

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



Week of 28 July - 3 August 2002

Contents

Equity Market Indicators	2
Technology, Media, Telecommunications and Life Sciences Market Activity	3
Weekly Highlights	5
International	5
Japan	5
Korea	6
China	7
Taiwan	8
Singapore / Malaysia	8
Hong Kong	9
United States / Canada	9
Europe	10
Other Economic Data	12
Currency Exchange Rates	12
Fixed Income Prices and Yields	12

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 28 July - 3 August 2002

Equity Market Indicators					
Index	Closing Level (8/2/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/2002	% Change 2001 Low
S&P 500	864.24	1.3%	-32.7%	-24.7%	-6.4%
Dow Jones Industrial Avg.	8,313.13	0.6%	-21.9%	-17.0%	5.5%
NASDAQ Composite	1,247.92	-1.1%	-45.5%	-36.0%	-7.7%
The Street.com Net	71.69	-2.2%	-73.8%	-62.8%	-32.5%
Japan Nikkei 225	9,709.66	1.2%	-29.1%	-7.9%	4.4%
Japan TOPIX	955.81	1.4%	-25.4%	-7.4%	-3.1%
Korea KOSPI Composite	700.68	0.4%	34.5%	1.0%	52.7%
Korea Kosdaq	57.60	-1.3%	3.4%	-20.2%	27.9%
Taiwan Stock Exchange	4,920.89	1.4%	-0.3%	-11.4%	44.1%
Singapore Straits Times	1,509.89	1.0%	-20.4%	-7.0%	26.6%
Hong Kong Hang Seng	9,991.72	2.2%	-32.8%	-12.3%	14.5%
Hong Kong GEM	151.26	3.2%	-50.6%	-24.2%	-3.8%
China Shanghai (A-Share)	1,734.38	0.3%	-22.0%	1.3%	8.8%
China Shenzhen (A-Share)	514.98	0.3%	-25.6%	3.1%	11.1%
China Shanghai (B-Share)	151.27	0.3%	69.5%	-11.8%	94.4%
China Shenzhen (B-Share)	244.21	0.6%	75.8%	-8.1%	97.0%

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



Week of 28 July - 3 August 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
7/31/02	Gentech Co., Ltd. [6541.ks] (Kosdaq)	Develops and manufactures dust collectors for environmental protection in factories.	\$2.3	KRW1,600	KRW2,120	+32.5%
7/31/02	BYD Company Limited [1211.hk] (HKSE)	Researches, develops, manufactures and sells Li-ion batteries, NiCd batteries and NiMH batteries.	\$182.5	HK\$10.95	HK\$12.9	+17.8%
7/31/02	Citiraya Industries Ltd. [CTR.sp] (Singapore SE)	Recycles and processes electronic components and products for the electronics industry.	\$19.8	S\$0.25	S\$0.45	+80.0%
7/31/02	Quasar Communication Technology Holdings Ltd. [8171.hk] (HKGEM)	Develops and provides customized solutions to cellular companies in China.	\$8.6	HK\$0.65	HK\$0.74	+13.8%
7/31/02	Shanghai Jiaoda Withub Information Industrial Co. Ltd. [8171.hk] (HKGEM)	Researches and develops network security system and provides business application solutions.	\$11.2	HK\$0.66	HK\$0.74	+12.1%

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



Week of 28 July - 3 August 2002

Asian Equity Markets: TMT and Life Sciences IPO Pricing						
7/30/02	Brite-Tech Berhad [BTEC.mk] (Kuala Lumpur SE)	Provides services such as water treatment, pollution control, and fuel treatment.	\$3.6	MYR.35	MYR0.385	+10%
7/29/02	Sino Stride Technology Holdings Limited [8177.hk] (HKGEM)	Develops and provides system integration solutions in China.	\$13.7	HK\$0.33	HK\$0.305	-7.6%

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



Week of 28 July - 3 August 2002

Weekly Highlights

International

Telecommunications

- **Overall drop in venture-capital investing** due to upheaval among public telecommunications companies, according to data released by venture research group VentureOne and accounting firm Ernst & Young. Overall, venture investments fell to \$5.1 billion in the second quarter, down from \$5.5 billion in the first quarter and down 43% from the \$9 billion invested in the 2001 second quarter.

Information Technology

- **IT utility services increasingly popular with major corporations in Asia.** A survey commissioned by IBM and conducted by Gartner Consulting of more than 280 respondents from Australia, China, India, Japan, Singapore and South Korea found that more than 64 percent of major Asia Pacific financial service and telecommunications organizations have turned to IT utility services.

Japan

Telecommunications

- **Telecommunications planned 2002 capital spending down 8.6% on the year** at 3.22 trillion yen (\$27.1 billion), the Ministry of Telecommunications announced. Type 1 telecommunications service providers plan to cut spending by 12.4% on an increasingly difficult business environment. On the other hand, Internet service providers are planning on investments up 1.3% from fiscal 2001.

Mobile / Wireless

- **Personal handyphone system (PHS) drawing renewed attention.** A growing number of companies plan to follow suit by leasing a PHS network from DDI Pocket, Japan's largest PHS service operator. DDI Pocket began leasing its PHS network to other firms after the wholesaling of telecom networks was allowed last year.
- **Sharp wins order from Vodafone for 1 million cellular phones with built-in cameras,** equal to 25% of Sharp's domestic cell phone shipments in fiscal 2001. Vodafone will offer the phones to subscribers in seven major European countries, including the U.K., France and Germany, where it will start a service to send both photos and messages via cell phone this autumn.

Media, Entertainment and Gaming

- **Market for other digital content expected to be worth 1.88 trillion yen** (\$15.8 billion) this year, an increase of 12.1% over last year, the Digital Content Association of Japan reported, driven largely by demand for DVD and mobile phone content. The market for digital movies is expected to grow 48.8%, and 44.9% for ring tone melodies and other mobile phone content.

Internet

- **Asahi to begin offering ADSL Internet service** with a maximum throughput of 12mbps, with monthly charges the same as those for its existing 8mbps service at 3,080 yen (\$25.91). The service will use telecom lines owned by Acca Networks.

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



Week of 28 July - 3 August 2002

- **Subscribers to fiber-to-the-home Internet connection service surges 34.7%** in June from the previous month to 68,600 lines, a record net increase of some 17,700 lines. The Ministry of Public Management, Home Affairs, Posts and Telecommunications reported that the number of subscribers to cable television-based Internet services stood at 1.62 million in June.

Semiconductors

- **AMD and Fujitsu entering into a partnership with Saifun Semiconductors of Israel**, settling a patent suit that Saifun brought against them in February. The two companies are No. 2 and No. 4, respectively, in terms of unit sales of flash chips, a variety of chip that is popular in portable devices because it retains data when electrical current is turned off.

Hardware

- **Japanese electronics makers report improved results in 1Q**, helped by restructuring and a recovery in some business segments. Toshiba nearly cut in half its group net loss, while Hitachi narrowed its group net loss by 76%. Mitsubishi Electric swung to a profit, helped by cost-cutting efforts amid drastic restructuring and an improved performance of its industrial machinery and equipment business.

Media, Entertainment and Gaming

- **Sega to issue a compilation disc of classic games from its hit "Sonic the Hedgehog" game franchise for Nintendo's GameCube console.** The "Sonic Mega Collection" will come out this November for the GameCube, the newest game player console from Nintendo, a Sega rival in the late 1980s and early 1990s.

Korea

e-Commerce

- **Online shopping turnover to rise by about 100 percent** towards the end of the year. Helped by the spread of the five-day workweek, the Asian Games and other favorable factors, domestic retail sales are expected to continue their explosive growth in the second half, with the year-on-year gain reaching up to 100 percent in online shopping turnover.

Telecommunications

- **Fair Trade Commission (FTC) to take measures against SK Telecom**, should SKT try to join forces with other major shareholders of KT to take over management of KT Corp. However, the FTC said that it cannot conclude that SKT's 9.55 percent stake in KT should be seen as a controlling share in KT and noted that SKT recently disposed of 1.79 percent of its exchangeable bonds of KT.

Mobile / Wireless

- **Mobile handset makers staging aggressive marketing and export plans**, backed up steady rise in earnings as local consumers continue to purchase high-end, color-screen handsets armed with various Internet functions. Samsung Electronics and LG Electronics are raising targets for handset export and revenue, while midsize handset makers are planning campaigns for GSM models in European countries.
- **Mobile phone exports to China up 4,000 percent in the first half of 2002**, the Ministry of Commerce, Industry and Energy said. According to the ministry's tally, exports of Korean mobile phones to China reached \$291.58 million in the first half, a 41-fold increase from \$6.85 million recorded during the same period last year.

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



Week of 28 July - 3 August 2002

Internet

- **Carlyle Group to buy Korea Thrunet's headquarters building** for up to 40 billion won (\$33.7 million) this month. Carlyle will lease the building back to Thrunet after the acquisition.

Media, Entertainment and Gaming

- **Adult rating assigned to U.S. PC game Warcraft III**, signaling that its local distributor Hanbit Soft might face troubles in marketing the game to PC operators. The adult rating means that PC salon owners, who rely on popular PC-based online games to secure revenue, might lose teen customers - the crucial segment for their income.

China

Telecommunications

- **China Telecommunications to raise \$3 – 3.5 billion from a dual listing** in Hong Kong and New York this autumn, far less than the US\$10 billion touted in December 2000 and lower than the \$5 billion revised target after the monopoly was restructured. China's biggest fixed-line operator was planning to start pre-marketing activities in the third week of September and aimed to list as soon as October.
- **China's telecom firms to cut spending by 21 per cent this year** due to the break-up of fixed-line carrier China Telecom and increased caution at China's two mobile carriers, according to Beijing-based market research group Norson Telecom Consulting. Norson forecast investment in telecom equipment by China's five main carriers this year at 98.5 billion yuan (\$11.9 billion).

Software

- **China aims to double its share of the world software market** from 1.2 per cent to about 3 per cent by 2005. The China Software Industry Association expects software and related services to be worth 250 billion yuan (\$30.2 billion) by 2005, representing more than 60 per cent of the domestic market and exports of \$3 billion annually.

Internet

- **Sparkice closes its last Net bar.** Beijing's first and most prominent Internet cafe operator made the decision partly due to government regulations and partly to focus entirely on e-commerce - which it expects to bring a profit.
- **China's Web audience now second most active in the world.** Web Side Story, which measures global Internet traffic by tracking access to the 125,000 most active sites, has ranked China behind the United States but ahead of Japan. Chinese Web surfers accounted for 6.63 per cent of the traffic to these popular sites, compared with 42.65 per cent for the US and 5.24 per cent for Japan, it said.

Semiconductors

- **Intel expects China PC market to overtake Japan this year**, earlier than expected and underscoring the weak demand in Asia's most mature market. But Intel's vice-president of the Asia-Pacific region expects the outlook for the semiconductor industry to remain bleak despite bright spots in emerging markets.

Information Technology

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



Week of 28 July - 3 August 2002

- **China to invest 20 billion yuan (\$2.4 billion) into science and technology R&D** projects in the next three to five years. The projects would be centered on electric vehicles, integrated circuits, herbal medicine modernization, dairy development and water-saving agriculture. The scientific projects, some of which have already been started, involve 22 provinces and municipalities.

Taiwan

Semiconductors

- **Semiconductor sector slowdown could leave chipmakers in a more dominant position** than they are today. Already, a slowdown in the much-anticipated recovery is forcing many of the world's largest semiconductor companies to speed up their outsourcing and cut back on expansion plans. In addition, a protracted slowdown could also hasten a shakeout of newcomers in the contract manufacturing sector.

Information Technology

- **Institute for Information Industry's posts a positive outlook for the global economy**, benefiting upstream IT suppliers in Taiwan. The upturn will begin in 2H02 for production levels and consumer demand, and gets significantly better in the year 2003. But despite the optimism for 2H02, margins may not be very good.

Singapore / Malaysia

e-Commerce

- **Online travel is the number one Internet business in the US**, with annual sales estimated to reach US\$31 billion by 2002, according to IDC. The trend may well be duplicated in Asia where online travel forms the third biggest online spending sector. Yahoo! and Priceline have decided to launch the co-branded Name Your Own Price travel sites

Telecommunications

- **Singapore Telecommunications to invest about \$100 million on submarine cable networks** that link Japan and Hong Kong with other major countries. The telecom operator in Southeast Asia will add Tokyo and Hong Kong as operational hubs, building a three-way setup with Singapore by the end of the current business year.

Mobile / Wireless

- **3G mobile phone licenses awarded to Malaysia's two biggest telecommunications firms**, making Malaysia the second country in the region to pursue the commercially unproven technology. State-controlled Telekom Malaysia, the dominant fixed-line operator, and Maxis Communications, the No 1 mobile provider, successfully bid for a licence to offer and operate the high-speed data communications service.

Software

- **Malaysia to allow schools and social organizations to use pirated computer software** "for educational purposes and to encourage computer usage," said Malaysia's Domestic Trade and Consumer Affairs Minister, Muhyiddin Yassin. Apart from pirated computer software, Malaysia also has to deal with the rampant sales of illegal Hollywood blockbusters released on video compact discs (VCDs).

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



Week of 28 July - 3 August 2002

Hong Kong

Telecommunications

- **Pacific Century CyberWorks appeals ruling enforcing access for rival fixed-line operators.** The case will focus on whether CyberWorks, Hong Kong's dominant telecom operator, should have been ordered by the Office of the Telecommunications Authority (Ofa) to open up its broadband network to other operators without a predetermined pricing.
- **Hutchison Whampoa and Singapore Technologies Telemedia (STT) are set make another bid for Global Crossing.** The alliance is expected to submit a bid in the auction for the company, hoping to buy out the bankrupt global undersea cable operator for less than the US\$750 million cash bid rejected in May.

Mobile / Wireless

- **Sunday Communications has become the first mobile operator in Hong Kong to pledge its third-generation (3G) licence to creditors.** Hong Kong's smallest mobile operator yesterday announced it had made some amendments to loans from Nortel Networks and United Overseas Bank (UOB), including the pledging of its 3G licence.

Internet

- **Cheung Kong and Hutchison Whampoa to increase stake in Priceline.com,** buying up to \$40 million worth of shares to tighten their grip on the online travel agency. The move follows a near-80 per cent plunge in Priceline's shares from a 52-week high of US\$9.40 to US\$1.85 at Wednesday's close. The two companies are the largest shareholders in Priceline, with a combined holding of about 31 per cent.

United States / Canada

e-Commerce

- **EBay sells Butterfields subsidiary to Bonhams,** a privately owned British art auction house, for an undisclosed price. EBay acquired Butterfields, a prominent offline auction house, in 1999 as a way to facilitate its entry into fine arts and collectibles. Although eBay still does a brisk business in these categories, it has also expanded into other areas including computer equipment, houses and cars.

Telecommunications

- **Qwest Communications expects to restate financial results for 2000 and 2001** and to withdraw its financial projections for 2002. The Denver-based phone company said its internal investigation into previous accounting practices isn't finished. So far, Qwest said it has uncovered misstatements that led it to book about \$874 million in revenue for 2000 and 2001 in lump sums up front instead of over time.

Mobile / Wireless

- **Microsoft to announce a deal with AT&T Wireless Services** to sell a variety of wireless software and services to business customers. The deal could usher in the U.S. debut of Microsoft's "Pocket PC Phone Edition" software which runs devices combining the features of cellphones and Pocket PC hand-held computers. The phones are designed by High Tech Computer of Taiwan and other vendors.

Software

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



Week of 28 July - 3 August 2002

- **Microsoft to introduce multi-year contracts for business software.** The company is about to complete the biggest change in five years in the way that it sells its software to businesses with a system of locked-in upgrades and fixed payments that promises steadier revenue but has also rankled some smaller customers.

Internet

- **California-based Corio to buy all the assets of Qwest CyberSolutions LLC** and serve the customers of the Qwest unit. Corio would also purchase from Qwest ongoing network services, including data center services, dedicated Internet access and storage solutions.

Media, Entertainment and Gaming

- **Standard & Poor's Ratings Service lowers outlook on AOL Time Warner to negative**, because of AOL's poor online-advertising sales and the Securities and Exchange Commission's investigation of the accounting surrounding certain online-advertising transactions. The revised outlook doesn't change AOL's corporate-credit rating but signals that the rating could fall in the next year or so.
- **AOL Time Warner and AT&T suspend IPO of content and cable partnership** controlled by AOL, to allow parallel negotiations toward a different restructuring of the partnership to continue. Those negotiations are expected to last about two weeks and could ultimately lead to an initial public offering of a minority stake in AOL's cable-TV operations.
- **Eyeblaster and Unicast release new guidelines for online ad buying**, in an effort to make it easier for publishers and advertisers to craft spots to various formats and technologies. Eyeblaster is launching a searchable directory of rich-media advertising specifications of about 200 online publishers. Unicast is streamlining the naming scheme of its advertising products.
- **Activision in agreement with Jamdat Mobile to develop games for next-generation cellular phones.** Jamdat already jointly publishes videogames on wireless devices for rivals Electronic Arts and Infogrames, owner of the rights to Hasbro Inc.'s family games. The addition of Activision gives Jamdat a stronger lineup of games on wireless phones.
- **DirecTV to offer online digital music in partnership with Listen.com.** The alliance applies only to subscribers to DirecTV Broadband, a struggling and still-small niche of Hughes's overall business that provides services over digital telephone lines instead of via satellites. The joint venture will give those customers access to a broad array of streaming music on demand or Internet radio stations.

Information Technology

- **IBM to buy the consulting arm of PricewaterhouseCoopers LLP for \$3.5 billion** in cash and stock. The acquisition would extend the reach of IBM's Global Services Business and strengthens its consulting and systems integration business. It marks the first major acquisition since Samuel Palmisano became chief executive and the biggest since it acquired software developer Lotus Development in 1995 for \$3.5 billion.

Europe

Telecommunications

- **KPN NV to buy KPNQwest's Dutch assets.** Terms of the deal weren't revealed, but a spokesman said the price KPN will pay is "a couple of million" euros. The Dutch assets consist of a fiber-optic

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



Week of 28 July - 3 August 2002

network and an operating center in the Hague. KPN is continuing talks to buy KPNQwest's Belgian, German and United Kingdom assets, and expects to reach a deal on those assets later this month.

Hardware

- **Siemens considering another round of job cuts at its struggling telecommunications units** in light of persistent market weakness. A spokeswoman said no concrete decisions have yet been taken. Siemens was reacting to statements from trade union IG Metall that Siemens plans to cut more than 4,000 jobs at its fixed-line unit and less than 1,000 at its wireless unit.

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



Week of 28 July - 3 August 2002

Other Economic Data

Currency Exchange Rates						
Currency	Units	Current Rate (8/2/2002)	% Change 1 Week Ago	% Change 1/1/2001	% Change 1/1/ 2002	% Change Last 12 Mth.
Japanese yen	¥/US\$	118.8500	-0.1%	3.9%	10.8%	4.0%
Hong Kong dollar	HK\$/ US\$	7.7999	0.0%	0.0%	0.0%	0.0%
Chinese renmenbi	RMB/ US\$	8.2768	0.0%	0.0%	0.0%	0.0%
Singapore dollar	S\$/ US\$	1.7497	0.7%	0.9%	5.5%	1.6%
South Korean won	KRW/ US\$	1184.5000	0.5%	-6.2%	10.9%	8.0%
New Taiwan dollar	NT\$/ US\$	33.6720	0.0%	1.8%	3.8%	2.9%
Australian dollar	US\$/A\$	0.5391	0.5%	-3.6%	5.8%	4.3%
New Zealand dollar	US\$/NZ\$	0.4639	0.3%	4.4%	11.4%	10.9%
Philippine peso	PHP/ US\$	51.2750	0.0%	2.6%	0.6%	4.1%
Euro	US\$/€	0.9867	0.1%	4.7%	11.0%	11.6%
British pound	US\$/£	1.5700	0.3%	5.0%	7.9%	9.8%

Fixed Income Prices and Yields							
Note	Currency	Current (8/2/2002)		1 Week Ago		4 Weeks Ago	
		Price	Yield	Price	Yield	Price	Yield
US 30-year	US\$	102.3281	5.25%	100.9375	5.31%	98.8750	5.45%
Japan 30-year	¥	99.8590	2.20%	100.4425	2.18%	98.8135	2.27%
Hong Kong 10-year	HK\$	118.8102	6.29%	N/A	N/A	116.0971	4.92%
China (10/2027)	US\$	114.9983	6.52%	106.5629	6.94%	105.2529	7.05%
Singapore 10-year	S\$	109.1504	4.24%	108.6546	3.37%	108.0155	3.47%
South Korea 10-year	US\$	121.4283	7.31%	121.6283	4.53%	118.8166	5.07%
Australia 15-year	A\$	105.8910	6.14%	105.8480	5.76%	103.7150	6.03%
New Zealand (07/2009)	NZ\$	104.0176	6.73%	103.7364	6.33%	102.8390	6.49%
Philippines 20-year	PHP	121.2013	15.06%	120.8689	15.00%	116.0311	15.66%
India 20-year	INR	128.9091	8.30%	126.8881	7.86%	125.2767	8.01%
UK 30-year	£	93.4600	4.54%	92.9953	4.69%	91.2786	4.80%
Germany 30-year	€	106.1000	5.18%	105.4280	5.13%	103.2537	5.27%

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.