Hong Kong GEM	114.70	1.1%	-62.6%	-42.5%	-27.7%
China Shanghai (A-Share)	1,499.36	2.8%	-32.6%	-12.4%	-6.5%
China Shenzhen (A-Share)	430.96	3.5%	-37.7%	-13.7%	-8.1%
China Shanghai (B-Share)	118.75	1.3%	33.1%	-30.8%	50.2%
China Shenzhen (B-Share)	194.85	3.6%	40.2%	-26.7%	55.6%

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



Week of 24 - 30 November 2002

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
N/A						

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
11/27/02	China National Medicines Corp. Ltd. [600511.CH] (Shanghai Stock Exchange)	Wholesales and retails chemical material medicines, western medicine preparations, biochemical medicines, biological products, and Chinese traditional medicines	\$32.0	RMB5.00	RMB12.15	143.00%
11/28/02	New Era Electronics Co., Ltd. [4909.TT] (Gre Tai)	Develops, manufactures, and markets printed circuit boards	\$3.9	TWD45.00	TWD45.20	0.04%
11/29/02	AGL Mediatech Holdings Limited [8192.HK] (HKSE)	An online rich media and content distribution solution provider	\$3.9	HKD0.25	HKD0.35	38.00%

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



Week of 24 - 30 November 2002

Weekly Highlights

International

Hardware

- **StorageTek introduces BladeStore enterprise storage systems to Greater China.** The blade design has allowed server makers, such as Hewlett-Packard, to pack all the components of a single server, including a high-performance computer microprocessor and networking system, onto one card. The technique enables users to fit as many blades as they need in a small rack cabinet.
- **Juniper Networks predicts Asia-Pacific router sales will rebound from next year** as the region's telecommunications firms add more advanced equipment that can help them deploy new and improved services. Juniper expects key markets such as Greater China, Japan and South Korea to lead a growing trend in the region to replace outdated networking gear.

Information Technology

- **The \$875 billion IT industry shrank an unprecedented 2.3 percent this year**, taking the cumulative dip since the start of last year to 3 percent, IDC said. The two-year downturn was in sharp contrast to the average annual growth of 12 percent registered in the 20 years to 2000. The slightly more positive outlook for the coming year may be a boost for many of the region's economies.

Japan

Life Sciences

- **Kirin Brewery allies with NanoCarrier, a biotech start-up**, to develop anti-cancer agents that can target a specific cancerous area and thereby have less negative and more positive side-effects. The two companies will develop anti-cancer agents that employ nanoparticles, which envelop cancer medicines and carry them to the affected area.

Mobile / Wireless

- **Nine telecommunications firms to join an alliance for IP telephone services** set up by NEC, KDDI, Japan Telecom and Matsushita Electric Industrial. Tokyo Telecommunication Network, DoCoMo AOL, Dream Train Internet and six other companies will join the grouping, which aims to start an IP telephone service in March 2003. The 13 firms have a total of 17 million subscribers.

Software

- **Microsoft may disclose parts of its Windows operating system blueprints** to the central and municipal governments. Its latest plan to introduce in Japan the Shared Source Initiative is meant to counter IBM Japan and others that have beefed up their sales efforts in open-source Linux-based operating systems. Microsoft has disclosed source code to the U.S., Swedish and Swiss governments.

Venture Capital / Investments

- **Softbank in final negotiations with at least two overseas investment funds**, including Cerberus Group, for the sale of Aozora Bank shares. Softbank, which has a roughly 49% stake in the bank, is

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



Week of 24 - 30 November 2002

poised to sell shares valued at around 50 billion yen. If Softbank agrees to sell the shares to an overseas investment fund, Aozora Bank's business reforms would be led by an overseas lead shareholder.

Media, Entertainment and Gaming

- **Enix to buy Square for \$764 million in cash and stock**, combining the makers of “Dragon Quest” and “Final Fantasy,” Japan's most popular role-playing video-game series. Square has sold more than 42 million copies of the “Final Fantasy” games worldwide, while Enix has sold 30 million copies of “Dragon Quest.” Both games can be played on Sony's PlayStation 2 video-game consoles.
- **Bandai to charge fees for some of its popular "Fortress" online video game services**, for which the number of domestic registered players has now reached 380,000. The basic fees will be 500 yen per month, and 1,200 yen for three months, although a limited service involving fewer game characters will continue to be available free of charge.

Korea

Telecommunications

- **Dacom close to sealing a deal to take over Powercomm**, a unit of the state-run utility giant KEPCO, a development that could deal a blow to competing bidder Hanaro Telecom. Dacom is said to have narrowed the gap in pricing with KEPCO for acquiring Powercomm. Final details are being worked out, and Dacom and KEPCO are likely to go ahead with the Powercomm deal.

Mobile / Wireless

- **Pantech & Curitel staging aggressive marketing campaigns** and introducing new high-powered handset models. Pantech & Curitel used to focus on the handset export market but revised its strategy last month to solidify its brand recognition in the local market. The company aims to secure about a 15 percent share in the local handset market that has long been dominated by Samsung and LG.

Internet

- **Korea's cyber-community industry is undergoing changes** as major players ratchet up marketing efforts to attract new subscribers. The initial move was sparked by the controversial fee-based community service by Freechal. The fee-based Web service operator began to charge a monthly fee of 3,000 won for subscribers who maintain Internet communities.

Semiconductors

- **Hynix Semiconductor needs another massive debt restructuring** that includes a 1.9 trillion won (\$1.57 billion) debt-for-equity swap. In a report to a meeting of Hynix creditors, Deutsche Bank also recommended that the chip maker be allowed to roll over its remaining debt totaling 3 trillion won until 2006. Otherwise, the chip maker would face a new cash flow crisis as early as the first half of next year.

Venture Capital / Investments

- **Newbridge Capital forms a United States-Japan consortium to bid for Chohung Bank.** Days before Monday's bid deadline for state-run Chohung, Newbridge has enlisted US investment fund Cerberus and Japan's Shinsei Bank in an attempt to buy Korea's fourth-largest bank. The move would extend the US fund's reach in Korea's banking sector.

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



Week of 24 - 30 November 2002

Information Technology

- **Korean IT industry forecasted to see a slowdown in their growth rates over the next year.** The Korea Institute for Industrial Economics & Trade (KIET) said yesterday in its outlook for 2003 that the growth rate will be sluggish although the possibility of negative growth is highly unlikely. The report suggests that explosive growth in the technology sector is unlikely next year.

China

Life Sciences

- **New rules aimed at protecting firms' patent rights polarize innovators and producers.** The State Drug Administration (SDA) has announced that new drugs are now redefined as products that have not been previously approved for sale, either in China or overseas. Many mainland pharmaceutical firms are believed to have modeled products on medicine manufactured overseas to avoid R&D spending.

Mobile / Wireless

- **China Telecom to muscle into the lucrative mobile market** by offering their IP service to cellular users. Customers using wireless operators China Mobile Communications Group or China United Telecommunications will soon be able to tap China Telecom's cheaper long-distance rates by dialing a standard code. The IP system carries voice over packet-based networks controlled by routers.
- **ZTE wins a 1.57 billion yuan deal to supply equipment to China's No 2 mobile operator,** beating foreign vendors that dominate the mainland market for telecom gear. ZTE will help China United upgrade its CDMA network to allow customers to download videos to cellphones. China United plans to double the user capacity of its CDMA network to 30 million as part of its second-phase expansion.

Software

- **Concord Communications to make an aggressive push into the mainland next year** with initiatives in the telecommunications, financial services and government sectors. Hong Kong, where Concord has its Greater China headquarters, is expected to remain the company's launch pad for new technologies to be included in its flagship product, eHealth.

Venture Capital / Investments

- **Datang Mobile to raise funds via private placement to help finance its 3G project.** Datang Mobile has budgeted \$170 million for the next two years to develop TD-SCDMA (time division synchronous code division multiple access) technology, a home-grown 3G wireless communications technology. Datang Mobile a year ago appointed Bank of China International to look for strategic investors.

Singapore / Malaysia

Life Sciences

- **EDB aims to broaden the base of Singapore's pharmaceuticals industry** by diversifying into the emerging field of biologics manufacturing, which refers to the large-scale production of protein-based therapeutics. One of the first players is A-Bio Pharma, which will focus on the production of complex proteins such as monoclonal antibodies using mammalian cell culture technology.

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



Week of 24 - 30 November 2002

Telecommunications

- **Singapore Telecommunications has sold its 50 percent stake in Failsafe Corporation Singapore**, which provides data and disaster recovery services. Singapore Telecom sold its stake to Failsafe Corporation Holdings, the other shareholder of the joint venture. Failsafe is Singapore's largest provider of data recovery services, with two centers that cost a total of \$79.8 million to set up.
- **C2C will expand into Malaysia through an alliance with Time dotCom**. They will provide phone companies with networks that link Malaysian cities with other countries in Asia. C2C and Time dotCom said they plan to target local phone companies that need capacity for high-speed data transmission and international networks.

Mobile / Wireless

- **MobileOne Asia raises about \$447 million in the nation's biggest stock offer in three years**. The company sold 600.5 million shares. Institutional investors paid S\$1.32 a share while individuals will be offered the stock at S\$1.25. ABN Amro Rothschild arranged the sale. MobileOne will pay more than half of its profit for 2002 and 2003 in dividends.
- **Nokia is late in delivering a so-called third-generation network to MobileOne**. The two companies are negotiating a new schedule. Nokia, which was to have delivered the software in the middle of 2002, will probably deliver it in December. MobileOne said in 2000 it would pay Nokia \$284 million over five years for new equipment including that needed for 3G networks.

Semiconductors

- **Chartered Semiconductor Manufacturing agrees to share computer chip plants with IBM**, trying to close a gap in market share and technology with Taiwanese rivals. The shares of the world's third-largest provider of made-to-order chips rose as much as 9.9 percent on the plan to offer customers manufacturing capacity in IBM's factories that use 300 millimeter wafers.

Hardware

- **Venture begins production of computer-related products at a new factory in China**. The factory is about 100,000 sq ft, and might be expanded to 160,000. It plans to make computer networking equipment, printers and related products at the factory. Venture has bought two-thirds of Univac Precision Engineering this year and plants and equipment from Iomega and Agilent Technology.

Information Technology

- **Datacraft Asia to revive its network systems integration business** with an aggressive focus on Internet-based services to its major corporate customers. Emerging from 12 months of stagnant sales and a sweeping restructuring program, the company this week introduced a strategy for providing IP telephony systems and simplifying how these can be adopted for various business applications.

Hong Kong

Internet

- **Cathay Pacific, Travelocity and 16 major airline partners to launch Zuji.com.hk**, two months after introducing the Singapore and Australia sites. The new travel site aims to put searches for travel fares and car rentals in the hands of the leisure traveler. Zuji has been compared with Orbitz in the US, is seen to have an advantage over other travel portals because of its airline investors.

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



Week of 24 - 30 November 2002

- **ESDlife alies with Info Mapping to allow workers to report in for their duties at ESDlife kiosks** when they are out of the office. The DispatchPro outdoor worker management system connects to a company's network. The solution was developed with geographic information system and address coding technologies, enabling real-time visualisation of job progress and locations.

United States / Canada

Telecommunications

- **WorldCom reaches a partial settlement with the SEC on fraud charges** as the telecommunications company agreed to expanded oversight of its operations. While the settlement resolves significant portions of the SEC's case against WorldCom, attorneys for the commission said the case isn't closed. The biggest looming issue is whether WorldCom will have to pay a hefty fine.
- **Level 3 Communications to acquire most of the assets of ISP Genuity for \$242 million.** The deal, which followed weeks of complex negotiations between a multitude of parties, marks a significant step in a plan by Bloomfield, Colorado-based Level 3 to use fresh capital from Warren Buffett and other investors to buy assets on the cheap from ailing competitors.

Software

- **Sun Microsystems puts StarOffice suite of software on the retail shelf**, hoping it will become an attractive alternative to the more costly but pervasive Microsoft Office. The StarOffice software was previously sold over the Internet as a download or through channel partners. StarSuite 6.0 consists of a word processor, spreadsheet and presentation software, and other office software.
- **Oracle accused in a lawsuit of improperly using MangoSoft's technology** in its new database software. MangoSoft contends that it invented software for computer networks with a shared memory and structured data storage systems. Oracle's 9i Real Application Clusters software uses that technology without permission, MangoSoft claims in the patent lawsuit filed in Concord, New Hampshire.
- **Antitrust fight against Microsoft dwindles to Massachusetts vs. the software giant**, as seven other states announced they would accept the landmark settlement reached by the company and the Bush administration. Massachusetts Attorney General Tom Reilly, one of Microsoft's most outspoken critics, asked a U.S. appeals court to reconsider tougher sanctions against the software company..

Internet

- **Amazon.com to provide services for CDNow**, a Web store that sells recorded music and movies. Amazon.com said the companies wouldn't announce other details of the agreement at this time. Bertelsmann keeps the brand name and Web site. Bertelsmann has been scaling back the closely held company's Internet businesses to cut costs.
- **Software maker Roxio buys remaining intellectual property assets of Napster** for just over \$5 million in cash. The deal went through immediately following a Delaware bankruptcy court's approval. Santa Clara, Calif.-based Roxio, which specializes in CD-burning software, snapped up Napster's patents and brand name for the cash, plus \$300,000 in warrants for shares of Roxio common stock.
- **Ticketmaster to acquire Danish ticketing company Billetnet from Post Danmark** for an undisclosed sum. Ticketmaster, majority owned by USA Interactive, said the Billetnet acquisition follows

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



Week of 24 - 30 November 2002

its recent expansion into the Netherlands and Norway, and it plans to make further acquisitions in the Nordic region.

Media, Entertainment and Gaming

- **EchoStar Communications offers to sell Cablevision Systems** frequencies to reach the entire U.S. with a new satellite television service. EchoStar, owner of the Dish Network satellite TV service, is trying to persuade the U.S. Federal Communications Commission to reverse an earlier decision that its proposed \$26 billion purchase of Hughes from General Motors would harm competition.

Information Technology

- **EDS to integrate its information technology with Xerox's document-management systems** and services. As part of the agreement, EDS will become a systems integrator for Xerox products. In turn, Xerox will become EDS's preferred supplier of print, copy, fax systems and related services.
- **EDS is paring back its pursuit of long-term, big-dollar deals** to concentrate on deals with more-immediate cash flow and profits. By early 2003, the Plano, Texas, computer outsourcing firm will adjust sales compensation to encourage deals that generate near-term cash flow and profits. It often has purchased existing computer gear and retained employees in the pursuit of long-term contracts.

Europe

Telecommunications

- **France Telecom to slow down its investments in 3G wireless networks** as part of a cost-savings effort aimed at matching the roughly \$8.9 billion the French government is expected to inject into the troubled operator. Those cost savings across France Telecom, to be achieved over two or three years, would come from reductions in spending on both operations and infrastructure.

Mobile / Wireless

- **Sony Ericsson needs bring out new products soon, according to Gartner Dataquest.** The company published third-quarter handset sales statistics that showed that Sony Ericsson sold only five million mobile phones in the third quarter, compared with more than 8.5 million before the merger. Ericsson said it would need to invest more into the venture next year to see it through to profitability.

Media, Entertainment and Gaming

- **Telewest Communications agrees to the terms of a \$3.1 billion bank loan** that will allow the second-biggest U.K. cable-television operator to stay in business. About 30 banks will provide the money to replace existing debt and fund operations. The agreement with Telewest's banks will also allow it to complete a plan to hand bondholders control in return for 3.5 billion.

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



Week of 24 - 30 November 2002

Other Economic Data

Currency Exchange Rates

Currency	Units	Current Rate (11/29/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/ 2002	% Change Last 12 Mth.
Japanese yen	¥/US\$	122.5450	0.3%	7.2%	-6.9%	-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\$	1.7655	-0.2%	1.9%	-4.4%	-3.7%
South Korean won	KRW/ US\$	1208.7500	-0.3%	-4.2%	-8.0%	-4.5%
New Taiwan dollar	NT\$/ US\$	34.8110	0.5%	5.2%	-0.5%	1.2%
Australian dollar	US\$/A\$	0.5610	0.2%	0.3%	10.1%	8.3%
New Zealand dollar	US\$/NZ\$	0.4982	-0.2%	12.1%	19.7%	20.7%
Philippine peso	PHP/ US\$	53.5500	-0.6%	7.1%	3.7%	3.2%
Euro	US\$/€	0.9943	0.2%	5.5%	11.8%	12.0%
British pound	US\$/£	1.5575	-0.5%	4.1%	7.2%	9.2%

Fixed Income Prices and Yields

Note	Currency	<u>Current (11/29/2002)</u>		<u>1 Week Ago</u>		<u>4 Weeks Ago</u>	
		Price	Yield	Price	Yield	Price	Yield
US 30-year	US\$	105.0781	5.12%	105.2031	5.03%	105.8438	4.99%
Japan 30-year	¥	108.7130	2.02%	109.0915	1.72%	106.5560	1.85%
Hong Kong 10-year	HK\$	120.3477	6.21%	121.3160	4.01%	121.6513	3.99%
China (10/2027)	US\$	114.5016	6.55%	115.1327	6.29%	114.0633	6.37%
Singapore 10-year	S\$	113.1722	4.09%	113.2129	2.69%	112.9437	2.74%
South Korea 10-year	US\$	121.6546	7.30%	122.0658	4.25%	123.1052	4.10%
Australia 15-year	A\$	106.2695	6.12%	107.0540	5.60%	107.2840	5.58%
New Zealand (07/2009)	NZ\$	103.7580	6.75%	103.9028	6.27%	104.3728	6.19%
Philippines 20-year	PHP	122.9653	14.84%	122.6292	14.78%	120.8566	15.00%
India 20-year	INR	136.9418	7.81%	137.9753	6.92%	132.7324	7.34%
UK 30-year	£	94.0500	4.52%	94.6764	4.58%	96.5615	4.46%
Germany 30-year	€	106.4300	5.17%	105.6077	5.12%	106.1987	5.08%

This document is provided for information purposes only, and constitutes neither investment advice nor the recommendation to purchase or sell securities of the companies named in this document. IRG Limited, and its affiliated companies, make no representation as to the accuracy or completeness of the information contained in this document.