



Wireless Equipment

April 10, 2006

John R. Bucher

310-268-2633

john.bucher@harrisnesbitt.com

Jung Pak

310-268-2669

jung.pak@harrisnesbitt.com

Industry Rating: **Positive**

Summary

- This note provides a recap of last week's CTIA wireless conference in Las Vegas, Nevada.
- We have correlated our takeaways from CTIA 2006 with our previously published top-ten wireless equipment trends; in our view, our takeaways from CTIA largely support our positive sector rating.
- We are inclined to remain biased toward wireless equipment suppliers with subscriber equipment exposure rather than infrastructure-centric suppliers with some exceptions.
- Our top long-term pick remains Qualcomm, the target price of which is being raised to \$57 from \$53. Our \$57 target price is based on 30x our new FY2007 pro forma EPS estimate of \$1.90 and is supported by our DCF analysis.

CTIA Wireless Conference Recap

Our observations and analysis of the events, meetings and discussions that took place last week at CTIA 2006 in Las Vegas reaffirm our positive industry/sector rating, which is based on the following three sub-sector themes:

- Positive outlook on subscriber equipment/devices based on strong replacement demand from shrinking average handset holding periods associated with wear/tear and breakage and driven by the availability of new broadband multimedia features and services.
- Neutral-to-slightly-positive outlook for wireless/cellular network equipment/infrastructure.
- Positive outlook for specialty communication equipment, such as GPS solutions and public safety communications equipment, although these categories of communications equipment do not typically feature as prominently at CTIA compared with cellular voice and data communications equipment.

Wireless Equipment	Rating	7-Apr Price	Target	EPS			P/E			Div	Yld	Book	Mkt Cap (\$mm)
				2005E	2006E	2007E	2005E	2006E	2007E				
Andrew (ANDW)	Outperform	\$11.52	\$16	\$0.46	\$0.55	\$0.80	25.0	20.9	14.4	\$0.00	0.0%	\$9.64	1,839
Audiovox (VOXX)	Neutral	\$11.79	\$13	-\$0.30	\$0.08	\$0.33	na	nm	35.7	\$0.00	0.0%	\$19.64	239
Ericsson (ERICY)	Neutral	\$37.61	\$38	\$2.05	\$2.25	\$2.40	18.3	16.7	15.7	\$0.25	0.7%	\$8.25	59,665
Garmin (GRMN)	Outperform	\$82.27	\$81	\$2.74	\$3.24	\$3.57	30.0	25.4	23.0	\$0.50	0.6%	\$10.71	8,902
Harris Corp. (HRS)	Neutral	\$46.84	\$50	\$1.51	\$2.15	\$2.52	31.0	21.8	18.6	\$0.32	0.7%	\$11.37	6,278
Motorola (MOT)	Outperform	\$23.52	\$27	\$1.12	\$1.30	\$1.42	21.0	18.1	16.6	\$0.16	0.7%	\$6.67	58,791
Nokia (NOK)	Outperform	\$20.59	\$25	\$0.97	\$1.21	\$1.40	21.2	17.0	14.7	\$0.37	1.8%	\$3.45	91,294
Qualcomm (QCOM)	Outperform	\$51.96	\$57	\$1.16	\$1.55	\$1.90	44.8	33.5	27.3	\$0.36	0.7%	\$7.23	86,061
Research in Motion (RIMM)	Neutral	\$79.78	\$80	\$2.11	\$2.53	\$3.02	37.8	31.5	26.4	\$0.00	0.0%	\$10.75	14,839
Sierra Wireless (SWIR)	Neutral	\$12.38	\$12	-\$0.72	\$0.30	\$0.47	na	41.3	26.3	\$0.00	0.0%	\$5.42	315
Trimble (TRMB)	Outperform	\$44.49	\$44	\$1.43	\$1.74	\$1.93	31.1	25.6	23.1	\$0.00	0.0%	\$10.58	2,393
ViaSat (VSAT)	Neutral	\$29.02	\$28	\$0.83	\$1.01	\$1.20	35.0	28.7	24.2	\$0.00	0.0%	\$9.09	787

Source: Harris Nesbitt estimates and company reports.

Refer to pages 17 to 19 for Important Disclosures, including Analyst's Certification. For Important Disclosures on the stocks discussed in this report, please go to www.harrisnesbitt.com, and click through Research, Equities.

CTIA Recap

Our observations and analysis of the events, meetings and discussions that took place last week at CTIA 2006 in Las Vegas reaffirm our positive industry/sector rating, which is based on the following three sub-sector themes:

- Positive outlook on subscriber equipment/devices based on strong replacement demand from shrinking average handset holding periods associated with wear/tear and breakage and driven by the availability of new broadband multimedia features and services. Additionally, during last week's conference, it became apparent that the aggressive marketing campaigns of a number of mobile virtual network operators (MVNOs) could elevate churn levels as these marketing programs hit their stride. For example, Disney Mobile announced its new MVNO-based service (using Sprint Nextel's CDMA network), and this family package, which includes web-based parental control of calling plans/features, could cause significant churn among certain market segments as Disney Mobile comes to market. As such, the potential for churn boosts the prospects of device suppliers.
- Neutral-to-slightly-positive outlook for wireless/cellular network equipment/infrastructure. We expect flatish growth in overall dollar value of global network equipment revenues; however, ongoing radio technology transitions and migration of core network elements to IP-centric technologies instead of legacy telco-centric standards suggest that demand should remain strong. Anticipated greenfield growth in emerging markets, in particular the Pacific Rim, offers a multi-year growth driver, although the competitive field for equipment suppliers suggests profit margins will remain challenging.
- Positive outlook for specialty communication equipment, such as GPS solutions and public safety communications equipment, although these categories of communications equipment do not typically feature as prominently at CTIA compared with cellular voice and data communications equipment.

Correlating CTIA 2006 with our Previously Cited Top Wireless Trends

We have organized our observations and analysis of CTIA 2006 according to the top-ten wireless equipment trends that we published in early January. In recapping this year's CTIA conference, we have listed the specific analytical takeaways from CTIA according to the specific trend list that we published earlier this year. Where appropriate, we have listed the companies that we expect to be positively or adversely affected by the driving trend.

1. **Broadband Catalyst for Replacement Demand in Devices.** EV-DO and HSDPA provide cost-effective transport for new applications that we expect to be prominently promoted once sufficient RF coverage and network tuning takes place, all of which should contribute to a new cycle of replacement device demand.
 - The top three US wireless carriers have committed to deploying broadband wireless services – EV-DO in the case of Verizon Wireless and Sprint Nextel, and HSDPA in the case of Cingular.
 - Sprint Nextel's current EV-DO Rev 0 coverage footprint encompasses an estimated 150 million POPs, while Verizon Wireless has a broader EV-DO Rev 0 footprint that covers substantially every major metropolitan market. During last week's conference,

both Sprint Nextel and Verizon Wireless claimed they would be first to launch EV-DO Rev A, which features a higher capacity reverse link, support for QOS (and VOIP), and lower end-to-end latency levels. (See our September 16, 2005 CDMA Americas Congress recap note for additional technical details.) For its part, Sprint Nextel indicated that it expects to have around 220 million POPs of EV-DO Rev A coverage by 3Q07. We expect Verizon Wireless to aggressively deploy EV-DO Rev A during 2007 and maintain its coverage advantage. As Sprint Nextel and Verizon Wireless begin offering Rev A-based services, there will be an incentive to upgrade the installed base of devices with Rev A-capable handsets and modems. This should be a positive for Qualcomm as well as for suppliers of CDMA-based devices, such as Motorola and Nokia.

2. **Multi-radio, Multi-protocol Devices.** The industry is benefiting from the convergence of multiple wireless transport services (local and wide-area) in multi-radio, multi-protocol devices; however, device form factors are becoming more diverse (not converging), and we expect these trends to continue indefinitely.
 - It is now commonplace to find cellular devices with transceivers capable of multiple cellular frequency bands with support for multiple radio protocols, for example CDMA/WCDMA and GSM. As a sidebar, Motorola announced its first dual-mode iDEN/CDMA handset during last week's conference.
 - In addition to supporting multiple cellular bands and radio protocols, embedded handset support for Bluetooth and GPS is commonplace. Going forward, we expect device manufacturers to continue integrating other radio protocols as embedded features of devices. Wireless LAN, FLO and DVB-H video tuners and satellite radio transceivers (see trend #5 below) are all likely to be integrated as integral parts of future handsets and data devices.
 - To the extent that increasing levels of unique radio integration continues, we think this serves as a competitive barrier to entry and is a positive for the top-five handset OEMs. Our position is based not so much on the complexity of requisite hardware, which as pointed out above is available in highly integrated fashion from leading silicon suppliers like Qualcomm, but rather our position is based on the accompanying increase in software complexity as device OEMs attempt to integrate these transport layers with applications and operating systems. Our checks with wireless carrier device testers confirm the existence of this barrier.
3. **Device Software Complexity is Becoming a Competitive Barrier.** Clever, efficient software development is an increasingly important competitive differentiator for device suppliers; the software "supply chain" is at least as, if not more important than the traditional hardware/component supply chain. When analog cellular handsets were first emerging as alternatives to built-in car phones (originally the only cellular device form factor), it was all about hardware and component design to bring the down the size of the phone. Today, we believe that hardware and components are plentiful, but developing high quality software that binds the millions of lines of code that comprise many high-end cellular devices – this software is the tough part of device engineering. We suspect that a common thread (pun not intended) between Nokia's E61 and Motorola's Q is that both have massive, complex software modules, and the time to market of these devices is being impeded not by hardware design/engineering but by software development, testing and

debugging. At this point, we believe that Nokia is among the most mature (best) software engineering practices of any mobile device supplier, although, as we have indicated in previous research, we believe Motorola is around half-way through an overhaul of its mobile device platform strategy, and a significant percentage of this overhaul pertains to more efficient software development.

- During CTIA, we participated in a group meeting with Mobile Devices CTO Rob Shaddock, whom we had interviewed on two previous occasions in the past six months. Although the group discussion at CTIA was not nearly as focused on software as our previous two dialogs, we came away with the following updates on the progress Motorola is making in achieving higher efficiency levels in software development and lower escaped defect rates:
 - Obtaining meaningful reductions in the cost of poor quality requires common software platforms be used across multiple product development teams. It also requires instilling discipline in the development process so that teams have incentives to reuse code and not duplicate effort.
 - Effective software testing is also critical to reducing the cost of poor quality, a parameter that we believe to be the single most important factor for Motorola's moving above the 10% operating margin barrier of its device business.
 - Although we appreciate the importance of the traditional hardware supply chain, we suspect there is more profit margin for Motorola to obtain by upgrading its software supply chain. Furthermore, we think Motorola is on the right track in this area, although we expect we are in the midst of a multi-year process for achieving target operating margins, and we wonder if some investors may be expect too much too soon in operating leverage.
 - Motorola's current UMTS processor is HSDPA capable, but the firmware that enables HSDPA has not been enabled in commercial versions of the product, which has not yet been optimized for HSDPA.
4. **Application Platform Opportunities.** More capable devices and broader bandwidth wireless services point to the increasingly important role that new middleware and server-side solutions are likely to play with enterprise, carrier and wireless media/game companies. Every leading equipment supplier was demonstrating its application platform last week at CTIA. Research In Motion's BlackBerry Enterprise Server/Mobile Data Services (BES/MDS) remains the market share leader, in our view; however, it is still early in the technology adoption lifecycle for enterprise and carrier-class messaging platforms. Ericsson and Nokia (which now includes Synchrologic/IntelliSync) also offer server solutions for mobilizing existing or new carrier or enterprise applications. One could argue that Qualcomm's BREW platform is itself a comprehensive, carrier-class general purpose, client-server platform. In our view, what limits the opportunities of the OEM platform solutions mentioned above is the speed with which the large, established enterprise software vendors, like Microsoft and Oracle, add native support for mobility to their existing server solutions.
5. **New Wireless Spectrum Allocations Coming.** Therefore, businesses whose market values are substantially based on the spectrum they hold may come to be viewed in a different light by the market, and new categories of hybrid services are likely to emerge.

Additionally, new engineering services and infrastructure opportunities appear to be up for grabs.

- During a keynote address at last week's conference, FCC Chairman Martin stated that one of his top priorities is to conduct the auction of the Advanced Wireless Services (AWS) licenses in June 2006. Chairman Martin is also placing high priority on preparing for the auction of the 700 MHz licenses, which some industry observers expect to attract non-traditional spectrum bidders, such as Google and Microsoft. Given the ideal wavelength for RF propagation of spectrum in the 700 MHz frequency band, this auction is expected to generate substantial interest from many corners of industry. Chairman Martin also indicated that the FCC is likely to be more permissive and flexible on such matters as power flexibility in rural areas.
- Here is a quick review of the spectrum auctions, policy changes and new spectrum buildouts that are likely to impact the wireless equipment industry in the future:
 - Relocation and deployment of network systems in the AWS spectrum, which includes the 1710-1755 MHz and 2110-2155 MHz bands. These bands are scheduled to be auctioned in six paired AWS groupings in a total of 1,122 AWS geographic market licenses.
 - Sprint Nextel's selection of radio technology and deployment of network systems in its nearly nationwide collection of licenses in the 2.5 GHz band (what used to be MMDS). We believe Sprint Nextel will select its radio technology for its 2.5 GHz spectrum within a matter of weeks. Based on our industry checks as well as comments made by Sprint executives during the CTIA conference, Sprint has to make its radio technology choice before the end of this summer in order to be able to comply with FCC network deployment mandates that must be met in order to preserve Sprint Nextel's legal rights to use the 2.5 GHz band.
 - The availability of ancillary terrestrial component (ATC) deployment of certain mobile satellite services licenses. Mobile Satellite Ventures (MSV), which is substantially owned by Motient and SkyTerra, is expected to select a radio technology to use concurrently in ground-based and satellite-based networks that will utilize the 30 MHz of spectrum for which MSV has ATC license rights. In addition to MSV, Globalstar is expected to deploy an ATC system in its current 11 MHz of spectrum. Another satellite network operator, Inmarsat, could also obtain permission to run an ATC system. Each of these ATC networks would represent new CAPEX and engineering services opportunities that did not exist previously. We believe tens of thousands of terrestrial radio sites will have to be deployed to support fully functional ATC hybrid terrestrial/satellite networks.
 - The auction next month of licenses in the 800 MHz band for air-to-ground communication services.
 - The potential for future auctions of spectrum licenses in what is today the 400 MHz general aviation frequency band.
 - The future auction of analog television spectrum that now has an official "sunset" date of early-2009.

- **Winners** – In our view, engineering services companies, such as LCC, Wireless Facilities, and Comsearch (owned by Andrew) are likely to benefit from the introduction of the above-listed spectrum for commercial wireless services, as site planning and RF engineering work will be required upfront. The major OEMs are likely to benefit from the upfront engineering and planning as well. For example, Nokia's Services group offers site-engineering services that are tailored for auction participants. ViaSat, a leading supplier of satellite ground stations that are likely to be required for ATC networks, has already won a supply contract with Boeing for an initial piece of the MSV buildout, and we believe ViaSat's commercial satellite business could become a major beneficiary of the ATC trend. Additionally, wireless network equipment OEMs with sophisticated systems integration resources and talent are likely to benefit. Device suppliers with multi-radio and multimedia expertise should also benefit once the above-listed spectrum is deployed. Finally, technology-licensing companies whose radio solutions are adopted by network operators stand to benefit as well.
 - **Potential losers** – existing spectrum holders that do not adjust their service offerings or underlying technologies, as the above-listed spectrum is commercially deployed. Based on our analysis above, it appears that the commercial spectrum supply curve will be shifting to the right. As this takes place, the value of spectrum held by incumbents could be pressured (at least in the short term).
6. **MediaFLO: Tip of the Iceberg.** Qualcomm's MediaFLO initiative will establish new business and technological reference models that will be emulated by other mobile multimedia companies.
- In general, this year's CTIA conference seemed to lack new device demonstrations with significant wow factors. In our view, Qualcomm's MediaFLO demonstrations more than made up for the lack of new, breakthrough products. Several weeks ago, we had the opportunity to use prototype MediaFLO handsets in San Diego, where Qualcomm has established a substantial MediaFLO broadcast footprint (there were very few locations where we were unable to receive the MediaFLO signal in San Diego County). Although we expect mobile video services to be deployed both "in band" and out of the cellular frequency bands, in our view, the sophisticated out-of-band MediaFLO solution is the most resource-efficient way to deliver high-quality video to mobile devices. During last week's CTIA conference, Qualcomm announced that it had established virtually citywide MediaFLO coverage in Las Vegas. Additionally, there were a number of production-representative handsets from Kyocera and Samsung with FLO tuners.
 - MediaFLO connotes 1) the wholly owned Qualcomm subsidiary that plans to resell mobile multimedia broadcast services; 2) a mobile broadcast/multicast modulation and end-to-end delivery scheme; and 3) a receiver/tuner supplied by QCT, initially as a companion component and eventually as a fully integrated part of Qualcomm's main chipset. Qualcomm only intends to spin off the wholly owned subsidiary that controls the spectrum license (716-722 MHz) and operates the multimedia processing and delivery business. The underlying technology and associated chipset business are expected to remain part of Qualcomm.

- We expect a wide range of companies, from broadcasters to content owners, to emulate what Qualcomm's wholly owned subsidiary has done in obtaining the rights to spectrum and deploying a national mobile multimedia service. We fully expect to see other companies follow Qualcomm's lead in this area, and in the US, we expect DVB-H and MediaFLO to be the predominant mobile multimedia technologies that are deployed.
7. **GPS Everywhere (via Software).** The embedding of low-cost GPS technology opens new opportunities for technology licensors, device suppliers, software developers, carriers and subscribers. For devices like mobile phones that come equipped with relatively powerful DSPs and host processors, manifest destiny is for GPS baseband processing to be accomplished in the main processor of the phone, not via a companion processor.
- First of all, no other GPS supplier comes close to Qualcomm's market share of the GPS-enabled handset shipments. Additionally, we believe Qualcomm has a substantial intellectual property position by virtue of the company's own R&D in the area of Assisted GPS (A-GPS) as well as the SnapTrack patents that Qualcomm acquired in 1999. We believe the reason that this solution has been so successful is that Qualcomm's solution is highly integrated with the main processor.
 - In our view, dedicated companion GPS processors are not likely to live long in mobile handsets. We expect non-Qualcomm-based devices to ship with much higher attach rates of GPS features as these features are implemented via software. Software-based GPS receivers are the future of devices like PDAs and cell phones, which are typically or soon will be equipped with powerful DSPs.
 - Private company Cambridge Positioning Systems' E-GPS could very well be the enabler that pushes software-based GPS receivers into the realm of the practical. We understand that E-GPS can significantly reduce the CPU requirements of the host processor during fix determination. Over the course of the next three years, we expect to see software-based GPS solutions become embedded in most handset designs.
 - Current companies that we believe offer GPS software for embedded receiver technology include Philips, RFMD, Trimble and SiRF.
 - We had the opportunity to view Trimble's new thumbnail-sized Copernicus chip, which is the result of joint development with private company u-nav.
8. **Intellectual Property Paramount.** Next-generation wireless network standardization processes are likely to be more wary with respect to licensing requirements – patent prosecution could become tougher for smaller players, increasing the likelihood of new strategic partnerships with existing IP leaders. In our view, it is going to be increasingly difficult for newcomers to challenge the current wireless eco-system of intellectual property. In fact, we are not aware of wireless technology newcomers that have been able to establish scalable technology licensing businesses. Given the significant intellectual property positions of the leading equipment and component suppliers, their still significant R&D spending levels, and their relatively large cash balances, we expect that up and coming wireless technologies are more likely to be acquired by existing equipment and technology companies that continue indefinitely as stand-alone companies. Nonetheless, we acknowledge that the history of wireless has been punctuated by disruptive innovations every 10-15 years, and we expect this trend to continue.

9. **New Features & Services to be IMS not Telco-based.** IP-based core networking initiatives will change the competitive landscape of traditional telco-centric switching and transmission equipment suppliers. We obtained IMS updates from Ericsson and Nokia last week. The move to IP-centric network elements is inevitable, in our view; however, we suspect that very few carriers will deploy IMS according to the formal IMS framework. Rather, we expect carriers to emphasize different aspects of IMS, depending on their operational needs. What is less certain in our minds is what impact IMS equipment sales will have on equipment supplier profitability, given the greater number of equipment vendors that are likely to offer IMS solutions compared to legacy telco equipment. We believe that a solid IMS hardware portfolio alone will be insufficient for market success; system integration and other services are likely to be key components of the IMS value proposition as viewed by wireless carriers. In our view, Ericsson and Nokia are both off to a good start in laying the foundation for growth in IMS hardware and services.

10. **We are in the early phase of a major upgrade wave in home networking equipment.**

We believe the combination of plentiful short-range wireless technologies and increasing adoption of high-definition multimedia programming and electronics equipment in the home is paving the way for one of the most profound upgrade waves in consumer communications equipment, that of home networking, which is a category that for all practical purposes never existed before. The availability and ease of integration of Wireless LAN, Ultra Wideband (UWB), Bluetooth, and a number of other shorter-range radio technologies into consumer electronics products holds the potential of simplifying the deployment of home networking by eliminating wires and enhancing interoperability. We have already seen the incorporation of unlicensed mobile access (UMA) technologies into cellular subscriber equipment. We expect future handoffs to be made from the cellular network to home and enterprise UMA networks so that users can truly rely on one device that can seamlessly transition from the wide-area network to one of a number of local area networks. Examples of announcements and/or demonstrations of home networking products that are likely to drive this trend include the following:

- Motorola's Follow Me TV experience of room-to-room media sharing is being extended to handsets. Motorola announced a new technology that can move recorded shows from Motorola set-top digital video recorders to mobile devices, like the next-generation RAZR V3x.
- Axisstel announced a new product line of 3G wireless broadband gateways, including CDMA2000 1xEV-DO Gateways. The company's MV300 series products combine CDMA2000 1xEV-DO wireless wide area networking with a WiFi wireless local area networking (WLAN) router, and also includes CDMA2000 1X circuit switch cellular voice and analog fax technology.
- Sierra Wireless announced that its EV-DO module has been designed into an EV-DO/WiFi router.

Other Company-specific Takeaways

Harris

In conjunction with this year's CTIA, Harris announced new features that enhance the flexibility of Harris's TRuepoint family of microwave radio systems. Harris's new Remote capacity control feature allows wireless operators to add capacity on any TRuepoint microwave link where and when it is needed, thereby enabling more granular control and more efficient ways of optimizing network resources. This new feature is expected to reduce the number of expensive truck rolls that are usually required to add microwave capacity.

At Harris's mid-March analyst day, we noticed that the company was significantly more positive than in previous years when describing the market outlook for microwave equipment. We met briefly with senior management of Harris's Microwave business last week during the CTIA conference, and we found this newfound confidence still in place. Our checks with other industry contacts, which include employees of antenna suppliers, wireless carriers and competing backhaul equipment/service providers, confirm renewed interest in backhaul equipment; however, we are uncertain to what extent microwave equipment suppliers, like Harris, will benefit. Here's why: wireless network operators are considering a wider range of backhaul options besides microwave radio systems. In metropolitan markets, we believe an increasing percentage of cell sites are "fiber-fed," although we have thus far been unable to quantify the current mix of fiber-fed cell sites and the growth trend for this backhaul method. Additionally, there are alternative backhaul solutions, such as the service-centric model of private company FiberTower and the old LMDS radio resources available through First Avenue Networks.

Qualcomm

In our view, Qualcomm had the most impressive set of product demonstrations of any single company at CTIA 2006. Qualcomm's booth featured a number of new devices incorporating MediaFLO tuners, new MSM7000 series chipsets, embedded GPS and other multi-radio solutions. The following bullet points are a recap of what we believe were the most significant Qualcomm announcements and demonstrations made during CTIA:

- Demonstrations of telco-quality EV-DO Rev A VOIP sessions and EV-DO Rev A-enabled support for latency-sensitive multiplayer games.
- Announced the expected commercial availability of EV-DO Rev B in late 2007. EV-DO Rev. B, the first planned implementation of Qualcomm's Multicarrier Multilink eXtensions (DMMX) platform, is expected to support up to 4.9 Mbps in each forward-link carrier for a combined three-channel data speed of up to 14.7 mbps. EV-DO Multicarrier Multilink eXtensions (DMMX) platform.
- Production-representative MediaFLO-equipped demonstrations on handsets from Kyocera, LG, and Samsung. In addition to demonstrating streaming high-definition (on a handset display) video channels with fast channel switching times, Qualcomm demonstrated a Pointcast-like bit trickle feature that enables autonomous updates of stock quotes and sporting events.

- Announced the industry's first single-chip CDMA2000 radio frequency (RF) complementary metal oxide semiconductor (CMOS) transceiver with integrated receive diversity and simultaneous-GPS with support for the following frequency bands: 800 MHz, 1800 MHz, 1900 MHz, and 2100 MHz. This single-chip solutions also include new IntelliCeiver power management features, which increase overall talk and standby times and extend battery life during data session.
- The 65nm MSM6800 chipset features the process technology enabling devices that are more highly integrated, feature-rich, power-efficient and smaller in size with advanced functionality. The MSM6280, MSM7200, MSM7500, and MSM7600 chipsets also will be offered in 65nm versions.
- Sampling of Single Chip (QSC) solutions, the QSC6010, QSC6020 and QSC6030 for CDMA 1X networks. More than five device manufacturers are presently receiving shipments of the solutions for new designs. Qualcomm also provided additional details on the company's previously announced second-generation QSC products, the QSC6055 and QSC6065 solutions, which provide multi-band RF and simultaneous-GPS processing.
- Qualcomm's GPS-enabled chipset/device support of BREW-based location-based services from Autodesk, and private companies Bones in Motion, Networks in Motion, and WaveMarket.
- Qualcomm showcased numerous other BREW-based entertainment and productivity applications.
- In our view, QVM, a software application that permits the simultaneous and concurrent execution of multiple Java applications, supports our prediction that BREW will become the most stable and resource-rich environment for running Java applications on mobile devices.
- WorldMode support anticipated in CY3Q06; WorldMode encompasses the MSM6125, MSM6500 and MSM6550 solutions, which feature simultaneous-GPS and receive diversity.
- MSM7200 chipset, which offers the same multimedia capabilities as the MSM7500 solution for CDMA EV-DO networks, and is pin-, software API- and RF-compatible to simply and speed the migration of manufacturers to this UMTS silicon solution.

South Korean government inquiry announced. Just as the CTIA conference commenced last week, Qualcomm announced that it had become aware of an inquiry being conducted by the Korean Fair Trade Commission into business dealings between Qualcomm and each of three major OEMs based in South Korea. We understand that this inquiry was likely triggered by a complaint from a smaller South Korean manufacturer of communications equipment. This manufacturer is believed to be complaining of unfair bundling of Qualcomm's certain software, perhaps its Dual Mode Subscriber Software (DMSS) with particular chipsets that were sold to larger South Korean OEMs. At this point, we do not believe this matter has anything to do with the six complaints filed with the European Union.

EU Status Update. Qualcomm is not providing much in the way of updates on the status of the six complaints that were filed with the European Union. We think this is prudent, given the problems that some US companies appear to have exacerbated by speculating on the status of active matters before the Commission. At this point, we are aware that Qualcomm has received

copies of all six individual complaints, and we believe the company is going out of its way to cooperate completely with all requests. We expect a decision from the DG Competition within several months and perhaps much sooner as to whether it will formally investigate these six complaints. In the event a formal investigation is launched, we would expect this to be a multi-year process. In any event, from the standpoint of investor risk, the EU has the authority to levy a penalty of 10% of the “turnover” (probably net revenue) in the relevant European geographic area in which any inappropriate business practices occurred, and the EU can also prescribe remedies to existing business practices. At this point, we are not adjusting our valuation of QCOM shares to reflect any EU risk because an investigation has not yet been announced.

Technology roadmap. Qualcomm provided an update of its radio technology roadmap, which includes the following three parallel wide-area mobile technology tracks:

- CDMA EV-DO track – from EV-DO Rev 0 to Rev A (beginning CY2H06) and then to Rev B (late 2007/early 2008).
- WCDMA/HSDPA evolutionary track.
- FLASH-OFDM (pre-802.20) track, including both FDD and TDD modes, evolving to standard 802.20 (2007).

In discussing the three parallel wide-area broadband radio tracks above, Qualcomm indicated that it intends to provide carriers and OEMs with whatever technology they deem to be most suitable. In response to our questions, Qualcomm’s CEO Paul Jacobs stated that there would probably be a fair degree of “cross pollination” from one technology track to the next, even though each of these tracks represents its own semi-independent R&D effort.

With respect to Qualcomm’s FLASH-OFDM development effort, if and when this technology is commercially adopted by wireless carriers and OEMs, Qualcomm would apply its standard licensing model to the commercialization of FLASH-OFDM. That is to say, Qualcomm’s “portfolio approach” to licensing would continue, and OEMs would pay comparable royalties for FLASH-OFDM or multi-mode CDMA/WCDMA and FLASH-OFDM.

QTL licensing franchise now extends into OFDM. Based on our review of Qualcomm’s own organically generated OFDM patents as well as those that were acquired via the acquisition of Flarion Technologies, we believe Qualcomm’s licensing franchise has been extended from covering wide-area mobile CDMA/WCDMA, as well as A-GPS and mobile multimedia solutions to now also include wide-area, mobile OFDM-based radio networks. Based on the strengths of its OFDM patent portfolio, over time, we expect widespread (albeit reluctant) recognition by wireless industry intellectual property experts that Qualcomm’s QTL licensing franchise includes wide-area, broadband, mobile OFDM radio communication as well as CDMA/WCDMA, A-GPS and certain mobile multimedia communication technologies. Qualcomm’s technology roadmap also includes a local area radio path that features 802.11n, the full version of which is expected to be integrated in commercial products in the 2008-2009 time frame.

PIC and other interference cancellation solutions in the pipeline. During a brief conversation with Qualcomm’s CTO, Roberto Padovani, we learned that chipsets with Pilot Interference Cancellation (PIC) are expected to be commercial launched in the near future. PIC is expected to be useful for VOIP applications over EV-DO and could provide an approximate 30% boost in capacity. Furthermore, beyond PIC, Qualcomm plans to roll out a more universal interference cancellation system, which could boost network performance significantly.

Raising estimates and target on anticipated higher levels of CDMA replacement demand triggered by EV-DO and stronger WCDMA unit volumes. We are raising our FY2007 pro forma EPS to \$1.90 from \$1.75, previously. Our revised estimate is driven by expected increased shipments of MSM chipsets as well as increased CDMA/WCDMA handset shipments, as outlined below. In addition, we are raising our QCOM target price to \$57 from \$53. Our target price is based on a 30 multiple to our new FY2007 pro forma EPS estimate of \$1.90 and is supported by our DCF analysis. Risks to our target include the potential for earnings multiple contraction in the event the DG Competition of the European Commission were to launch a formal investigation into the six complaints that have been filed by Nokia, Ericsson, NEC, Matsushita, Texas Instruments and Broadcom with the European Union; additional multiple contraction risks include the possibility that Sprint Nextel selects a non-CDMA technology for its 2.5 GHz spectrum.

FY2007 Estimates	Current	Prior
Target Price	\$57	\$53
Pro Forma EPS	\$1.90	\$1.75
Net Revenue	\$8.5B	\$8.0B
MSM Chipset Shipments	232M	212M
Combined CDMA/WCDMA Device Shipments	318M	301M
WCDMA Device Shipments	110M	106M

Source: Harris Nesbitt

Sierra Wireless

Sierra Wireless demonstrated the first functional EV-DO Rev A subscriber equipment that we are aware of. In addition to product demonstrations, we also had the opportunity to meet with CEO Jason Cohenour and CFO David McLennan. We came away with an appreciation for Sierra's focus on the mobile broadband PC card and OEM module market opportunities. We also appreciate the discipline that these two executives appear to bring to their respective positions.

Although based on our own research we believe the quarterly OEM module unit shipment rate is still in the tens of thousands of units; we understand that some market research firms are projecting over 7 million annual OEM module shipments in 2009. Collectively, the potential size of the combined PC card and OEM module market is expected to be over 15 million units, according to some market research forecasts. At this point, we don't doubt that Sierra will be one of the leading suppliers into these markets. Looking at our expectations for this year, between the two form factors, we have higher levels of confidence in our just-over-half-million unit forecast for PC card shipments than in our 285,000-unit OEM module forecast.

Other Noteworthy CTIA Observations

Airvana – We have previously mentioned private company Airvana in a number of earlier research notes. Heretofore, we recognized this company as one of the leading suppliers of EV-DO radio access solutions and one of the early, innovative thinkers on applying EV-DO Rev A to support VOIP. In conjunction with CTIA, Airvana announced a radio gateway product that permits cellular radio integration with fixed wireless technologies, including WiFi and WiMax.

This appears to be a logical next-step for Airvana, which has extensive expertise in mobile IP and QOS enablement.

AuthenTec – We think private company AuthenTec is well positioned to capitalize on what we view as an inevitable trend for wireless subscriber equipment to gain embedded support for biometrics, in particular fingerprints. We expect this company's TruePrint technology to become one of the leading standards for cellular biometrics, which we believe could open up a wide range of mobile commerce applications.

Bitfone – we have mentioned private company Bitfone in a number of previous research notes that addressed the complexity of device software and the challenges of firmware maintenance on mobile devices. Bitfone's OEM and carrier customer/partner list continues to grow, and we think this company is on its way to establishing mProve, SmartCare and Mobile Variance as the industry's leading suite of over-the-air configuration management and maintenance solutions.

IPWireless – This private company is a leader in end-to-end UMTS TD-SCDMA radio networking solutions for voice, data and mobile television/video. We are aware of a number of carrier evaluations of IPWireless's TDD technology, which appears to have conquered some of the limitations that have plagued previous efforts at commercializing TDD solutions. We would not be surprised if IPWireless were to be on the invitation list for a number of Request for Proposals that we expect to go out in conjunction with the new spectrum opportunities highlighted above (trend #5).

TensorComm – We first described TensorComm's interference cancellation technology in our September 16, 2005 research note. We were first attracted to the company as it comes across as a pure play on improving spectral efficiency and enhancing network optimization. CDMA systems are inherently interference limited and this limitation is manifested as CDMA cells are loaded. As previously mentioned, we are aware of a number of development efforts underway at Qualcomm to mitigate interference limitations. It would appear to us that TensorComm's solution should be of interest to non-Qualcomm CDMA/WCDMA/HSDPA silicon suppliers, or to the OEMs that utilize non-Qualcomm CDMA silicon solutions. TensorComm claims 50% throughput increase and 40% network capacity improvement for HSDPA networks that utilize its technology.

TenXc – Perhaps smart antenna is a bad word in the cellular infrastructure realm, where very few smart antenna products have ever taken hold. Nonetheless, private company TenXc's bi-sector array appears to have the benefits of a smart antenna system without the complexity that typically accompanies such systems. We are believers in the need for network optimization solutions, including cost-effective RF coverage enhancement solutions. If this company's antenna product is priced affordably, TenXc might find receptive carrier customers.

V-ENABLE – This private company has an impressive mobile search technology that provides spoken/voice searches from wireless devices. Of all the demonstrations that we observed during CTIA, this application could be put to immediate, productive use in our mobile, EV-DO browsing sessions if the application can remain robust in noisy environments.

Need for additional remote site back-up power – One of the more subtle trends that we believe is at play is the need for additional back-up power at remote cellular facilities, such as cell sites. Our previously held position was that back-up battery companies would be the likely beneficiaries of this trend, if accurate. However, we are aware of an increasing trend to install

small-footprint generators in many cell site locations, so back-up battery companies may not necessarily be the best way for investors to play this trend.

Companies mentioned (priced as of the close on April 7, 2006):

AutoDesk	(ADSK, \$42.60, Not Rated)
AT&T	(T, \$26.16, Not Rated)
Axesstel	(AFT, \$1.56, Not Rated)
BellSouth	(BLS, \$33.83, Not Rated)
Boeing	(BA, \$79.57, Not Rated)
Broadcom	(BRCM, \$45.94, OUTPERFORM)
First Avenue Networks	(FRNS, \$9.35, Not Rated)
Google	(GOOG, \$408.20, NEUTRAL)
Kyocera	(KYO, \$92.25, Not Rated)
LCC International	(LCCI, \$3.79, Not Rated)
Matsushita Electric Industrial	(MC, \$23.46, Not Rated)
Microsoft	(MSFT, \$27.25, Not Rated)
Motient	(MNCP.PK, \$19.42, Not Rated)
NEC	(NIPNY, \$7.70, Not Rated)
Oracle	(ORCL, \$13.75, Not Rated)
Philips Electronics	(PHG, \$33.38, Not Rated)
RF Micro Devices	(RFMD, \$8.37, UNDERPERFORM)
SiRF Technology Holdings	(SIRF, \$38.32, Not Rated)
SkyTerra Communications	(SKYT.OB, \$19.70, Not Rated)
Sprint Nextel	(S, \$26.40, Not Rated)
Texas Instruments	(TXN, 33.07, OUTPERFORM)
Verizon Communications	(VZ, \$33.79, Not Rated)
Vodafone Group	(VOD, \$21.96, Not Rated)
Walt Disney	(DIS, \$27.53, OUTPERFORM)
Wireless Facilities	(WFII, \$3.90, Not Rated)

QUALCOMM

Income Statement

	Dec-03 1Q04A	Mar-04 2Q04A	Jun-04 3Q04A	Sep-04 4Q04A	FY2004A	Dec-04 1Q05A	Mar-05 2Q05A	Jun-05 3Q05A	Sep-05 4Q05A	FY2005A	Dec-05 1Q06A	Mar-06 2Q06E	Jun-06 3Q06E	Sep-06 4Q06E	FY2006E	FY2007E
Net sales	\$ 1,153	\$ 1,184	\$ 1,325	\$ 1,371	\$ 5,031	\$ 1,390	\$ 1,365	\$ 1,358	\$ 1,560	\$ 5,673	\$ 1,741	\$ 1,816	\$ 1,788	\$ 1,822	\$ 7,167	\$ 8,480
Cost of sales	370	359	369	410	1,454	450	386	389	441	1,645	505	527	519	528	2,078	2,544
Gross profit	783	849	956	961	3,577	940	979	969	1,119	4,028	1,236	1,289	1,270	1,293	5,088	5,936
Research and development	150	169	194	208	720	219	242	246	255	962	273	274	313	323	1,183	1,241
Selling, general and administrative	117	135	159	144	553	143	149	151	168	611	168	168	192	198	726	761
Amortization of intangible assets	2	2	0	5	5	—	—	—	—	—	—	—	—	—	—	—
Operating expenses	269	305	352	350	1,274	362	391	397	423	1,573	441	443	505	520	1,909	2,002
Operating income (EBIT)	515	543	604	611	2,273	588	588	572	696	2,455	795	846	765	773	3,179	3,934
Investment income	44	56	60	62	222	66	78	84	117	344	111	92	98	103	403	467
Pretax income	559	599	664	673	2,495	664	666	656	813	2,799	906	938	863	876	3,582	4,401
Income taxes	168	171	182	174	695	190	179	191	270	829	239	244	224	228	935	1,144
Pro Forma Net income	\$ 391	\$ 428	\$ 482	\$ 499	\$ 1,800	\$ 474	\$ 487	\$ 465	\$ 543	\$ 1,970	\$ 667	\$ 694	\$ 638	\$ 648	\$ 2,648	\$ 3,257
Pro Forma EPS - Diluted	\$ 0.24	\$ 0.26	\$ 0.29	\$ 0.30	\$ 1.07	\$ 0.28	\$ 0.29	\$ 0.28	\$ 0.32	\$ 1.16	\$ 0.39	\$ 0.41	\$ 0.37	\$ 0.38	\$ 1.55	\$ 1.90
CY Pro Forma EPS					\$ 1.12					\$ 1.28					\$ 1.57	\$ 2.02
Diluted shares	1,654	1,671	1,682	1,682	1,675	1,704	1,683	1,686	1,686	1,694	1,702	1,706	1,709	1,710	1,707	1,712
GAAP EPS - Continuing operations (Diluted)	\$ 0.25	\$ 0.26	\$ 0.29	\$ 0.23	\$ 1.03	\$ 0.30	\$ 0.31	\$ 0.33	\$ 0.32	\$ 1.26	\$ 0.36	\$ 0.34	\$ 0.28	\$ 0.29	\$ 1.28	\$ 1.69
GAAP EPS - Discontinued operations (Diluted)	\$ (0.04)	\$ 0.03	\$ -	\$ 0.00	\$ (0.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GAAP EPS - Diluted	\$ 0.21	\$ 0.29	\$ 0.29	\$ 0.23	\$ 1.03	\$ 0.30	\$ 0.31	\$ 0.33	\$ 0.32	\$ 1.26	\$ 0.36	\$ 0.34	\$ 0.28	\$ 0.29	\$ 1.28	\$ 1.69
Margin Analysis																
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	32.1%	28.3%	27.9%	29.9%	29.5%	30.9%	28.3%	28.6%	28.3%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	30.0%
Gross margin	67.9%	71.7%	72.1%	70.1%	70.5%	69.1%	71.7%	71.4%	71.7%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	70.0%
Research and development	13.0%	14.3%	15.2%	15.2%	14.3%	15.8%	14.6%	14.3%	16.3%	17.0%	15.7%	15.1%	17.5%	17.0%	16.5%	14.6%
Selling, general and administrative	10.1%	11.4%	12.0%	10.5%	11.0%	10.3%	10.9%	11.1%	10.8%	10.8%	10.8%	9.9%	10.7%	10.9%	10.1%	9.0%
Operating expenses	23.3%	25.8%	26.6%	25.5%	25.3%	26.0%	26.6%	29.2%	27.1%	27.7%	25.3%	24.4%	28.3%	28.6%	26.6%	23.6%
Pro Forma Operating margin	44.6%	45.6%	45.6%	44.6%	45.2%	43.0%	43.1%	42.1%	44.6%	43.3%	45.7%	46.6%	44.7%	44.4%	44.4%	46.4%
Pretax margin	48.5%	50.6%	50.1%	49.1%	48.5%	47.8%	48.9%	48.3%	52.1%	49.3%	48.2%	51.7%	48.2%	48.1%	50.0%	51.9%
Tax rate	30.1%	28.5%	27.4%	25.9%	27.9%	28.6%	28.9%	29.1%	33.2%	29.6%	26.4%	26.4%	26.0%	26.0%	26.1%	26.0%
Pro Forma Net margin	33.9%	36.1%	36.4%	36.4%	35.8%	34.1%	35.7%	34.2%	34.8%	34.7%	36.3%	38.2%	35.7%	35.6%	36.9%	38.4%
GAAP Net operating margin - Continuing operations	34.1%	36.3%	36.3%	34.6%	35.3%	36.9%	39.0%	41.2%	34.5%	37.8%	36.6%	32.1%	27.2%	27.3%	30.5%	34.0%
Annual Change																
Net sales	8.0%	16.4%	48.7%	57.4%	30.8%	20.6%	15.3%	2.5%	13.8%	12.8%	25.3%	33.0%	31.7%	16.8%	18.3%	
Cost of sales	-1.7%	-1.7%	29.0%	41.7%	17.0%	16.3%	15.2%	5.4%	7.6%	10.8%	17.4%	17.4%	33.3%	19.8%	26.4%	
Gross profit	9.3%	25.6%	58.0%	65.2%	37.6%	22.6%	15.3%	1.4%	16.4%	13.6%	28.8%	31.7%	31.0%	15.6%	22.4%	
Research and development	36.0%	30.3%	44.0%	45.2%	39.0%	46.1%	43.2%	27.1%	22.6%	33.7%	24.7%	13.4%	27.3%	26.6%	23.0%	
Selling, general and administrative	9.1%	15.3%	45.4%	27.1%	24.0%	22.7%	10.5%	-5.0%	16.7%	10.4%	17.5%	12.9%	27.2%	17.7%	18.8%	
Operating expenses	22.6%	22.8%	43.2%	35.4%	31.1%	34.8%	28.0%	12.8%	20.9%	23.5%	21.8%	13.2%	27.3%	23.0%	4.8%	
Pro Forma Operating income	9.5%	27.3%	68.1%	89.0%	41.6%	16.2%	28.0%	-5.3%	13.8%	8.0%	32.8%	44.0%	33.7%	11.1%	20.5%	
Pretax income	7.0%	20.0%	65.8%	81.1%	44.0%	18.2%	11.2%	-1.2%	28.8%	12.2%	36.4%	40.7%	31.5%	7.7%	28.0%	
Pro Forma income	13.4%	36.4%	89.7%	111.5%	55.1%	21.2%	13.6%	-3.6%	35.6%	8.4%	42.5%	47.3%	37.3%	19.3%	23.0%	
Pro Forma EPS - Diluted	11.9%	33.5%	73.3%	108.9%	51.5%	17.7%	11.6%	-3.6%	7.4%	8.2%	40.9%	35.2%	35.2%	17.7%	22.6%	
Income from continuing operations	48.6%	67.7%	101.6%	51.3%	67.6%	24.8%	20.6%	15.1%	39.0%	24.2%	20.9%	9.4%	-13.1%	-7.7%	32.1%	
GAAP EPS - Continuing operations (Diluted)	46.6%	67.7%	95.7%	47.5%	63.6%	21.1%	16.2%	15.1%	39.5%	22.4%	21.0%	9.3%	-14.4%	-8.9%	31.7%	
Sequential Change																
Net sales	32.3%	2.7%	11.9%	3.5%	1.4%	3.4%	8.0%	-0.5%	14.9%	1.4%	11.6%	4.3%	-1.5%	1.9%	3.0%	
Operating expenses	3.9%	13.7%	15.2%	-0.5%	3.9%	3.4%	1.5%	0.5%	6.5%	0.4%	4.3%	4.3%	14.2%	3.0%	0.4%	
Pro Forma Operating income	58.2%	5.6%	11.1%	1.2%	-2.1%	-2.1%	-1.7%	-2.7%	23.9%	14.2%	6.5%	6.5%	-8.0%	1.1%	1.1%	
Pretax income	58.7%	7.2%	10.9%	1.4%	-1.3%	-1.3%	0.3%	-1.5%	21.7%	11.4%	11.4%	3.5%	-8.0%	1.5%	1.5%	
Pro Forma Net income	64.6%	9.5%	12.6%	3.5%	-5.0%	-5.0%	2.7%	-3.3%	16.8%	22.8%	21.7%	2.8%	-8.0%	1.5%	1.5%	
Pro Forma EPS - Diluted	65.7%	8.3%	11.9%	4.7%	-7.3%	-7.3%	2.7%	-3.3%	16.6%	21.7%	21.7%	3.8%	-8.2%	1.5%	1.5%	
Income from continuing operations	61.4%	7.3%	10.2%	-20.4%	32.6%	32.6%	3.7%	5.3%	-3.9%	15.2%	15.2%	-6.1%	-16.4%	2.0%	2.0%	
GAAP EPS - Continuing operations (Diluted)	60.3%	6.2%	9.5%	-20.9%	31.6%	31.6%	3.7%	6.6%	-4.1%	14.2%	14.2%	-6.3%	-16.5%	2.0%	2.0%	

Source: Harris Wealth estimates and corporate reports.

QUALCOMM						
Cash Flow Statement						
(\$ in millions, except EPS)	FY2002A*	FY2003A*	FY2004A	FY2005A	FY2006E	FY2007E
OPERATING SOURCES						
Net income	\$ 525	\$ 1,029	\$ 1,725	\$ 2,143	\$ 2,186	\$ 2,887
Depreciation and amortization	349	146	163	200	254	297
Cash flow	874	1,175	1,888	2,343	2,440	3,184
Changes in working capital, net	43	25	150	15	(66)	(18)
Other non-cash adjustments	346	624	443	328	475	500
Operating cash flow	1,263	1,824	2,481	2,686	2,848	3,665
Capital expenditures	(127)	(202)	(332)	(576)	(634)	(466)
Free cash flow	\$ 1,136	\$ 1,622	\$ 2,149	\$ 2,110	\$ 2,214	\$ 3,199
NON-OPERATING SOURCES (USES)						
Acquisitions/disposals (investing), net	(946)	(790)	(2,994)	(200)	(1,160)	-
Debt increases (payments), net	-	-	-	-	-	-
Dividend payments	-	(135)	(308)	(524)	(449)	(600)
Stock issuance (repurchase), net	113	25	330	(567)	293	50
Other, net	(285)	(84)	(8)	37	109	-
Total non-operating sources	(1,118)	(984)	(2,980)	(1,254)	(1,207)	(550)
Net cash flow	\$ 18	\$ 638	\$ (831)	\$ 856	\$ 1,007	\$ 2,649
Beginning cash	1,389	1,407	2,045	1,214	2,070	3,077
Ending cash	\$ 1,407	\$ 2,045	\$ 1,214	\$ 2,070	\$ 3,077	\$ 5,726
Operating cash flow per share	\$ 0.80	\$ 1.14	\$ 1.51	\$ 1.63	\$ 1.71	\$ 2.20
Operating cash flow margin	43.3%	47.4%	50.8%	47.3%	39.7%	43.2%
Free cash flow per share	\$ 0.72	\$ 1.01	\$ 1.31	\$ 1.28	\$ 1.33	\$ 1.92
Free cash flow margin	39.0%	42.2%	44.0%	37.2%	30.9%	37.7%

Source: Harris Nesbitt estimates and corporate reports.

Important Disclosures

Analyst's Certification

I, John R. Bucher, hereby certify that the views expressed in this report accurately reflect my personal views about the subject securities or issuers. I also certify that I have not, am not, and will not receive, directly or indirectly, compensation in exchange for expressing the specific recommendations or views in this report.

Analysts who prepared this report are compensated based upon (among other factors) the overall profitability of HNC, BMO Nesbitt Burns, and their affiliates, which includes the overall profitability of investment banking services. Compensation for research is based on effectiveness in generating new ideas and convincing clients to act on them, performance of recommendations, accuracy of earnings estimates, and service to clients.

Company Specific Disclosures

For Important Disclosures on the stocks discussed in this report, please go to www.harrisnesbitt.com, and click through Research, Equities.

Harris Nesbitt Rating System

Our investment ratings compare a stock's expected performance to that of an index of comparable companies over a 9-15 month horizon. Our sector ratings are based on the expected performance of the sector compared with that of a broader market index over the same time period.

STOCK RATINGS

OUTPERFORM - We believe the stock's total return, including dividends, will exceed the group average by over 15%.

NEUTRAL - We believe the stock's total return will generally match the group average.

UNDERPERFORM - We believe the stock's total return will fall short of the group average by more than 15%.

SECTOR RATINGS

POSITIVE - We believe the sector will outperform the S&P 500 Index.

NEGATIVE - We believe the sector will underperform the S&P 500 Index.

Breakdown of Rating Distribution and Banking Clients

(As of December 31, 2005)	Buy	Hold	Sell	Unrated
% of total Harris Nesbitt coverage within rating category	34.6%	58.9%	6.5%	0.0%
% of stocks within rating category for which the Firm provided banking services over the past 12 months	8.5%	5.5%	0.0%	0.0%

Other Important Disclosures

Our analysts use various valuation methodologies including discounted cash flow, price/earnings (P/E), enterprise value/EBITDA, and P/E to growth rate, among others. Risks to our price targets include failure to achieve financial results, product risk, regulatory risk, general market conditions, and the risk of a change in economic conditions. For more specific information, please refer to www.harrisnesbitt.com.

Dissemination of Research

Harris Nesbitt Corp. Equity Research is available via our web site <http://research.harrisnesbitt.com>. Please contact your investment advisor or institutional salesperson for more information. Institutional clients may also receive our research via FIRST CALL Research Direct and Reuters.

All of our research is made widely available at the same time to all HNC client groups entitled to our research.

General Disclaimer

The information and opinions in this report were prepared by Harris Nesbitt Corp. (HNC). HNC is an affiliate of BMO Nesbitt Burns Inc., and BMO Nesbitt Burns Ltee/Ltd. ("BMO Nesbitt Burns"). This information is not intended to be used as the primary basis of investment decisions, and because of individual client objectives it should not be construed as advice designed to meet the particular investment needs of any investor. This material is for information purposes only and is not an offer or solicitation with respect to the purchase or sale of any security. The reader should assume that HNC, BMO Nesbitt Burns, or their affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein. The opinions, estimates, and projections contained in this report are those of HNC as of the date of this report and are subject to change without notice. HNC endeavors to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, HNC makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein, and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to HNC or its affiliates that is not reflected in this report. This report is not to be construed as an offer or solicitation to buy or sell any security. HNC, BMO Nesbitt Burns, or their affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. HNC and BMO Nesbitt Burns are subsidiaries of Bank of Montreal.

Additional Matters

To Canadian Residents: BMO Nesbitt Burns Inc. and BMO Nesbitt Burns Ltee/Ltd., affiliates of Harris Nesbitt Corp., furnish this report to Canadian residents and accept responsibility for the contents herein subject to the terms set out above. Any Canadian person wishing to effect transactions in any of the securities included in this report should do so through BMO Nesbitt Burns Inc. and/or BMO Nesbitt Burns Ltee/Ltd.

To UK residents: The contents hereof are intended solely for the use of, and may only be issued or passed onto, persons described in part VI of the financial Services and Markets Act 2000 (Financial Promotion) Order 2001.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment banking products. BMO serves Canadian clients through its Canadian retail arm BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, clients are served through Chicago-based Harris Bank, and Harris Nesbitt, an investment bank. HNC is a member of SIPC. BMO Nesbitt Burns is a Member of CIPF. "Nesbitt Burns" is a registered trademark of BMO Nesbitt Burns Corporation Limited, used under license. "BMO (M-Bar roundel symbol)" is a registered trademark of Bank of Montreal, used under license.

©COPYRIGHT 2006 HARRIS NESBITT CORP.

A member of BMO  Financial Group
