

Wireless Industry Performance Profile March Quarter 2004 Results

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Executive Summary

Each quarter Wall Street produces reams of numbers pertaining to the performance results of many thousands of companies. What is ultimately required however, is the interpretation of those numbers into information or definitive knowledge that can be understood and utilized by the interested parties, be they industry competitors, investors, or observers. While the interpretation of the individual company results can be meaningful and have a material impact on that company, there is a great deal more pertaining to the sector and industry level understanding that is being missed without additional analysis. This report, unlike most available on Wall Street which rarely go beyond the individual company results, utilizes the individual results as only a starting point and leverages that data into an aggregated approach to produce sub-sector and industry level performance profiles that provide the reader with a unique high-level perspective on the industry as well as a single source for the individual results of the top 46 wireless companies.

This report begins with an analysis of the major market indices in order to provide a framework with which to gauge the sub-sector and industry level performance trends. But in addition to the utilization of simple charts of these indices, a trend analysis and statistical variation approach is applied to specifically quantify long-term, medium-term and near-term growth trends as well as realistic bounds on the variation of the indices relative to those established trends and overall realistic growth of markets. In particular, the Wireless Holders Fund is an exchange traded fund on the American Stock Exchange with the ticker of “WMH” and is analyzed throughout this report as a proxy for the wireless industry as well as a single convenient mechanism for investing in the wireless market overall. The Wireless Holder Fund consists of 20 leading companies of the wireless industry and is analyzed in detail in the appendices of this report. While the objective of the Wireless Holders Fund is to represent the wireless industry at large, it is actually quite heavily weighted toward the service provider sub-sector. As a result, a broader universe of 41 companies within the wireless industry, simply named the Moeller Ventures Wireless Universe, is also thoroughly analyzed in this report and similarly tabulated in the appendices. Overall, 46 different companies are aggregated in this report. These companies represent the largest 46 companies of the wireless industry with market capitalizations over \$100 million.

The core analysis begins with the detailed income statement, balance sheet and cash flow models for each of these 46 wireless companies. The companies are then grouped in sub-sectors according to similarities in the company’s businesses. The results are then aggregated on a normalized time scale so that trend lines can be established on each of the meaningful statement line items. The sectors are then further aggregated into the high-level industry wide trends. This approach of successively aggregating the core data derives the sector and industry level performance profiles, which are then presented in an easy to understand format with bulletized overviews and a chart-based arrangement.

This analysis categorizes and aggregates the results of the following companies.

AETH	Aether Systems, Inc.
AIRN	Airspan Networks Inc.
ALVR	Alvarion LTD.
AMT	American Tower Corporation
ANAD	Anadigics Inc.

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ANDW	Andrew Corporation
ANEN	Anaren Inc.
ARDI	At Road Inc.
AWE	ATT Wireless
CAMP	California Amplifier Inc.
CCI	Crown Castle International
CRNT	Ceragon Networks LTD.
DT	Deutsche Telekom
ERICY	Ericsson
IDCC	InterDigital Communications Corporation
MOT	Motorola, Inc.
NOK	Nokia Corporation
NVTL	Novatel Wireless Inc.
NXTL	Nextel Communications
NXTP	Nextel Partners
OPWV	Openwave Systems Inc.
FON	Sprint Corporation
PROX	Proxim Corporation
PSRC	PalmSource Inc.
PWAV	Powerwave Technologies, Inc.
QCOM	Qualcomm, Inc
REMC	Remec Inc.
RFMD	RF Micro Devices
RIMM	Research in Motion
SKM	SK Telecom ADRs
SLAB	Silicon Laboratories Inc.
SMDI	Sirenza Microdevices Inc.
SRXA	S.R. Telecom, Inc.
SSI	SpectraSite Inc.
STXN	Stratex Networks Inc.
SWIR	Sierra Wireless Inc.
SWKS	Skyworks Solutions Inc.
SYNC	Intellisync Corporation
TCP	Telesp Celular Participacoes ADRs
TQNT	TriQuint Semiconductor Inc.
USM	U.S. Cellular
VOD	Vodafone Group ADRs
VZ	Verizon Communications
WJCI	WJ Communications Inc.
WVCM	Wavecom S.A.
WWCA	Western Wireless Corporation

Performance Overview

- **Wireless Industry Overall:** In general the wireless industry is recovering well from the technology and telecom market downturn of 2000, 2001 and 2002. 2003 has been a break out year as revenue growth has returned to many industry sub-sectors and operating profiles are improving as a result of overall expense reductions. On a medium-term and short-term basis the wireless industry and the exchange-traded Wireless Holders Fund are outperforming most every other major market index. From a public markets perspective, the wireless industry medium term annualized growth, established since July of 2002 (the period when most major market indices bottomed), is approximately 40% and is supported by a substantial rebound in industry-wide operating and net earnings.
- **Service Provider Sector:** Overall, the Wireless Service Provider Sector is experiencing improving results with revenue still growing at low double digit percentages as driven by the continued increase mobile wireless subscribers. Expenses are ‘in-check’ after fluctuating through 2001 and 2002 and are growing at a lower rate than revenue, which is producing better bottom line results for the sector.
- **Infrastructure System Service Provider Sector:** While struggling over the last few years, the Infrastructure System Service Provider Sector has shown improving financial trends over the last few quarters. While revenue growth remains basically flat, continued reductions in operating costs will likely result in positive net earnings for this sector in the next couple quarters.
- **System OEM Sector:** The OEM Sector continues to show signs of a maturing industry sub-sector with total revenue leveling off and overall cost and expense reductions providing the main driver for better bottom line results. From a system equipment perspective, the OEMs are coming under pricing pressure from service providers that are pushing to deploy and deliver services at continually lower costs. A similar phenomenon exists in the handset market as volume sales trends continue to shift toward lower priced models driven by the incremental new subscribers’ propensity to buy cheaper mobile phones as well as the pursuit of new geographic markets that demand less expensive handsets to drive demand.
- **Infrastructure Subsystem Sector:** Overall, the Infrastructure Subsystem Sector is exhibiting some signs of recovery (i.e. revenue growth and some profit growth) from the technology slump of 2002 and 2003. However, on an operating and net basis these companies continue to struggle as lower profit margins and increased expenses negate top line improvements and result in operating and net losses. This sector seems to be in difficult operating environment, striving to develop technologically advanced products needed to remain competitive while experiencing pricing pressure from its OEM and service provider customers.
- **Broadband Wireless Equipment Sector:** Overall, the Broadband Wireless segment continues to struggle with stagnant revenue growth and expense cuts, which will “right-size” the businesses in-line with the addressable market opportunities, in order to produce positive operating and net results. This sector in general has continued to suffer by providing technological solutions with cost dynamics that are too high relative to what is need by the market (i.e. communication service providers potentially utilizing wireless) in order to be successful. As a result, pricing pressure has resulted in muted revenue growth and poor profitability dynamics.
- **Product and Solution Provider Sector:** Overall, the Wireless Product and Solution Provider Sector has weathered the tech downturn better than most other wireless sectors. Through the technology downturn since 2001, these companies have focused on adjusting expenses to be in-line with business opportunities while also maintaining revenue growth. As a result, positive operating

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and net earnings are materializing for nearly every company in this group. This, in turn, is driving better market capitalization growth for this sector as compared to other wireless sectors.

- **Mobile & Wireless Software Sector:** Overall, the Mobile and Wireless Software Sector, as represented by the niche companies included in this analysis, has struggled to produce revenue growth or positive net earnings over the last 10 quarters. While the software oriented business models produce high gross margins (the highest gross margins of any wireless sector), high overall expenses negate that gross profit and result in negative operating and net results. Lack of positive bottom line results has, in turn, resulted in an underperformance of this sector relative to the overall industry.
- **Technology and Integrated Circuit Sector:** Overall, the Technology and Integrated Circuit Sector continues to be one of the better performing wireless sectors over the last 10 quarters with substantial growth in revenue, gross margin and bottom line profitability. As a result, this sector has outperformed the broader industry as represented by the Wireless Holders Index.

Overall Market Trends

Market Trends Overview

- **Trend Line Analysis:** DJIA, NASDAQ and the Wireless Holders Index are analyzed for long-term, medium-term and near-term trends. Trend lines are established by fitting the best exponential line to a defined set of the weekly closing price data over the time period in question.
- **Statistical Variation Analysis:** A statistical variation analysis is also applied to the indices weekly data using the assumption that the percentage variation of an index around the established trend line can be modeled as a random variable, to which a normal distribution can be applied. This analysis yields standard deviations above and below the trend line indicating historical trading ranges and can be used as a probability indicator for future index fluctuations. One standard deviation above and below the established trend line will include 68.3% of the historical index fluctuations over the defined time period. Two standard deviations above and below the trend line will include 95.4% of the historic fluctuations.
- **DJIA Long-Term Trend:** Over the last 22 years from October of 1982 through June 7th, 2004 the Dow Jones Industrial Average has exhibited a long-term trend line annual growth rate of 12.39% and a standard deviation of 16.4%. See Figure 1. Interestingly enough, even if the last seven years are look at as an abnormality, (i.e. a market “bubble” from January 1997 through 2000 and an abnormal bear market since 2000) and not included in the trend line calculations, the long-term annual growth only changes slightly to 12.18%, but the standard deviation narrows considerably to 10.17%.
- **DJIA Medium-Term Trend:** Since July 1, 2002, the approximate period when most market indices bottomed, the Dow has exhibited a trend line annual growth rate of 15.88% and a standard deviation of 4.9%. See Figure 2.
- **DJIA Near-Term Trend:** Year-to-date the DJIA is showing a trend line declining at -9.73% annually and a standard deviation of 1.4%. See Figure 3.
- **NASDAQ Long-Term Trend:** Over the last 20 years from October 1984 through June 7th 2004 the NASDAQ index has exhibited a long-term trend line annual growth rate of 13.09% and a standard deviation of 36.31%. The large standard deviation is due to the significant market fluctuations over the last seven years. Similar to the DJIA long-term analysis, if the last seven years are removed from the trend line calculations, the annual trend line growth rate only changes slightly to 12.00%, but the standard deviation narrows to a much more realistic value of 12.83%. See Figure 4.
- **NASDAQ Medium-Term Trend:** Since July 1, 2002 the NASDAQ has exhibited a trend line growth rate of 34.74% with a standard deviation of 6.55%. See Figure 5.
- **NASDAQ Near-Term Trend:** Year-to-date the NASDAQ is exhibiting a trend line declining at -17.74% and a standard deviation of 2.26%. See Figure 6.
- **Wireless Holders Index Medium-Term Trend:** The Wireless Holders Fund traded on the AMEX under the symbol “WMH” was actually initiated in November of 2000, unfortunate timing relative to the dramatic fluctuation in the market over the last few years. As a result, as can be observed in Figure 7, there really isn’t an established long-term trend. On a medium-term basis since July 1, 2002 however, there is a meaningful trend established showing the Wireless Holders Index growing at an annual rate trend line of 39.7% with a standard deviation of 8.61%. This indicates that on the medium-term basis the wireless industry market index growth is exceeding both the

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DJIA (at 15.88%) and the NASDAQ (at 34.74%). Like most medium-term trend line growth rates, the WMH growth is likely a result of the recovering trends of the technology markets overall since July 1, 2002 and the better fundamental performance of wireless within the technology and telecommunications industries. See Figure 7.

- **Wireless Holders Index Near-Term Trend:** In addition, on the near-term basis the Wireless Holders Index is also outperforming the DJIA and the NASDAQ, by exhibiting a year-to-date positive annual growth rate trend line of 1.2% over -9.73 for the Dow and -17.74 for the NASDAQ. See Figure 8.

Dow Jones Industrial Average Charts

Figure 1: DJIA Long-Term Trend Chart since January 1983

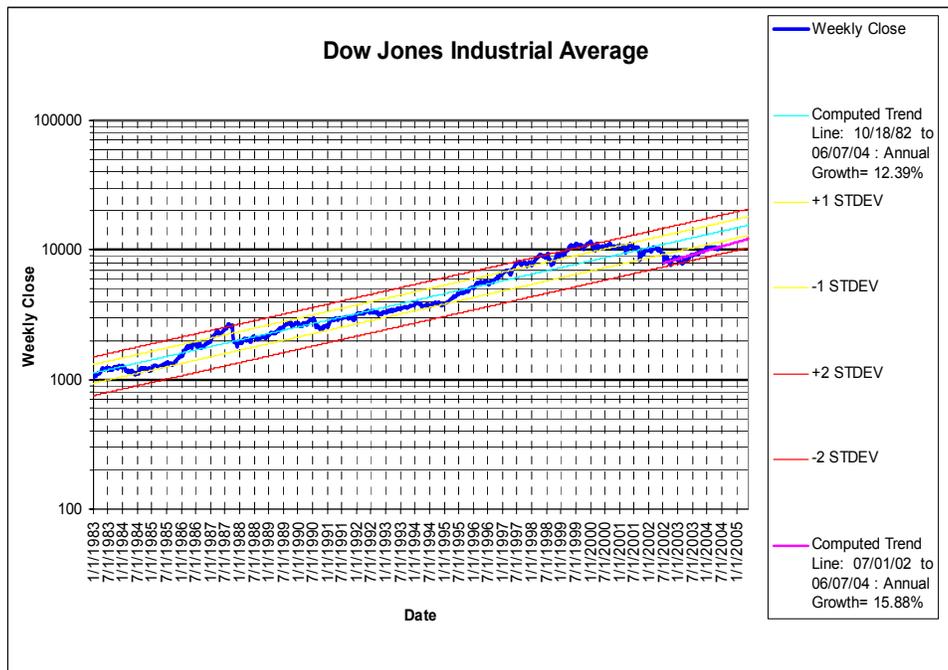


Figure 2: DJIA Medium-Term Trend Chart since January 2000

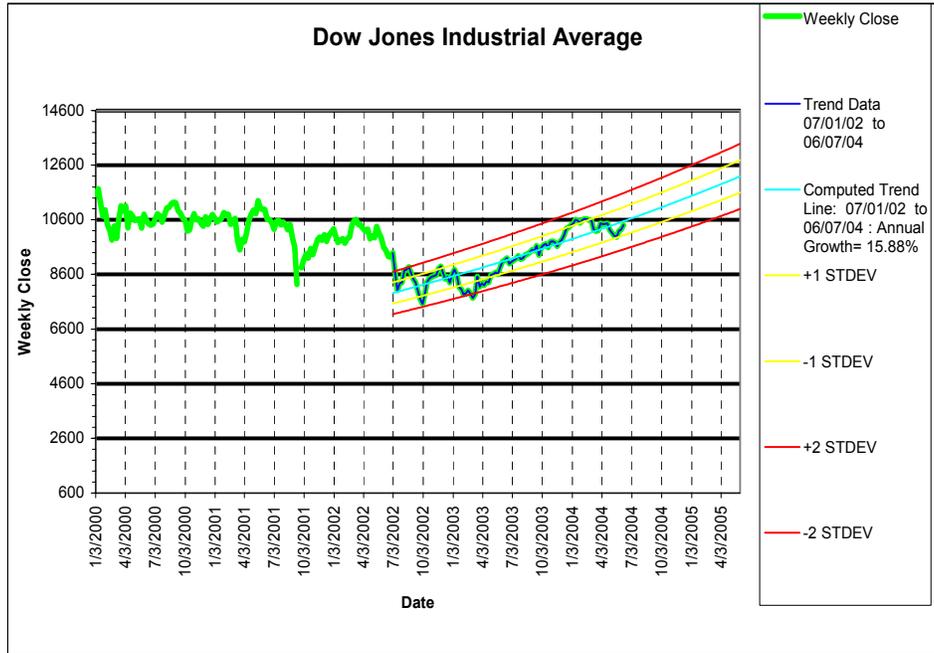
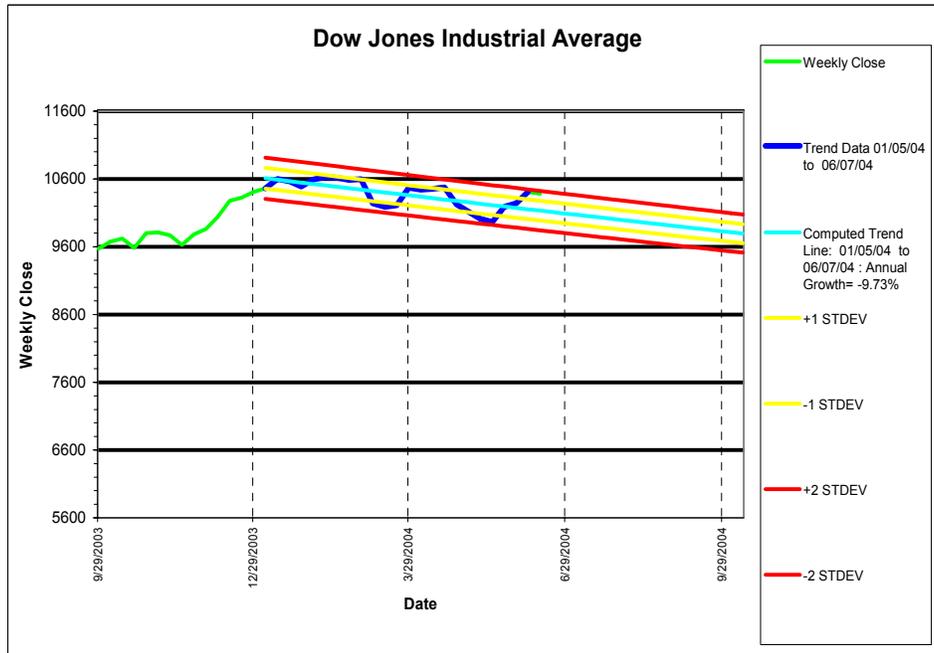


Figure 3: DJIA Near-Term Trend Chart since January 2004



NASDAQ Index Charts

Figure 4: NASDAQ Long-Term Trend Chart since October 1984

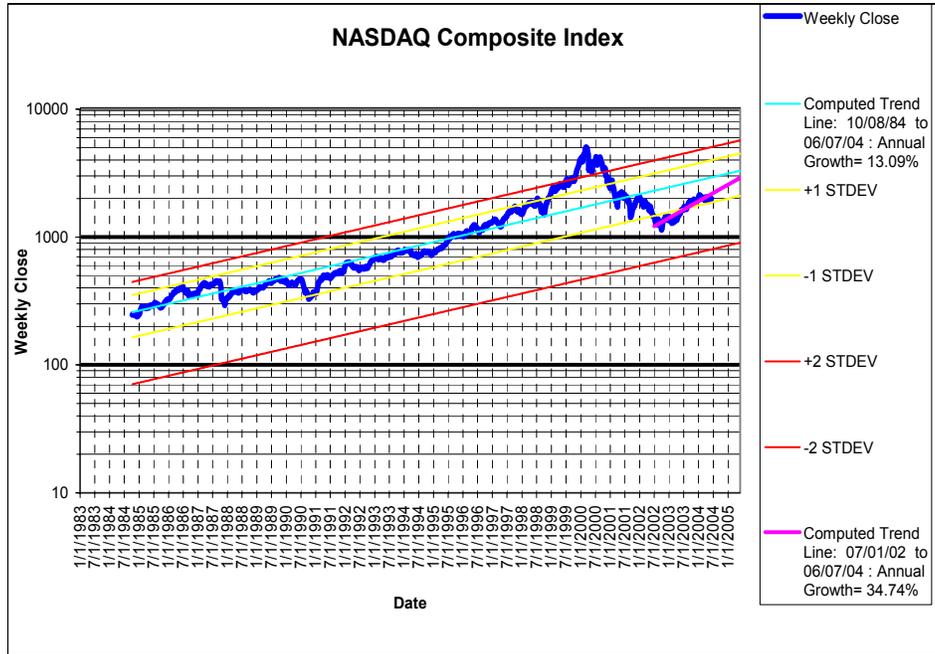


Figure 5: NASDAQ Medium-Term Trend Chart since January 2000

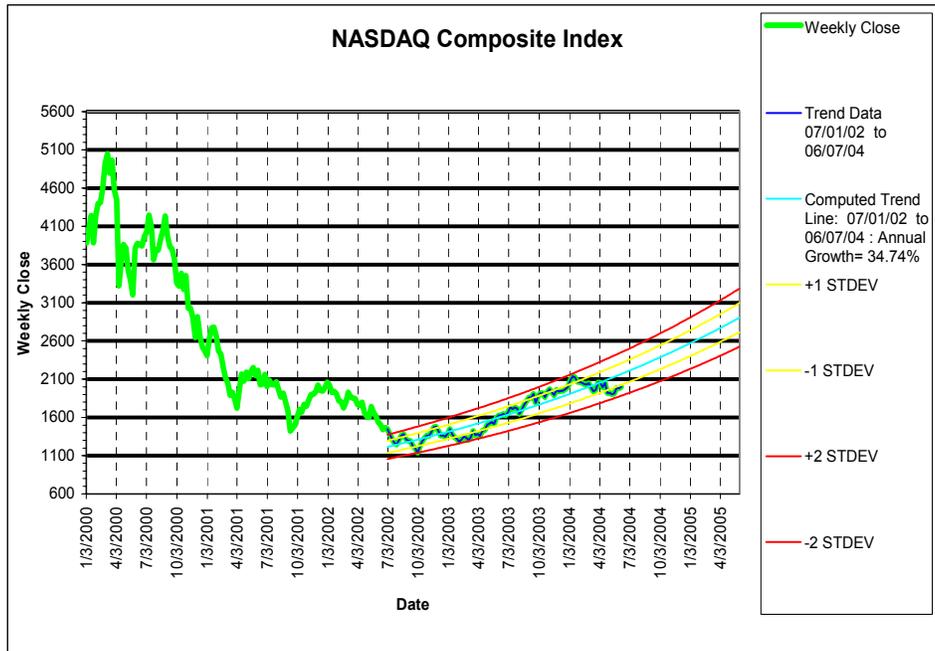
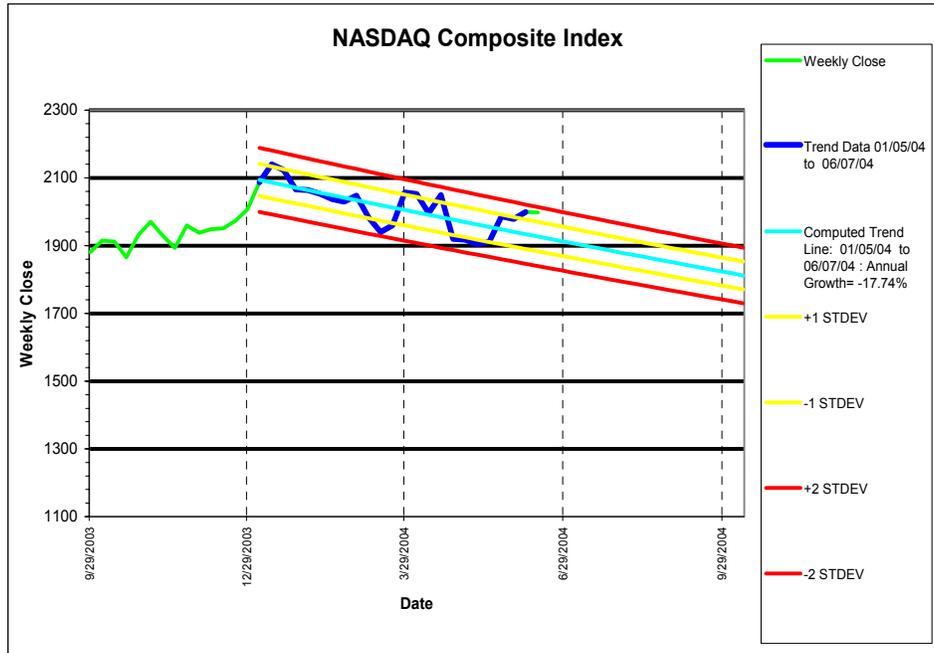


Figure 6: NASDAQ Near-Term Trend Chart since January 2004



Wireless Holders Index Charts

Figure 7: Wireless Holder Index Trend Chart since Inception November 2002

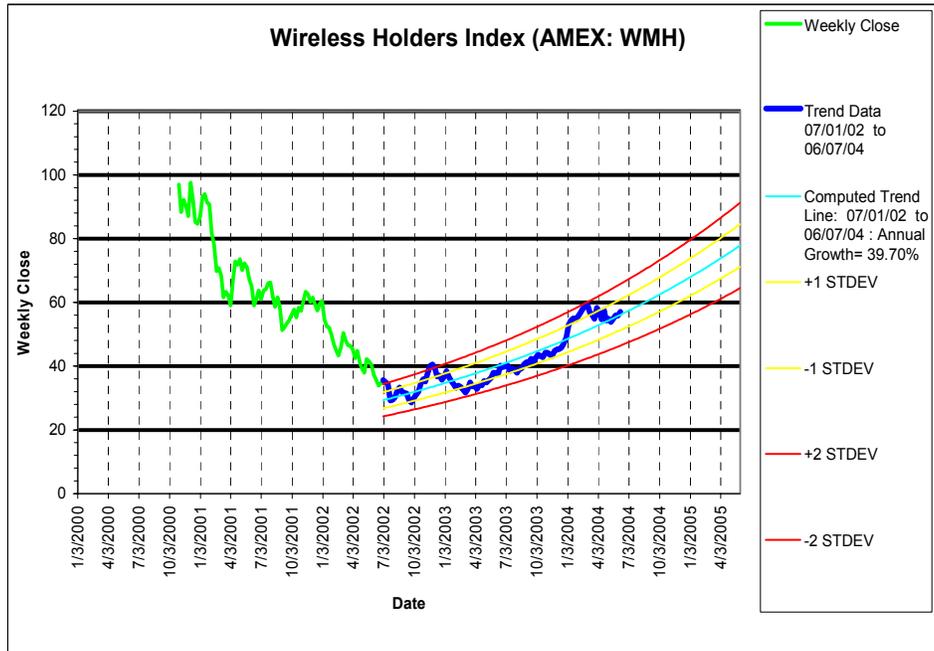
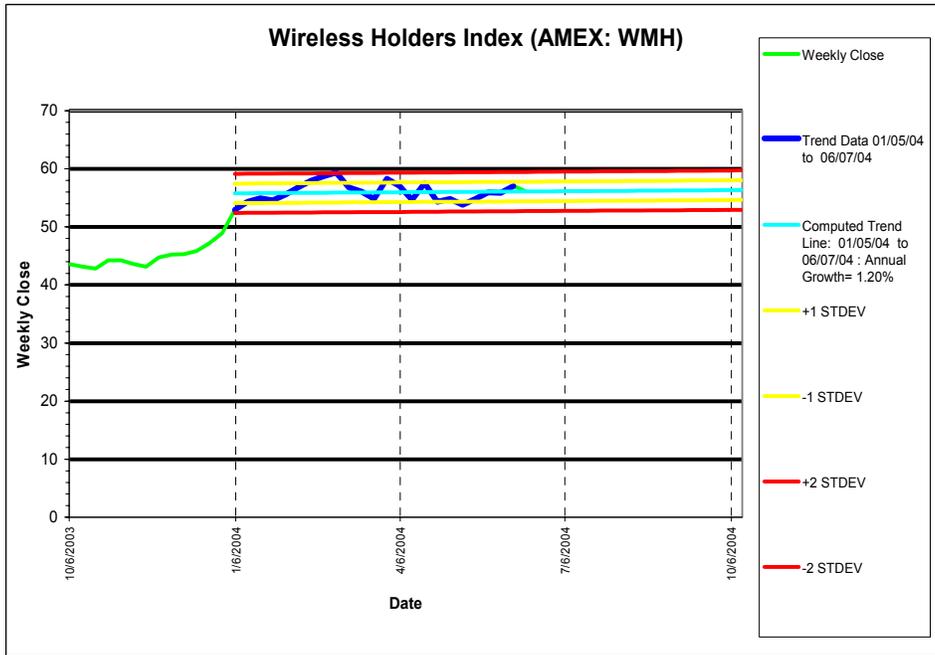


Figure 8: Wireless Holder Index Near-Term Trend Chart since January 2004



Wireless Industry Operating Profile

Wireless Industry Operating Profile Overview

- **Wireless Industry Characterization:** For this analysis the wireless industry is characterized via the aggregation of data on two different sets of companies. The first set is the 20 companies in the Wireless Holders Fund traded on the American Stock Exchange under the symbol “WMH”. Since this fund is highly weighted toward the service provider sector, a broader representation, simply called the Moeller Ventures Wireless Universe, was constructed that aggregates the results of 41 different companies of the wireless industry. See Appendix A for tables listing these two sets of companies and the summaries of the specific results for each of the companies.
- **Revenue Trend:** WMH total revenue was \$105.4 billion for the March quarter and exhibits a trend line annual growth rate of 8% as compared to revenue for the Moeller Ventures Wireless Universe of \$35.4 billion with a trend line growth rate of 2%. The principle difference in the revenue totals is the exclusion of the large wireline telecom providers (namely Deutsche Telekom, Sprint Corporation, Verizon and Wodafone) from the Moeller Ventures Universe, which is designed to focus more on the specific wireless service providers and broader technology suppliers. See Figure 9 and Figure 13.
- **Gross Profit Trend:** WMH gross profit for the March quarter was \$35.5 billion (34% of revenue), exhibiting a trend line growth rate of 3% annually. As a percentage of revenue, WMH gross profit is declining at trend line rate of approximately 5% annually. The Moeller Ventures Wireless Universe posted gross profit of \$17.2 billion (49% of revenue) and exhibits a trend line growth rate of 11% annually. As a percentage of revenue, Moeller Ventures Wireless Universe gross profit exhibits a positive trend line growth rate of approximately 9% annually. See Figure 9, Figure 10, Figure 13 and Figure 14.
- **Expense Trends:** WMH total operating expenses for the March quarter were \$64 billion or 61% of revenue and are exhibiting a trend line annual growth rate of 4%. As a percentage of revenue, WMH total operating expenses exhibit a declining rate of 4% annually. WMH SG&A as \$19.2 billion (18% of revenue) with a trend line annual growth rate of 32% on an aggregate basis. WMH R&D for the March quarter was \$2.9 billion (only 3% of revenue due to the WMH weighting toward service providers) basically flat with previous quarters. For the Moeller Ventures Wireless Universe total operating expenses were \$12.2 billion (34% of revenue), declining at a 9% annual trend line rate on an aggregate basis. SG&A was \$6.5 billion, 18% of revenue, exhibiting a basically flat trend line annual growth rate of just 1%. R&D was \$3.1 billion or 9% of revenue, essentially flat with previous quarters. As a percentage of revenue, R&D shows a trend line rate declining at 2% annually. See Figure 11, Figure 12, Figure 15 and Figure 16.
- **Operating & Net Earnings:** WMH operating income was \$5.0 billion (5% of revenue), declining at a 43% annual rate on an aggregate basis and declining at 52% as a percentage of revenue. WMH net income was a loss of \$2.3 billion. Both operating and net income for WMH are largely effected by the poor bottom line results of the large wireline telecom service providers. Without those large wireline telecom service providers, the Moeller Ventures Wireless Universe had operating income of \$5.3 billion (15% of revenue) and net income of \$3.5 billion (10% of revenue). Since the industry overall is recovering from the tech downturn of 2001 and 2002, meaningful trend line growth rates are difficult to establish (i.e. the trend line numbers in the charts are not representative of the longer-term earnings growth rates). However, overall industry bottom line results are improving quite dramatically. See Figure 9, Figure 10, Figure 13 and Figure 14.

Wireless Holders Index Cumulative Revenue and Profile Charts

Figure 9: Wireless Holders Index Cumulative Revenue & Profits Chart

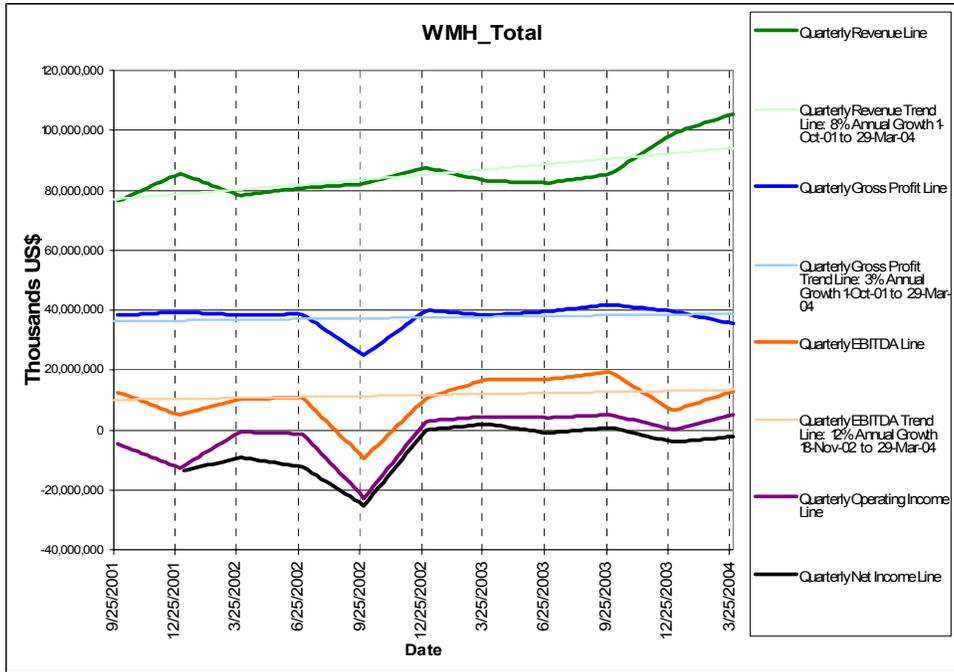
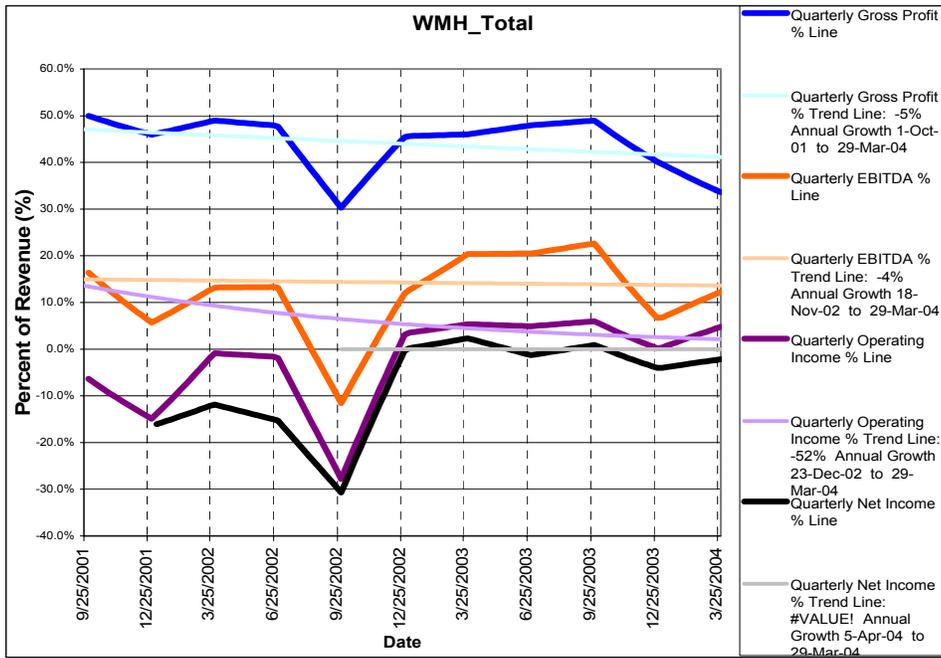


Figure 10: Wireless Holders Index Cumulative Revenue & Profits Percent Chart



Wireless Holders Index Cumulative Expenses Charts

Figure 11: Wireless Holders Index Cumulative Expenses Chart

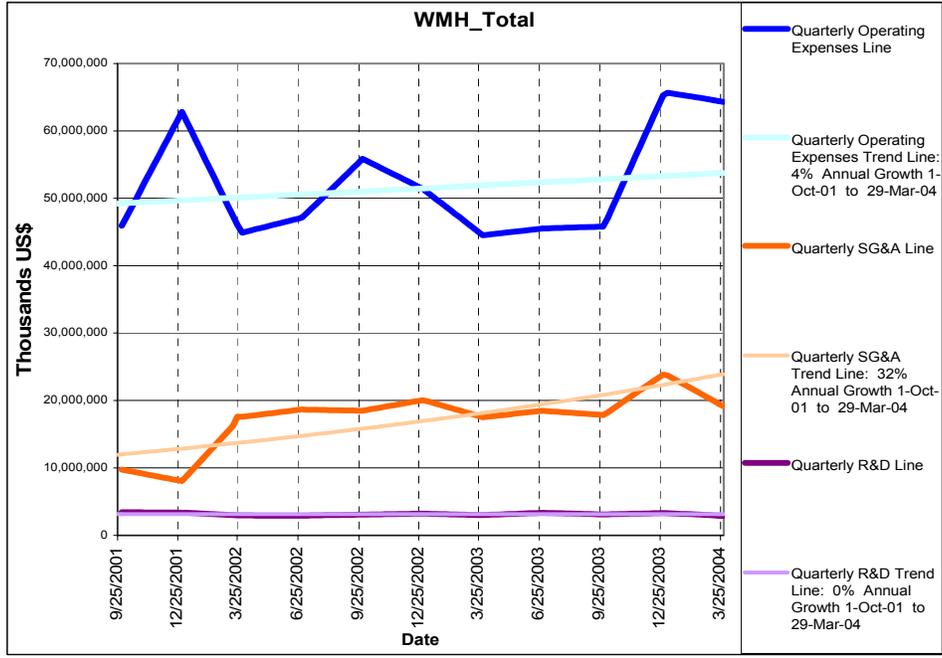
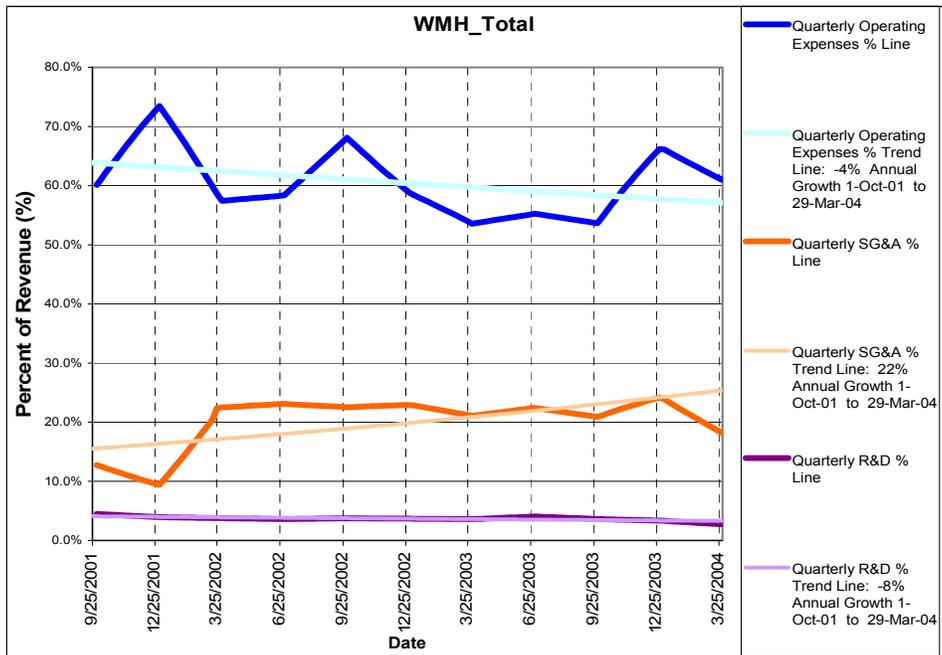


Figure 12: Wireless Holders Index Cumulative Expenses Percent Chart



Moeller Ventures Universe Cumulative Revenue and Profit Charts

Figure 13: Wireless Universe Revenue & Profits Chart

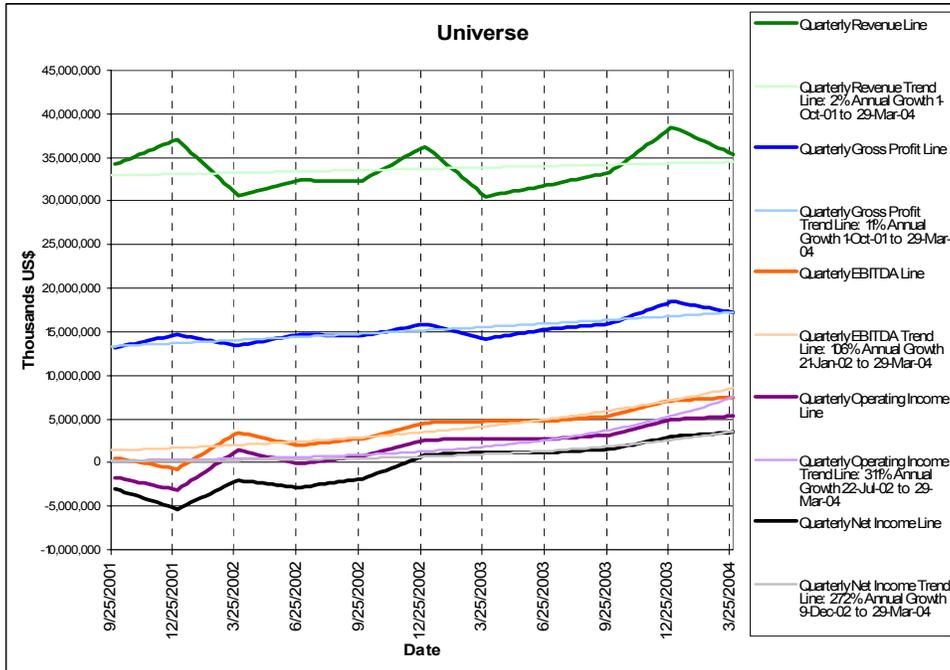
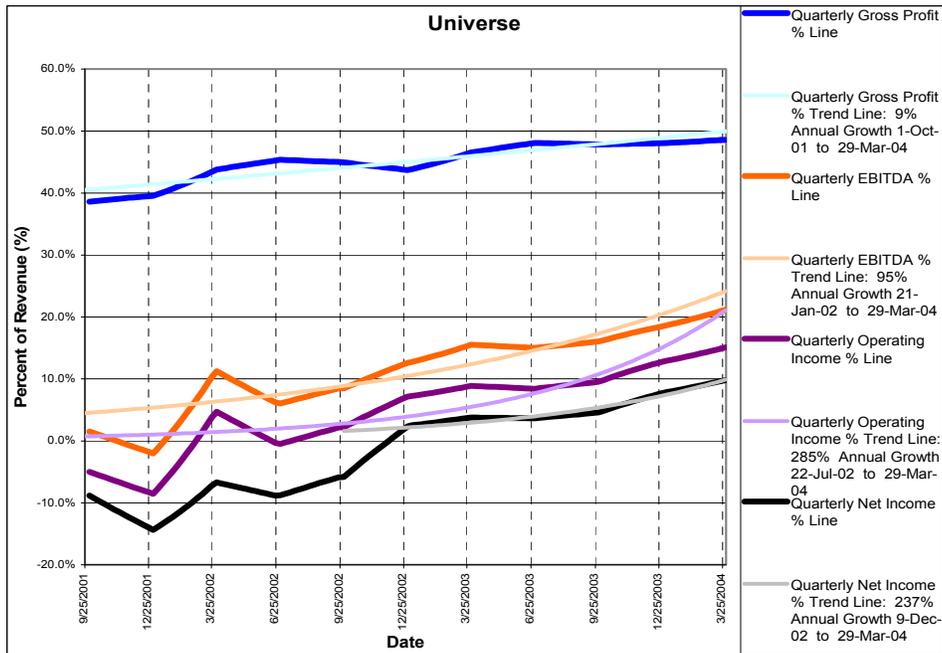


Figure 14: Wireless Universe Profit Percent Chart



Moeller Ventures Universe Cumulative Expenses Charts

Figure 15: Wireless Universe Expenses Chart

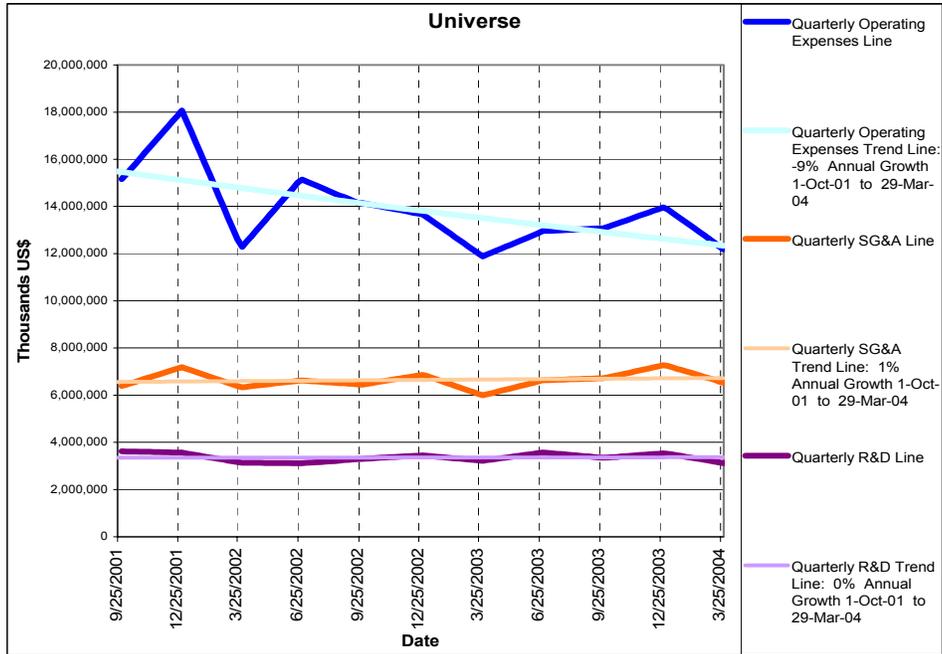
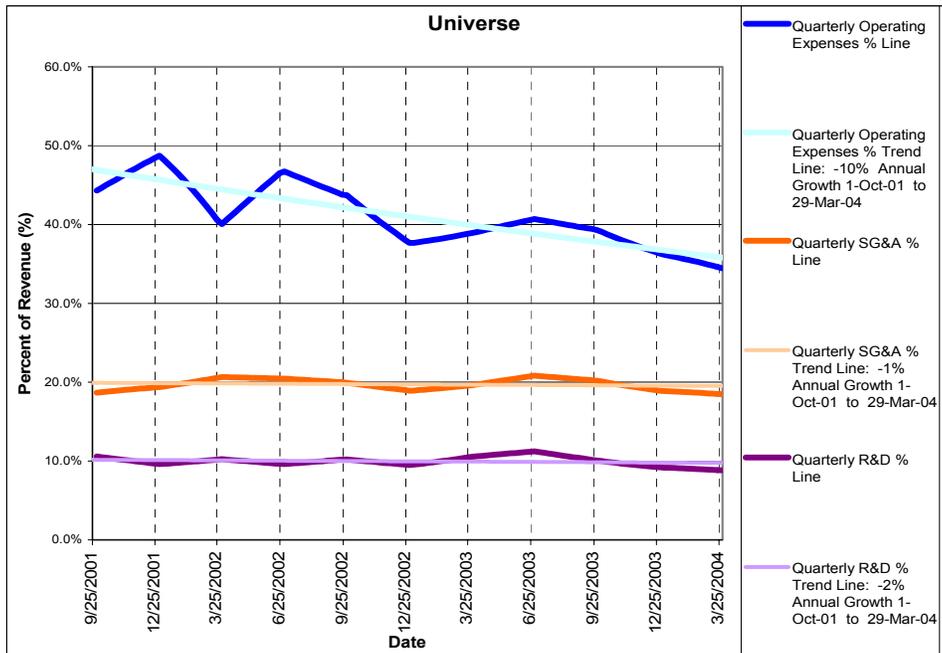


Figure 16: Wireless Universe Expenses Percent Chart



Wireless Service Provider Sector Profile

Wireless Service Provider Sector Overview

- Overall, the Wireless Service Provider Sector is experiencing improving results with revenue still growing at low double digit percentages as driven by the continued increase mobile wireless subscribers. Expenses are ‘in-check’ after fluctuating through 2001 and 2002 and are growing at a lower rate than revenue, which is producing better bottom line results for the sector.
- **Sector Characterization:** The Wireless Service Provider Sector is made up of companies providing wireless communication services (principally mobile cellular communication) and consists of the aggregated results of AT&T Wireless (NYSE: AWE), Nextel Communications (NASDAQ: NXTL), SK Telecom (NYSE: SKM), Telesp Celular Partici (NYSE: TCP), U.S. Cellular (NYSE: USM) and Western Wireless (NASDAQ: WWCA). This sector approximates the WAN Cellular / PCS service provider sector of the Wireless Holders Index, but focuses more on the ‘pure play’ wireless service companies and doesn’t aggregate the results from the more diverse telecom service providers like Deutsche Telekom (NYSE: DT), Sprint Corporation (NYSE: FON), Verizon Communications (NYSE: VZ) and Vodafone Group (NYSE: VOD), which are represented in the Wireless Holders Index.
- **Revenue Trend:** Sector revenue reached \$11.2 billion in the March quarter and exhibits a trend line annual growth rate of 14%. Likewise, a similar analysis of the service providers of the Wireless Holders Index shows aggregated revenue of approximately \$83.0 billion, growing at a trend line annual growth rate of 13%.
- **Gross Profit Trend:** Sector gross profit reached \$7.5 billion or approximately 67% of revenue and exhibits a trend line growth rate of 17% annually. Quarterly gross profit as a percentage of revenue exhibits a growth rate of 2% annually as quarterly expenses have stabilized and exhibit growth trends lower than that of revenue. See Figure 17, Figure 18, Figure 19 and Figure 20.
- **Expense Trends:** Total operating expenses are growing 6% annually on a quantitative basis, but declining 8% annually as a percentage of revenue and account for approximately 50% of revenue in the March quarter. SG&A shows similar trends, growing 13% annually and declining slightly (-1% annually) on a percentage of revenue basis at approximately 30% of revenue.
- **EBITDA Trends:** Quarterly EBITDA profit is \$3.9 billion or 34% of revenue and is on a trend line annual growth rate of 42%. See Figure 17 and Figure 18.
- **Operating & Net Earnings:** Like EBITDA profits, operating and net earnings have exhibited more stable trends through 2003 and 2004 after fluctuating through 2001 and 2002. Operating earnings for the sector hit \$1.9 billion (17% of total revenue) at the end of the March quarter and exhibit a trend line annual growth rate of 38%. Net earnings reached \$1.1 billion (10% of total revenue) and exhibit a trend line growth rate of 13% annually since the sector returned to positive earnings after the December quarter 2002. See Figure 18.
- **Stock Market Relative Performance:** From a public markets perspective, the cumulative market cap of the Wireless Service Provider Sector has performed approximately in-line with the Wireless Holders Index year-to-date, which isn’t surprising given the weighting of wireless services companies in the index. The Wireless Holders Index has returned approximately 15% YTD and the cumulative market cap of the Wireless Service Provider Sector companies has grown approximately 11% YTD. See Figure 21.

Wireless Service Provider Sector Cumulative Revenue & Profit Charts

Figure 17: Wireless Service Provider Revenue & Profits Chart

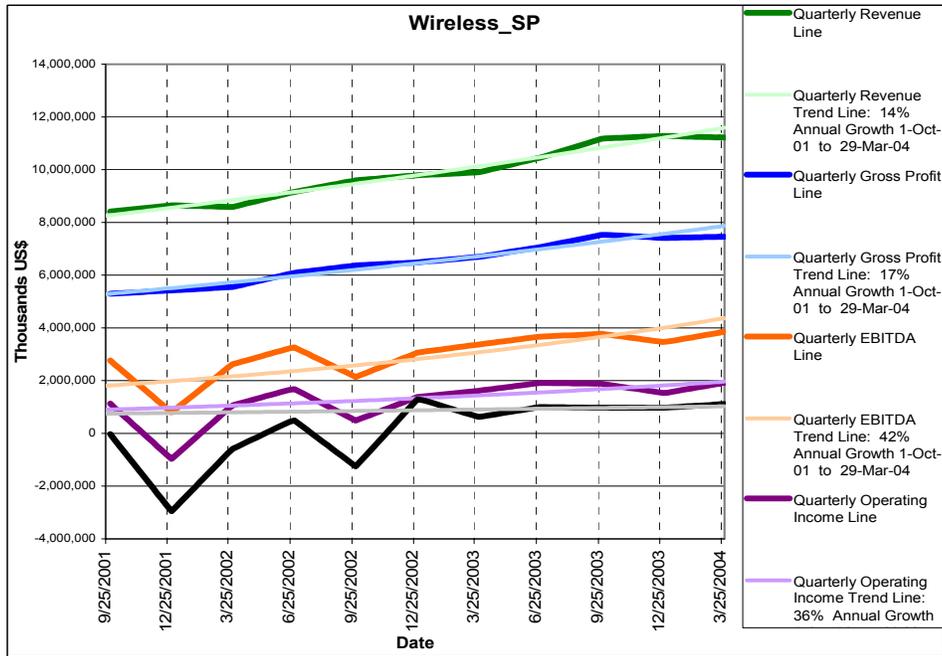
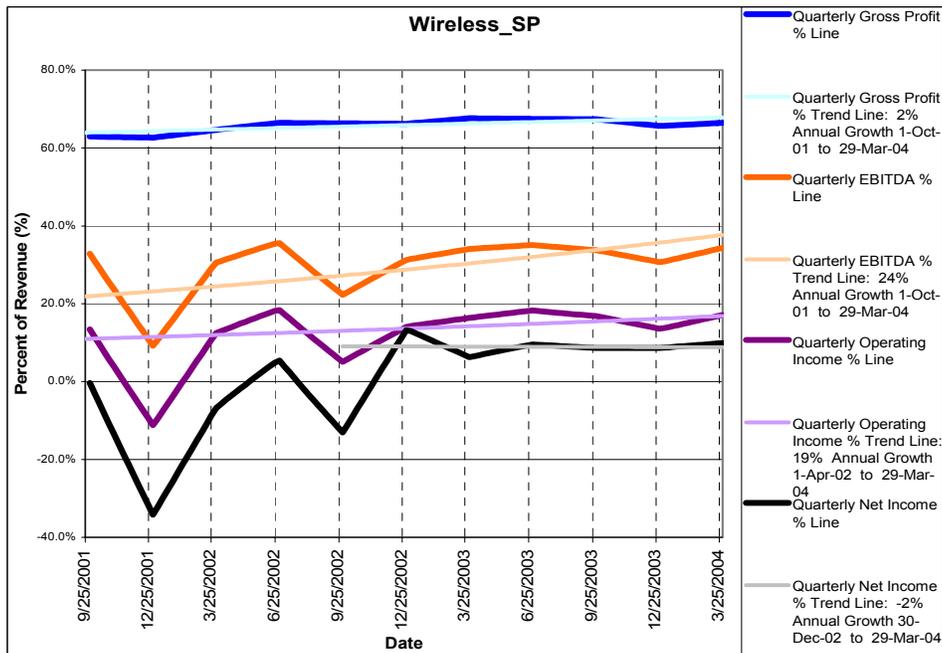


Figure 18: Wireless Service Provider Profit Percent Chart



Wireless Service Provider Sector Cumulative Expenses Profile Charts

Figure 19: Wireless Service Provider Expenses Chart

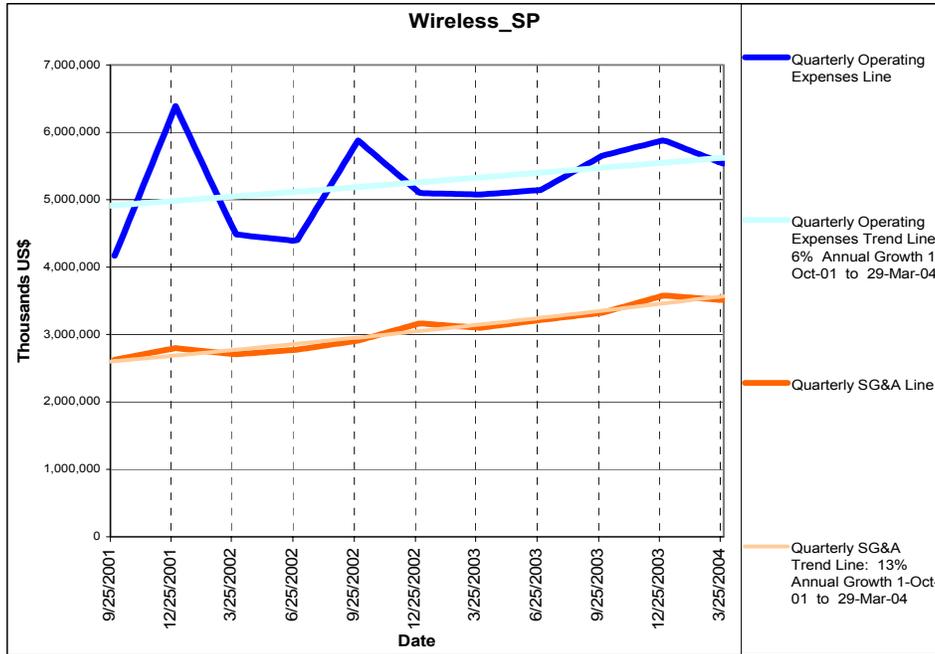
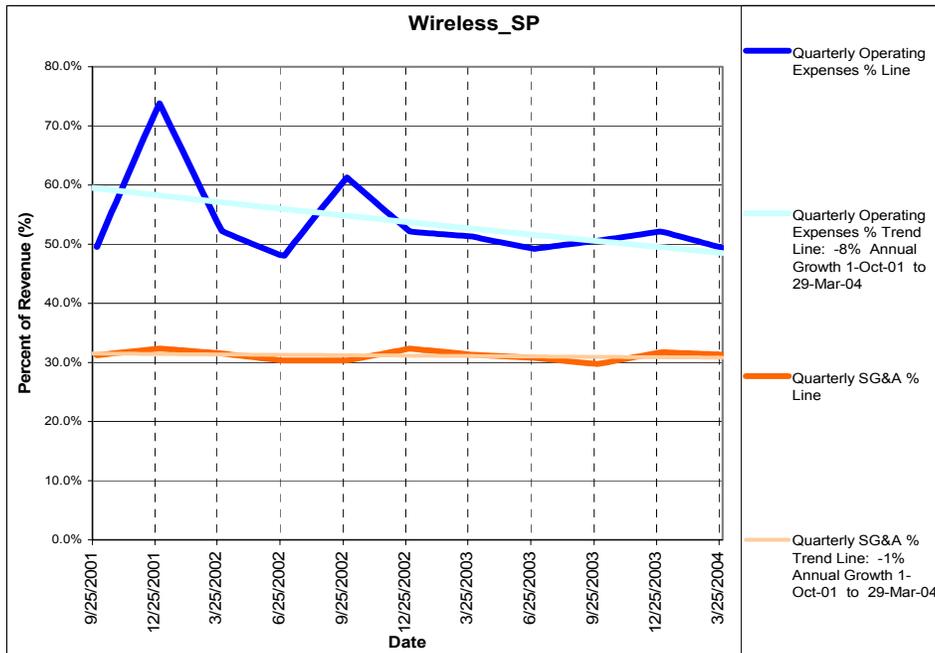
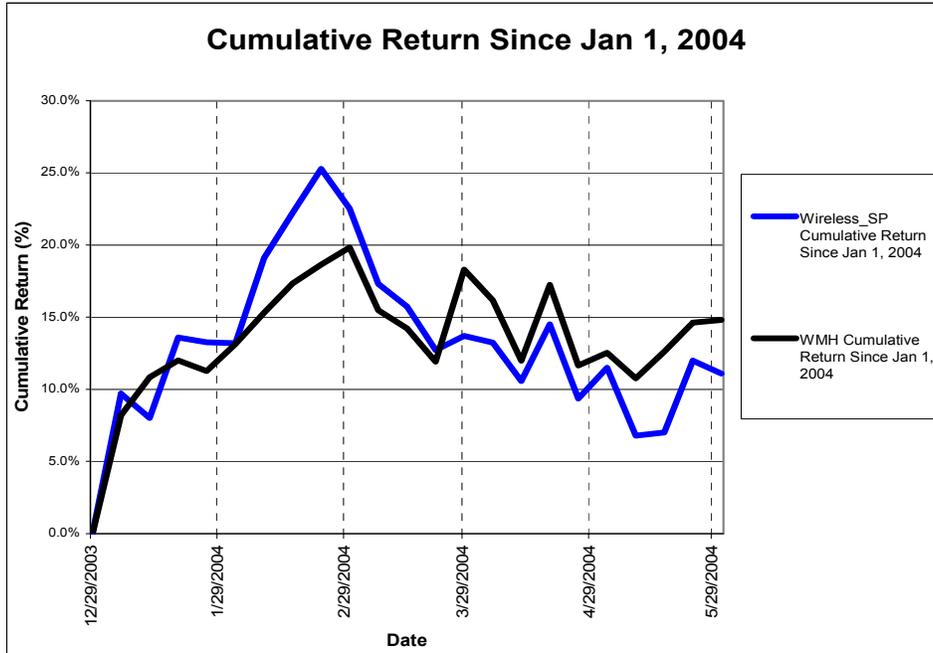


Figure 20: Wireless Service Provider Expenses Percent Chart



Wireless Service Provider Sector Year-to-Date Relative Performance Chart

Figure 21: Wireless Service Provider Cumulative Market Cap YTD Relative Performance



Infrastructure System Service Providers Sector Profile

Infrastructure System Service Provider Sector Overview

- While struggling over the last few years, the Infrastructure System Service Provider Sector has shown improving financial trends over the last few quarters. While revenue growth remains basically flat, continued reductions in operating costs will likely result in positive net earnings for this sector in the next couple quarters.
- **Sector Characterization:** The Infrastructure System Service Provider Sector consists of companies that typically own wireless infrastructure (typically mobile infrastructure) and lease it to the Wireless Service Providers on a wholesale basis. Currently there are three major public competitors in this sector - American Tower Corporation (NYSE: AMT), Crown Castle International (NYSE: CCI) and SpectraSite, Inc. (NYSE: SSI). Of the three, Crown Castle is the only one that is part of the Wireless Holders Index and as a result is grouped with the next closest sector, which is the OEMs. However, to get the best profile of the performance of these businesses, all three are analyzed together in the following charts.
- **Revenue Trend:** Sector revenue was \$519 million in the March quarter and exhibits a slightly declining trend line annual growth rate of -3%. See Figure 22.
- **Gross Profit Trend:** Sector gross profit reached \$309 million or approximately 59% of revenue and exhibits a trend line growth rate of 15% annually. Quarterly gross profit as a percentage of revenue exhibits a growth rate of 19% annually as overall operating costs continued to decline. See Figure 22, Figure 23 and Figure 24.
- **Expense Trends:** Total operating expenses were \$247 million or 48% of revenue for the March quarter and are declining at a 16% annual trend line rate. SG&A was \$42.6 million or 8% of revenue and is declining at a 6% annual rate. With costs declining more than revenue, on a percentage of revenue basis total operating expenses are declining 13% annually and SG&A is declining 3% annually. See Figure 24 and Figure 25.
- **EBITDA Trends:** Quarterly EBITDA profit for the March quarter was \$249 million (48% of revenue) and exhibits a trend line annual growth rate of 60%. As a percentage of revenue EBITDA show a trend line annual growth rate of 65%. See Figure 22 and Figure 23.
- **Operating & Net Earnings:** On an operating and net earnings basis this sector has been struggling for some time. Company restructurings in 2002 are resulting in improving operating and net earnings results, but still not with solidly positive returns. Operating earnings were \$61.5 million for the March quarter, just the second quarter in a row of positive results, so no meaningful trend line is established. Net earnings are still negative a -\$103 million. See Figure 22 and Figure 23.
- **Stock Market Relative Performance:** The March quarterly results, being the second quarter in a row of improving trends, pushed the year-to-date market returns for these companies above the Wireless Holders Index. YTD return for this sector is 29% versus 15% for the Wireless Holders. See Figure 26.

Infrastructure System Service Provider Sector Cumulative Revenue & Profit Charts

Figure 22: Infrastructure System Service Provider Revenue & Profits Chart

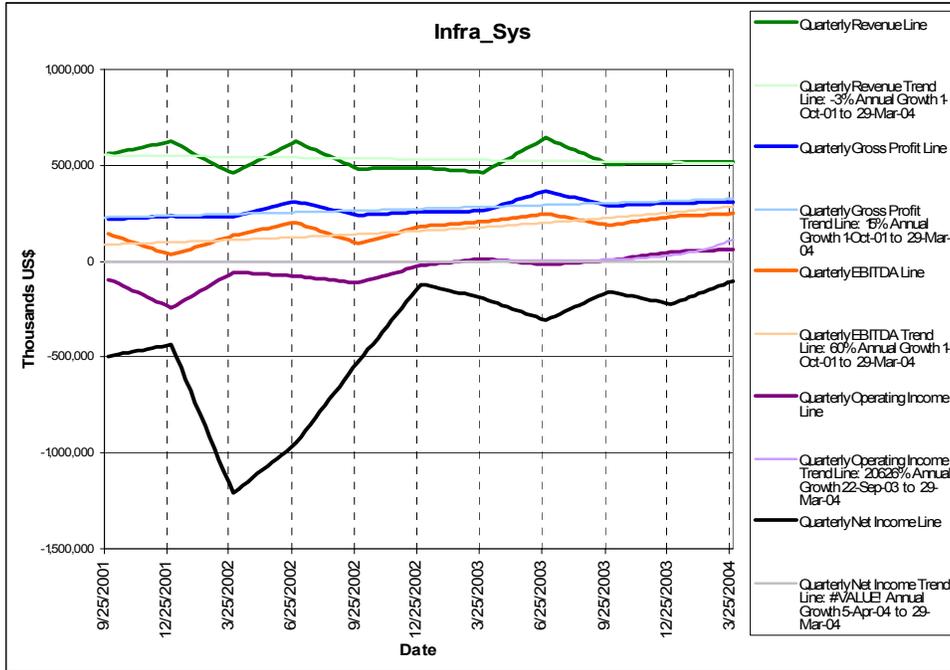
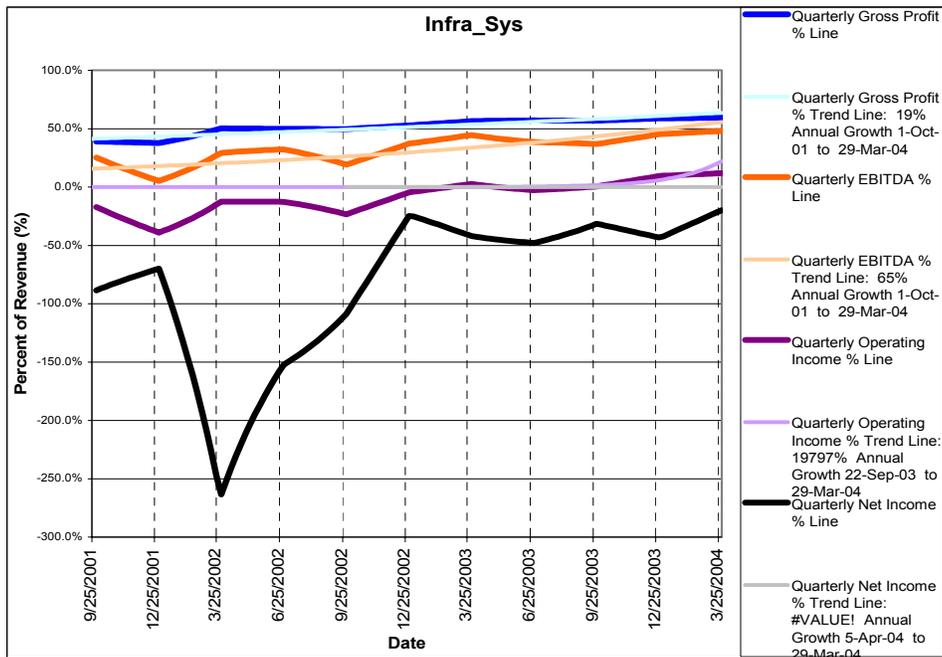


Figure 23: Infrastructure System Service Provider Profit Percent Chart



Infrastructure System Service Provider Sector Cumulative Expenses Profile Charts

Figure 24: Infrastructure System Service Provider Expenses Chart

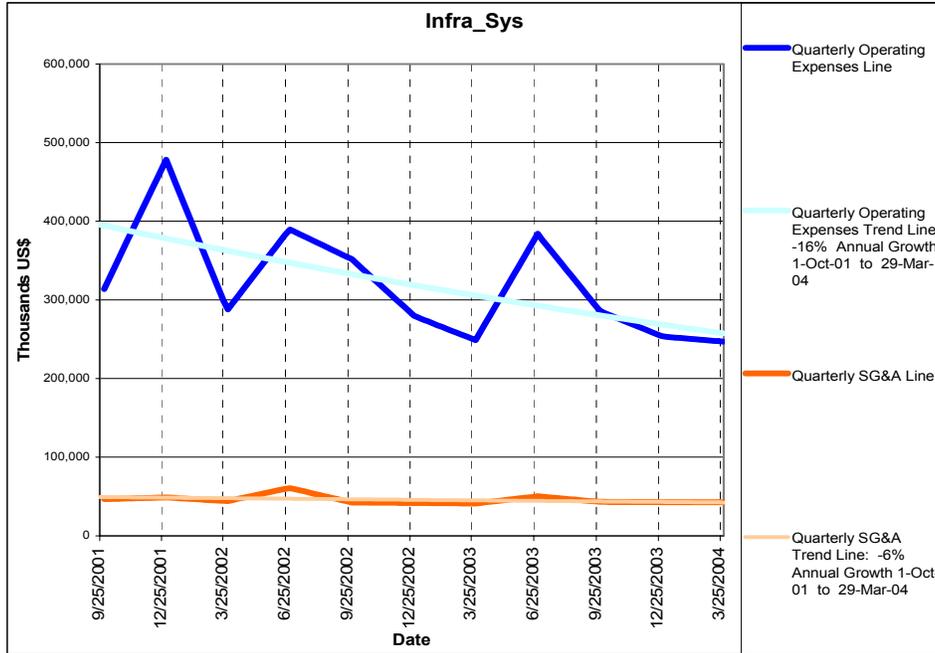
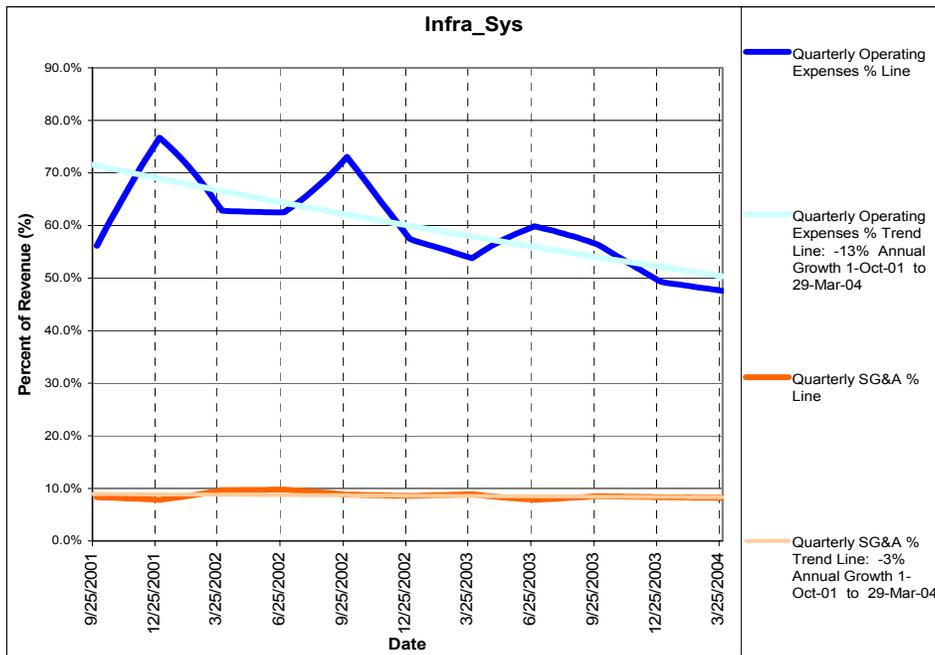
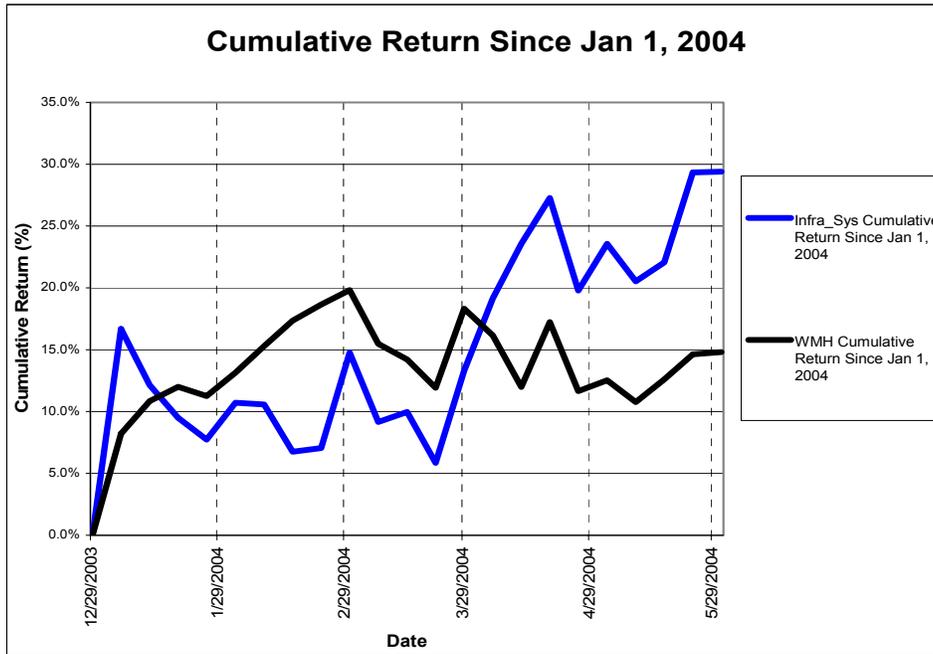


Figure 25: Infrastructure System Service Provider Expenses Percent Chart



Infrastructure System Service Provider Sector Year-to-Date Relative Performance Chart

Figure 26: Infrastructure System Service Provider Cumulative Market Cap YTD Relative Performance



System OEM Sector Profile

System OEM Sector Overview

- The OEM Sector continues to show signs of a maturing industry sub-sector with total revenue leveling off and overall cost and expense reductions providing the main driver for better bottom line results. From a system equipment perspective, the OEMs are coming under pricing pressure from service providers that are pushing to deploy and deliver services at continually lower costs. A similar phenomenon exists in the handset market as volume sales trends continue to shift toward lower priced models driven by the incremental new subscribers' propensity to buy cheaper mobile phones as well as the pursuit of new geographic markets that demand less expensive handsets to drive demand.
- **Sector Characterization:** The OEM Sector consists of the large equipment and handset companies predominately focused on the wireless market, i.e. Ericsson (NASDAQ: ERICY), Motorola (DJIA: MOT) and Nokia (NYSE: NOK). This sector closely represents the OEM & Infrastructure System Provider segment in the Wireless Holders Index, but without the inclusion of Crown Castle International, which makes only a marginal different compared to the combined results of Ericsson, Motorola and Nokia.
- **Revenue Trend:** Sector revenue was \$20.5 billion in the March quarter and exhibits a declining revenue trend of -5%. See Figure 27.
- **Gross Profit Trend:** Sector gross profit reached \$7.8 billion or approximately 38% of revenue and exhibits a trend line growth rate of 3% annually as a result of declining costs of goods sold. In turn, quarterly gross profit as a percentage of revenue exhibits a growth rate of 9% annually. See Figure 27, Figure 28 and Figure 29.
- **Expense Trends:** Total operating expenses were \$5.0 billion or 25% of revenue for the March quarter and exhibited a trend line declining at 17% annually. SG&A was \$2.5 billion, 12% of revenue, declining at a 10% annual rate. R&D for the March quarter was \$2.7 billion or 13% of revenue, declining at a 1% trend line rate. As a percentage of revenue R&D shows a trend line growth rate of 4% annually. Declining expense trends overall are the principle driver of improving operating and net earnings results for companies in this sector. See Figure 29 and Figure 30.
- **Operating & Net Earnings:** Operating income was \$2.8 billion, 14% of revenue and net income was \$2.0 billion or 9.8% of revenue. Both operating and net earnings are improving from loss situations approximately 18 months ago, which makes the calculate trend lines over that period of time somewhat meaningless. Nonetheless, for the last two quarters the operating and net results have been approximately flat. See Figure 27 and Figure 28.
- **Stock Market Relative Performance:** Year-to-date the OEM Sector has realized a 5% return versus the 15% for the Wireless Holders Index. The lower return for the OEM sector was largely drive by Nokia, which announced lower than anticipated quarterly and future results just after the close of the March quarter. See Figure 31.

System OEM Sector Cumulative Revenue & Profit Charts

Figure 27: System OEM Revenue & Profits Chart

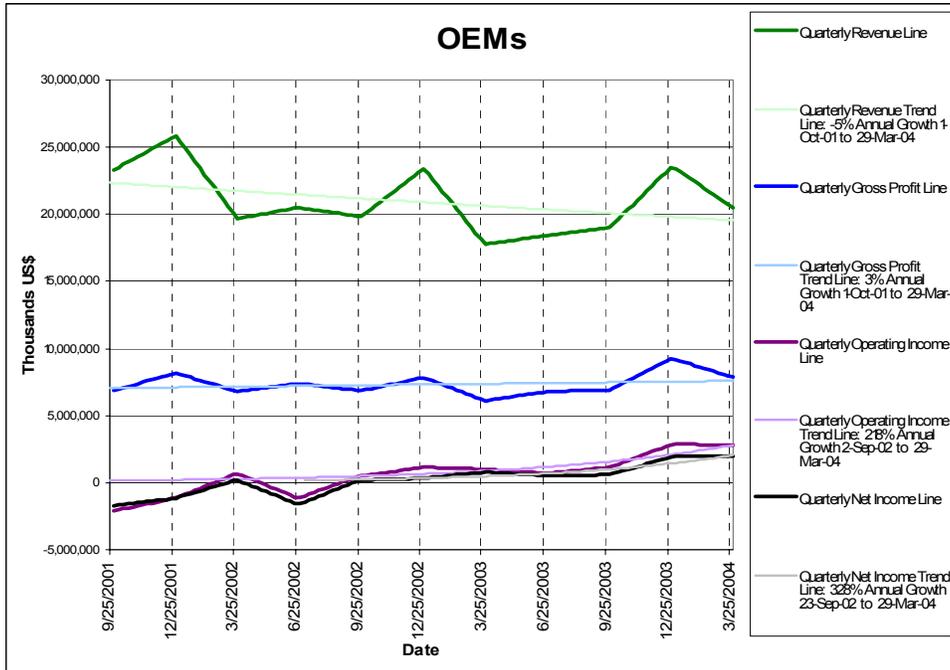
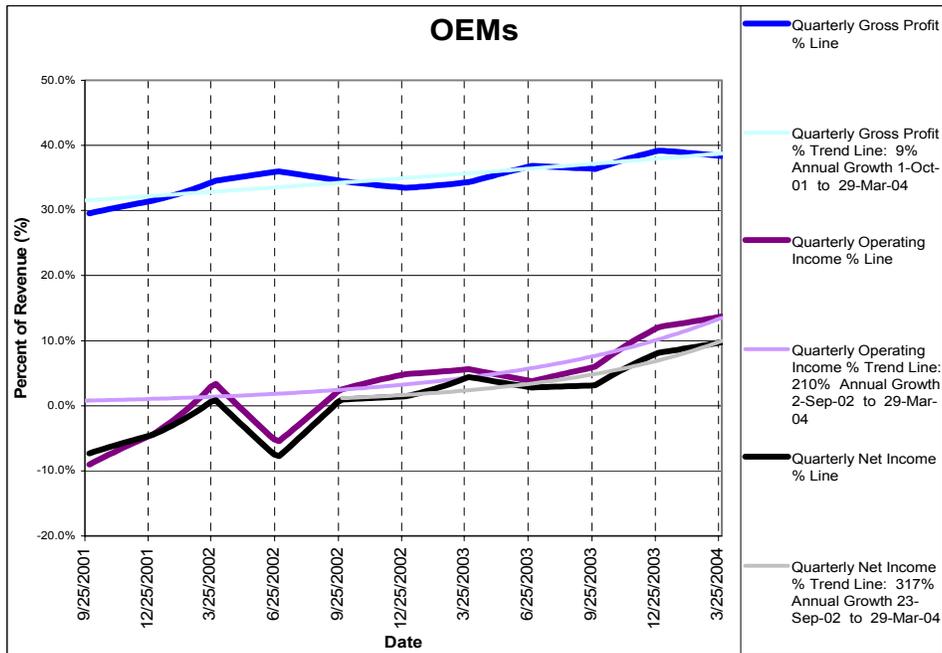


Figure 28: System OEM Profit Percent Chart



System OEM Sector Cumulative Expenses Profile Charts

Figure 29: System OEM Expenses Chart

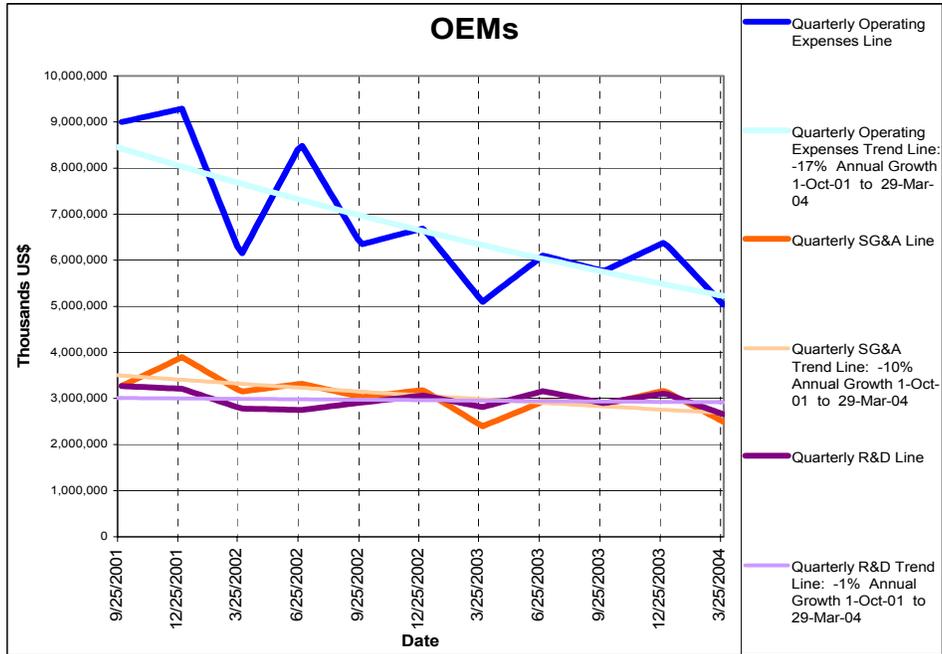
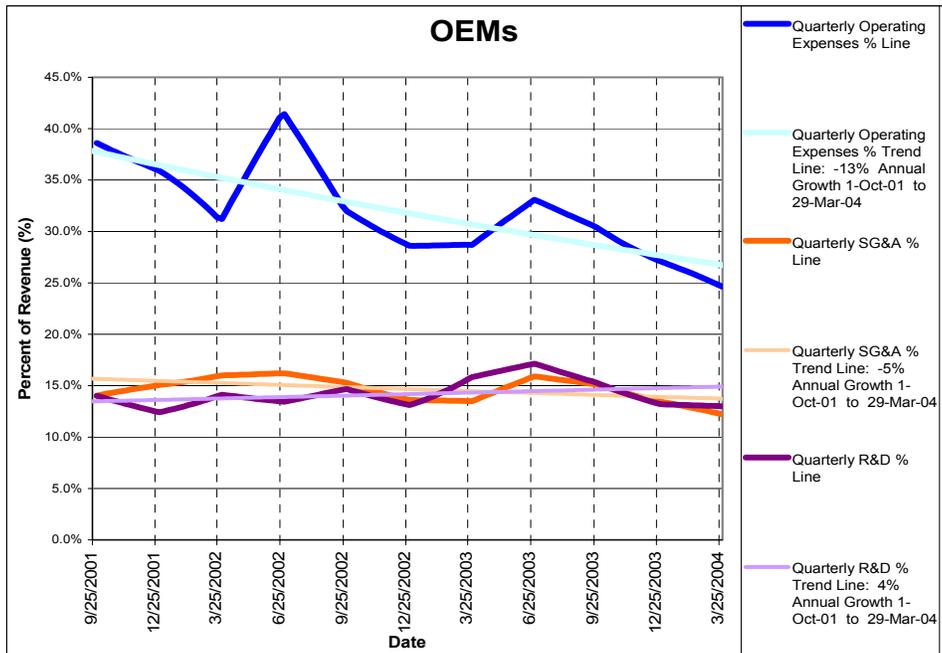
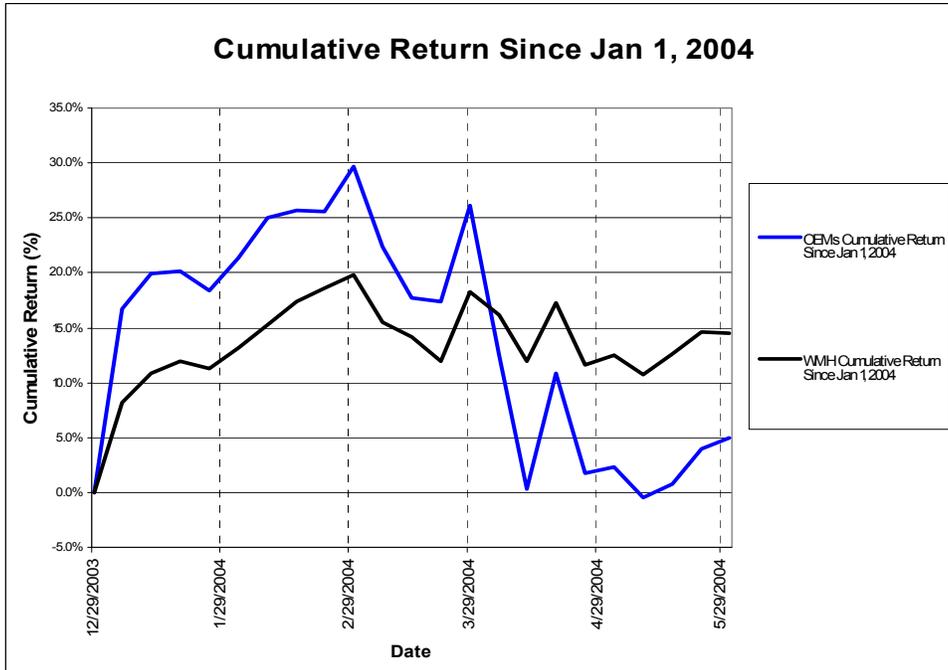


Figure 30: System OEM Expenses Percent Chart



System OEM Sector Year-to-Date Relative Performance Chart

Figure 31: System OEM Cumulative Market Cap YTD Relative Performance



Infrastructure Subsystem Sector Profile

Infrastructure Subsystem Sector Overview

- Overall, the Infrastructure Subsystem Sector is exhibiting some signs of recovery (i.e. revenue growth and some profit growth) from the technology slump of 2002 and 2003. However, on an operating and net basis these companies continue to struggle as lower profit margins and increased expenses negate top line improvements and result in operating and net losses. This sector seems to be in difficult operating environment, striving to develop technologically advanced products needed to remain competitive while experiencing pricing pressure from its OEM and service provider customers.
- **Sector Characterization:** The Infrastructure Subsystem Sector basically consists of the second tier of companies supplying infrastructure equipment to either the OEMs or directly to the service providers. On a revenue and market capitalization basis, this sector is only a fraction of the size of the OEM sector and, as a result, is not represented in the Wireless Holders Index. For this analysis, this sector consists of four companies, Anaren Inc. (NASDAQ: ANEN), Andrew Corporation (NASDAQ: ANDW), Powerwave Technologies (NASDAQ: PWAV) and REMEC, Inc. (NASDAQ: REMC).
- **Revenue Trend:** Sector revenue was \$661 million in the March quarter and exhibits recovering growth trends from essentially flat revenue growth trends through 2001, 2002 and much of 2003. As a result, the revenue trend line established over the last 10 quarters is growing at an annual rate of 20%. See Figure 32.
- **Gross Profit Trend:** Gross profit for the sector increased to \$133 million, or approximately 20% of revenue, for the March quarter and is exhibiting a trend line annual growth rate of 16%. While the increase in gross profit is a positive sign (approximately in-line with revenue growth), as a percentage of revenue, gross profit actually decreased from approximately 22% in the December quarter. Overall, as a percentage of revenue, gross profit exhibits a trend line declining at 4% annually. See Figure 32 and Figure 33.
- **Expense Trends:** Total operating expenses were \$151 million or 23% of revenue and exhibiting a trend line annual growth rate of 16% annually. As a percentage of revenue, total operating expenses exhibit a declining annual growth rate of 4% annually, largely due to the recovering revenue growth since the second half of 2003. SG&A was \$82.3 million, 12% of revenue, with a trend line annual growth rate of 12% on an aggregate basis but declining 7% annually as a percentage of revenue. R&D for the March quarter was \$52.7 million or 8% of revenue, increasing at a 33% trend line rate. As a percentage of revenue R&D shows a trend line growth rate of 10% annually. See Figure 34 and Figure 35.
- **Operating & Net Earnings:** Positive operating and net earnings have been largely nonexistent for this sector overall. For the March quarter the sector had an operating income loss of \$13.8 million and a net income loss of \$24.2 million. See Figure 34.
- **Stock Market Relative Performance:** Year-to-date the Infrastructure Subsystem sector has realized a 48% return versus 15% for the Wireless Holders Index, largely due to early 2004 stock price recovery driven by revenue growth. See Figure 36.

Infrastructure Subsystem Sector Cumulative Revenue & Profit Charts

Figure 32: Infrastructure Subsystem Revenue & Profits Chart

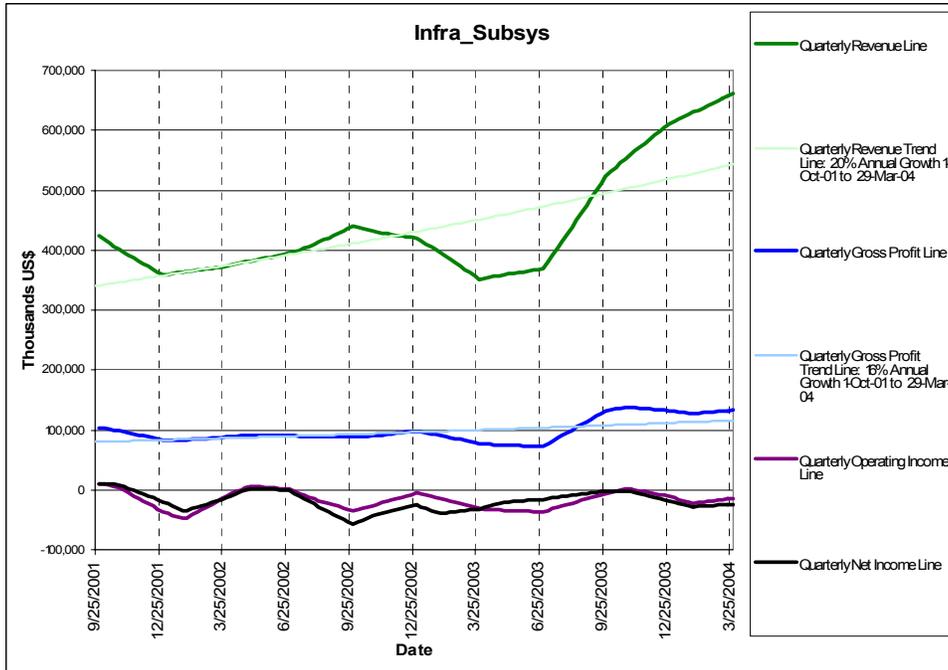
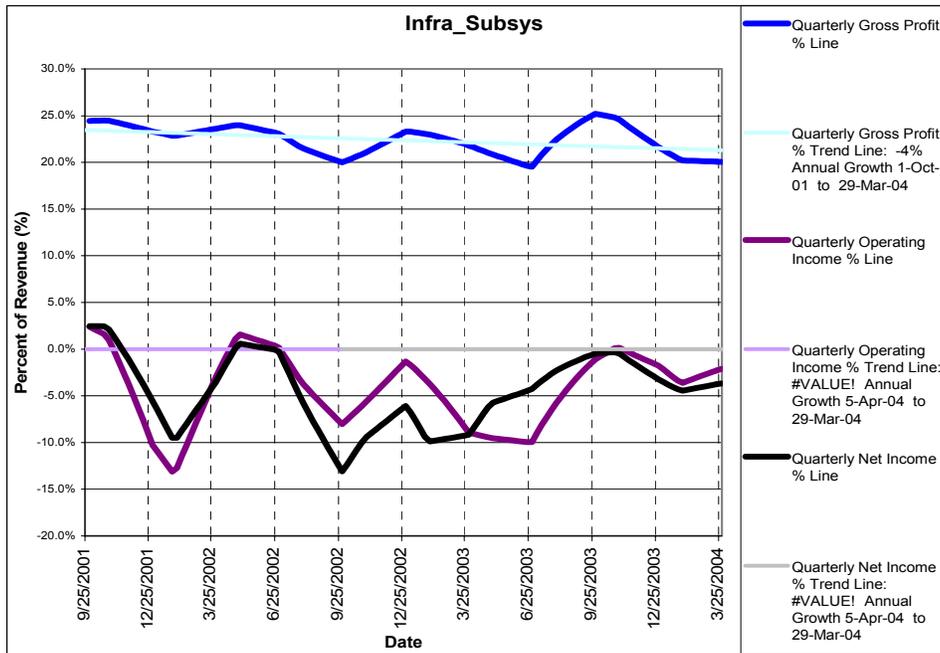


Figure 33: Infrastructure Subsystem Profit Percent Chart



Infrastructure Subsystem Sector Cumulative Expenses Profile Charts

Figure 34: Infrastructure Subsystem Expenses Chart

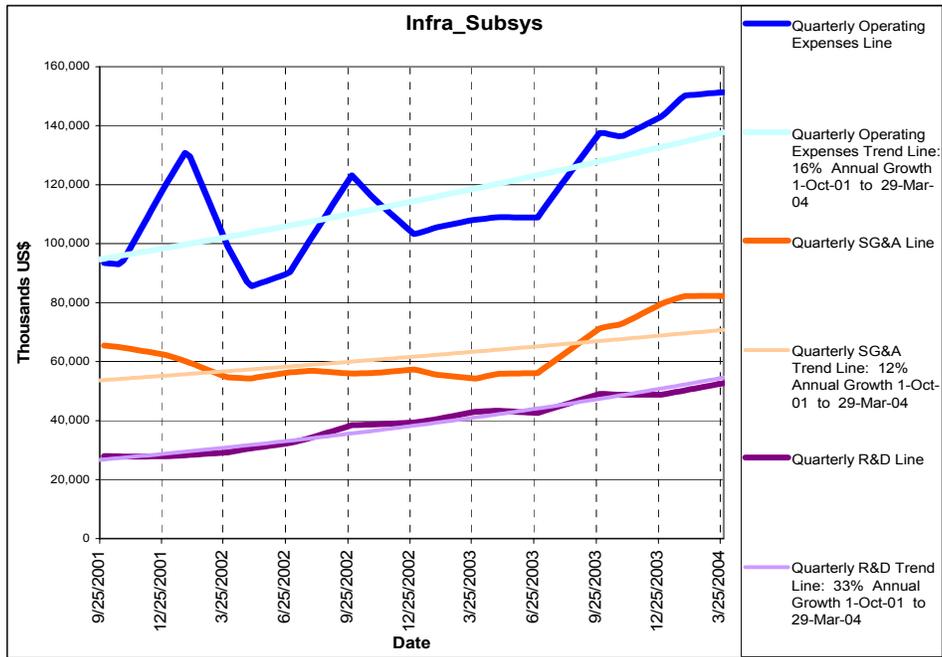
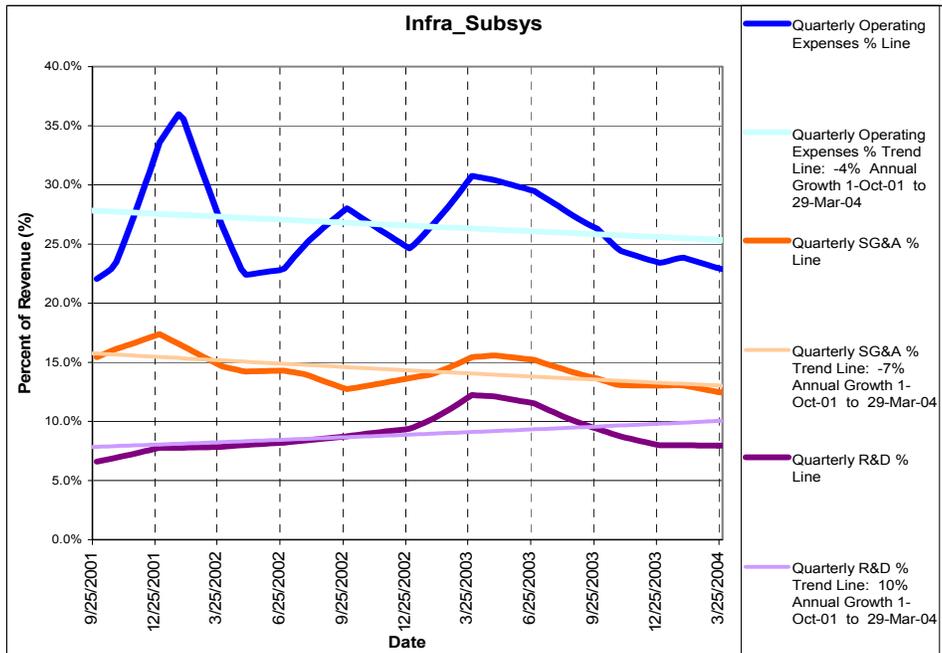
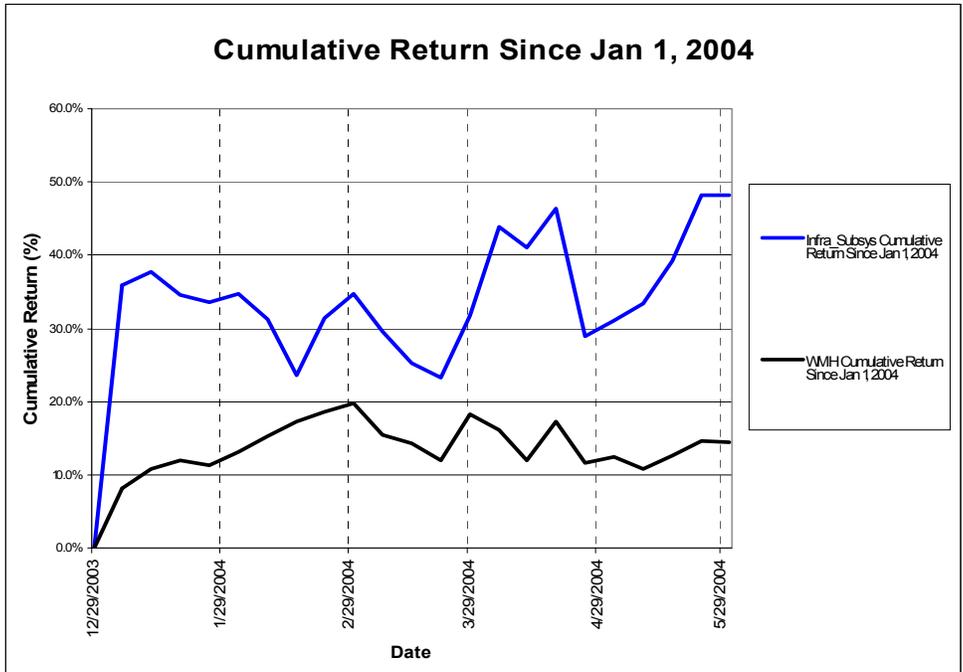


Figure 35: Infrastructure Subsystem Expenses Percent Chart



Infrastructure Subsystem Sector Year-to-Date Relative Performance Chart

Figure 36: Infrastructure Subsystem Cumulative Market Cap YTD Relative Performance



Broadband Wireless Equipment Provider Sector Profile

Broadband Wireless Equipment Provider Sector Overview

- Overall, the Broadband Wireless segment continues to struggle with stagnant revenue growth and expense cuts, which will “right-size” the businesses in-line with the addressable market opportunities, in order to produce positive operating and net results. This sector in general has continued to suffer by providing technological solutions with cost dynamics that are too high relative to what is need by the market (i.e. communication service providers potentially utilizing wireless) in order to be successful. As a result, pricing pressure has resulted in muted revenue growth and poor profitability dynamics.
- **Sector Characterization:** The Broadband Wireless segment consists of companies focused on providing high data rate communications technology and equipment typically into fixed (point-to-point or point-to-multipoint) or satellite communication deployments. Like the Infrastructure Subsystem sector, the Broadband Wireless sector is not represented in the Wireless Holders Index. This analysis includes the results of Alvarion LTD. (NASDAQ: ALVR), Airspan Netowrks (NASDAQ: ARIN), California Amplifier (NASDAQ: CAMP), Ceragon Networks (NASDAQ: CRNT), Proxim Corporation (NASDAQ: PROX), S.R. Telecom (NASDAQ: SRXA) and Stratex Networks (NASDAQ: STXN).
- **Revenue Trend:** Sector revenue was \$210 million in the March quarter, exhibiting a trend line annual growth rate of just 2%. Revenue growth overall, has been largely nonexistent in this sector over the last 10 quarters, as cumulative revenue for the seven competitors included in this analysis has been flat at approximately \$200 million. See Figure 37.
- **Gross Profit Trend:** Gross profit for the sector show similar trends as revenue and was \$64 million, or approximately 30% of revenue, for the March quarter and is exhibiting a trend line declining at a 1% annual rate. As a percentage of revenue, gross profit exhibits trend line declining at 3% annually. See Figure 32 and Figure 33.
- **Expense Trends:** Total operating expenses were \$111 million or 52.8% of revenue and are exhibiting a declining trend line annual rate of 19% annually. As a percentage of revenue, total operating expenses exhibit a declining annual growth rate of 20% annually. SG&A was \$62.8 million, 30% of revenue, exhibiting a trend line declining 6% annually on an aggregate basis and declining 7% annually as a percentage of revenue. R&D for the March quarter was \$31.4 million or 14.9% of revenue, increasing at a 2% trend line rate. As a percentage of revenue, R&D shows a trend line growth rate of 1% annually. See Figure 39 and Figure 40.
- **Operating & Net Earnings:** Over the pervious 10 quarters of this analysis, the Broadband Wireless sector cumulatively has not posted positive operating or net earnings. For the March quarter, operating income was a loss of \$47.0 million and net income was a loss of \$50.8 million. See Figure 37.
- **Stock Market Relative Performance:** While the Broadband wireless sector performed approximately in-line with the Wireless Holders through the end March, the lack of material improvements in top and bottom line results for this sector as resulted in a cumulative negative return of 7% relative to the positive 15% return for the WMH index year-to-date. See Figure 41.

Broadband Wireless Equipment Provider Sector Cumulative Revenue & Profit Charts

Figure 37: Broadband Wireless Equipment Provider Revenue & Profits Chart

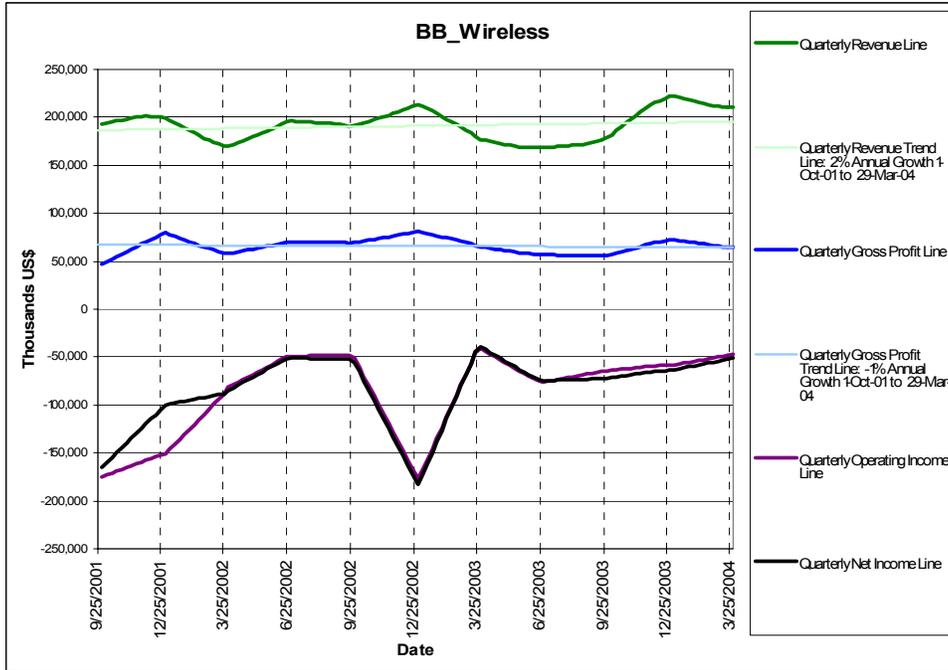
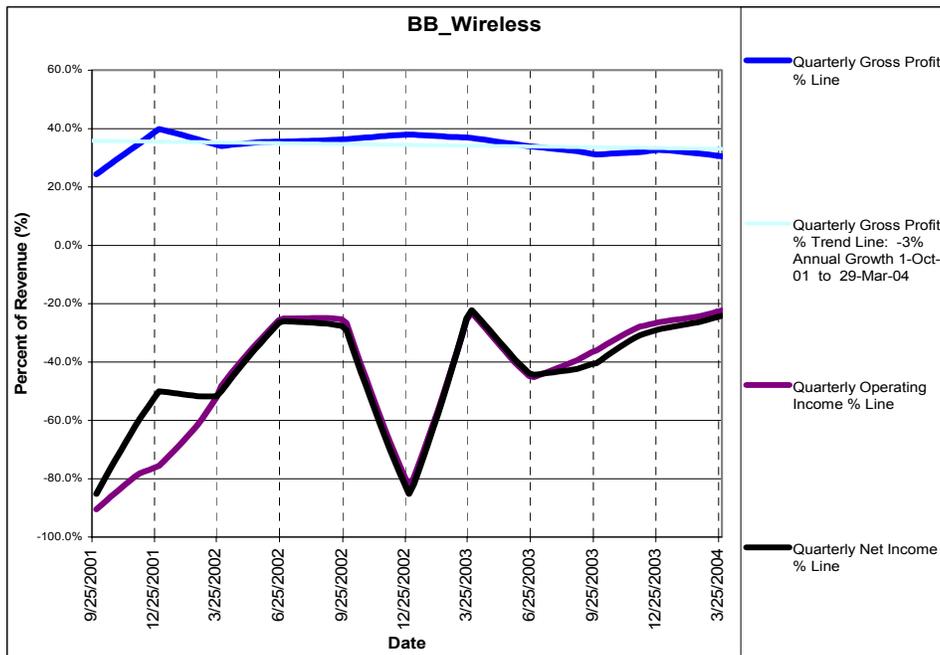


Figure 38: Broadband Wireless Equipment Provider Profit Percent Chart



Broadband Wireless Equipment Provider Sector Cumulative Expenses Profile Charts

Figure 39: Broadband Wireless Equipment Provider Expenses Chart

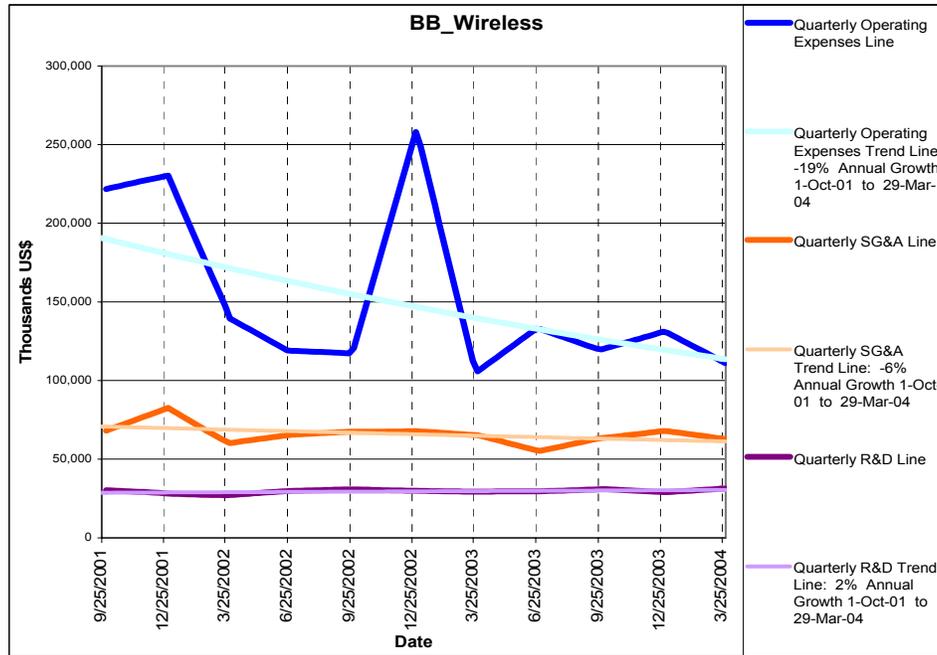
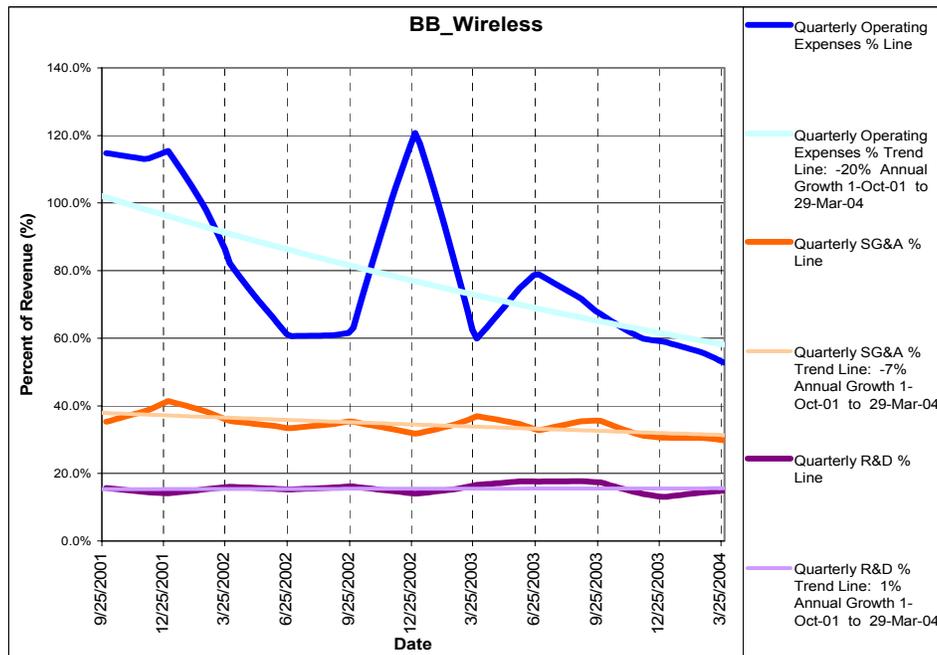
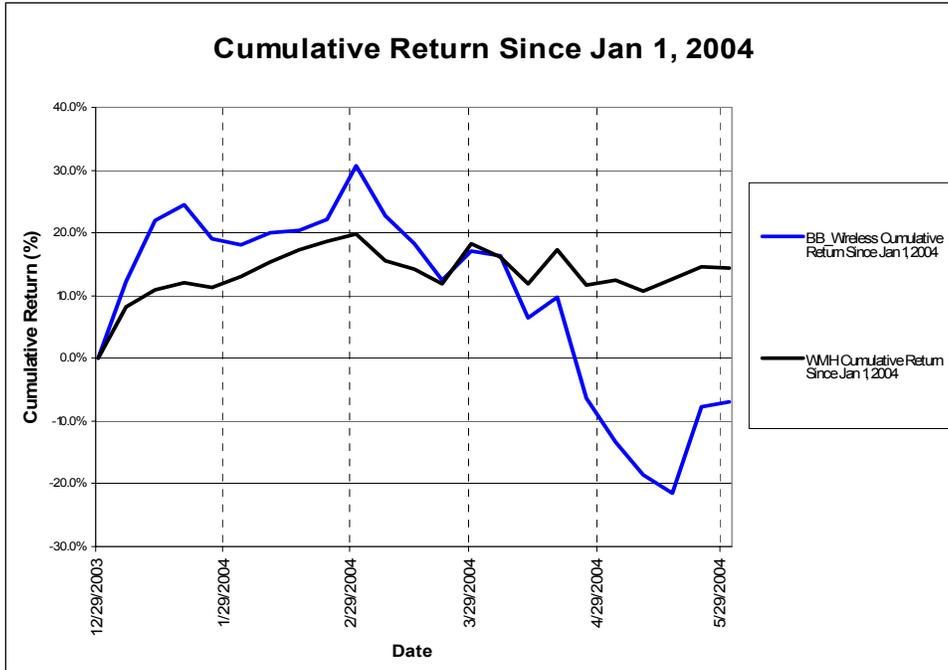


Figure 40: Broadband Wireless Equipment Provider Expenses Percent Chart



Broadband Wireless Equipment Provider Sector Year-to-Date Relative Performance Chart

Figure 41: Broadband Wireless Equipment Provider Cumulative Market Cap YTD Relative Performance



Wireless Product and Solution Provider Sector Profile

Wireless Product and Solution Provider Sector Overview

- Overall, the Wireless Product and Solution Provider Sector has weathered the tech downturn better than most other wireless sectors. Through the technology downturn since 2001, these companies have focused on adjusting expenses to be in-line with business opportunities while also maintaining revenue growth. As a result, positive operating and net earnings are materializing for nearly every company in this group. This, in turn, is driving better market capitalization growth for this sector as compared to other wireless sectors.
- **Sector Characterization:** The Product and Solution Provider Sector consists of what can be a fairly diverse set of companies that provide a variety of products, services and solutions such as stand-alone wireless products, application specific system integration solutions, peripheral products to wireless services, etc. This analysis aggregates the results from six companies, Aether Systems (NASDAQ: AETH), At Road Inc. (NASDAQ: ARDI), Novatel Wireless (NASDAQ: NVTL), Research in Motion (NASDAQ: RIMM), Sierra Wireless (NASDAQ: SWIR) and Wavocom S.A. (NASDAQ: WVCM). The Wireless Holders Fund included two of these companies, Aether Systems and Research in Motion. However, these two companies alone are not representative of the industry sector as the results are highly dominated by Research in Motion.
- **Revenue Trend:** Sector revenue was \$357 million in the March quarter, exhibiting a trend line annual growth rate of 10%. See Figure 42.
- **Gross Profit Trend:** Gross profit for the sector was \$156 million, or approximately 44% of revenue, for the March quarter and is exhibiting a trend line annual growth rate of 51%. As a percentage of revenue, gross profit exhibits a trend line annual growth rate of 37%. See Figure 43 and Figure 44.
- **Expense Trends:** Total operating expenses were \$131 million or 37% of revenue and are exhibiting a declining trend line annual rate of 20% annually. As a percentage of revenue, total operating expenses exhibit a declining annual growth rate of 27% annually. SG&A was \$64.8 million, 18% of revenue, exhibiting a trend line declining 7% annually on an aggregate basis and declining 16% annually as a percentage of revenue. R&D for the March quarter was \$46.1 million or 13% of revenue, declining at a 6% annual trend line rate. As a percentage of revenue, R&D shows a trend line rate declining at 15% annually. See Figure 44 and Figure 45.
- **Operating & Net Earnings:** Like many sectors that emerged over the last five plus years, this sector has historically been focused on market penetration and revenue growth as opposed to operating and net earnings. However, better operating and net results have materialized over the last two quarters, in particular, as these companies have reduced expenses to be in-line with the overall business opportunities. For the March quarter, operating income was \$24.3 million (7% of revenue) and net income was \$56.6 million (16% of revenue), with net income exceeding operating income due to restructurings (i.e. special gains on sale of assets) and tax rebates due to previous quarterly losses. See Figure 42 and Figure 43.
- **Stock Market Relative Performance:** The improving bottom line performance of companies in this sector has driven a substantial out-performance relative to the Wireless Holders. Year-to-date the Product and Solution Provider Sector has experienced a 54% market cap increase as compared to the 15% Wireless Holders Index return. See Figure 46.

Product & Solution Provider Sector Cumulative Revenue & Profit Charts

Figure 42: Product & Solution Provider Revenue & Profits Chart

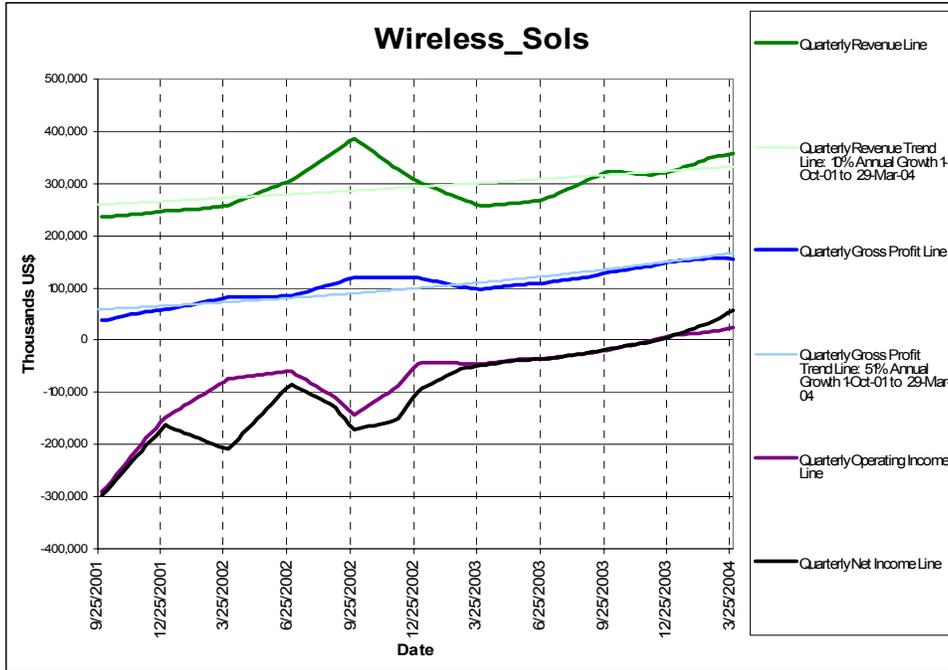
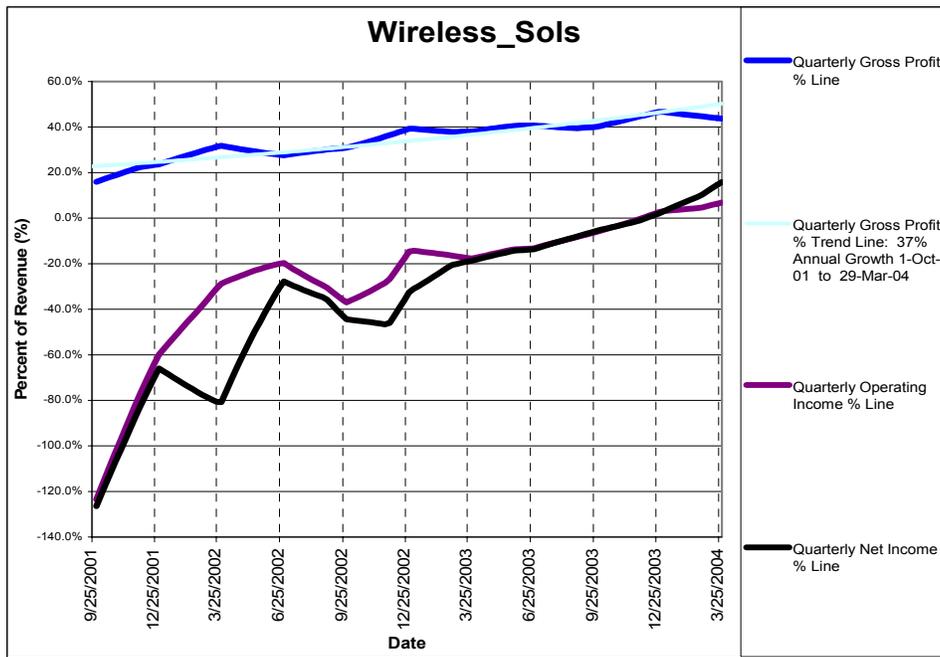


Figure 43: Product & Solution Provider Profit Percent Chart



Product & Solution Provider Sector Cumulative Expenses Profile Charts

Figure 44: Product & Solution Provider Expenses Chart

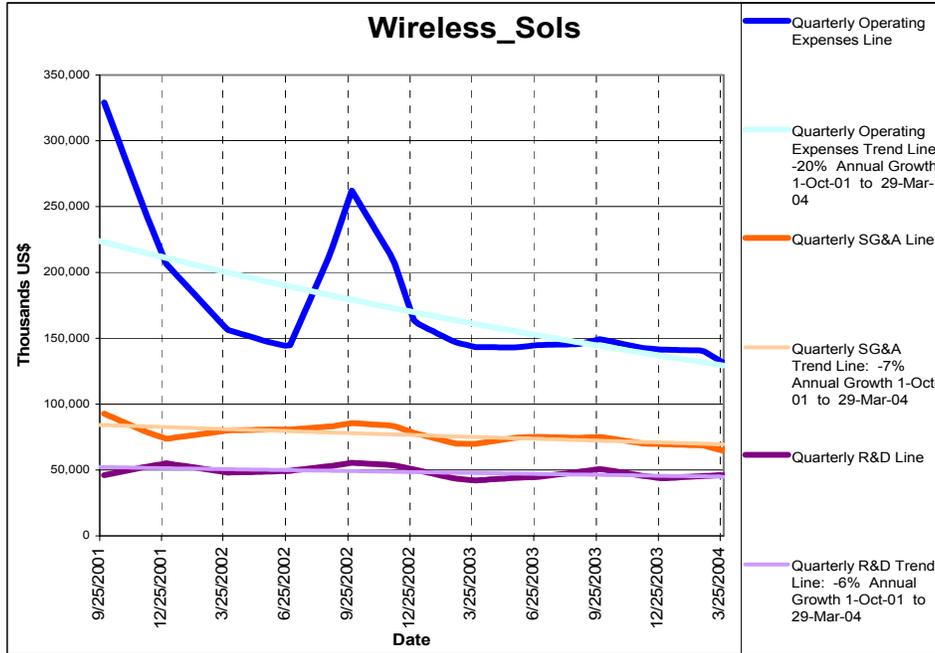
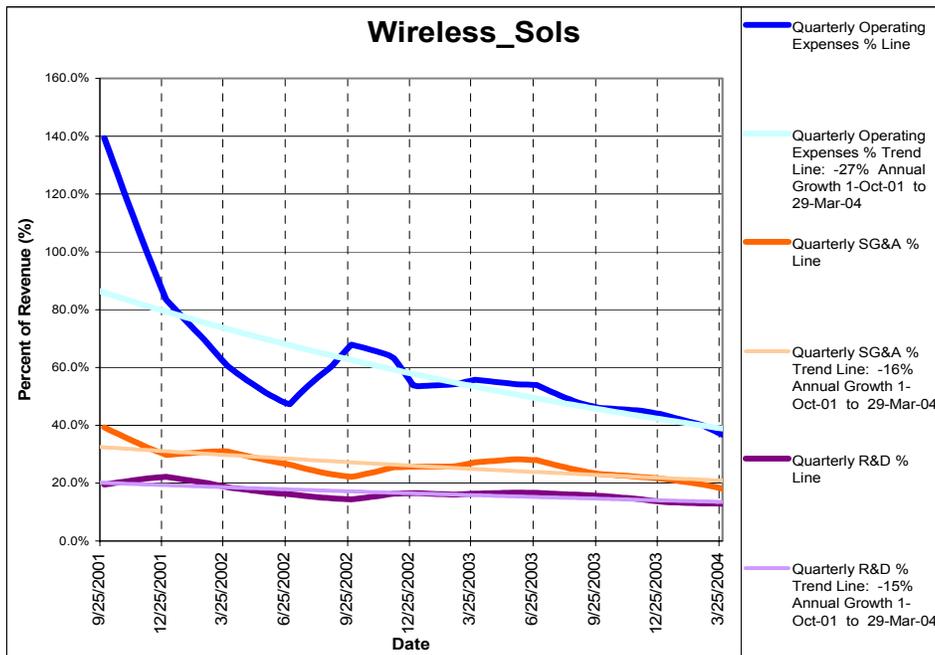
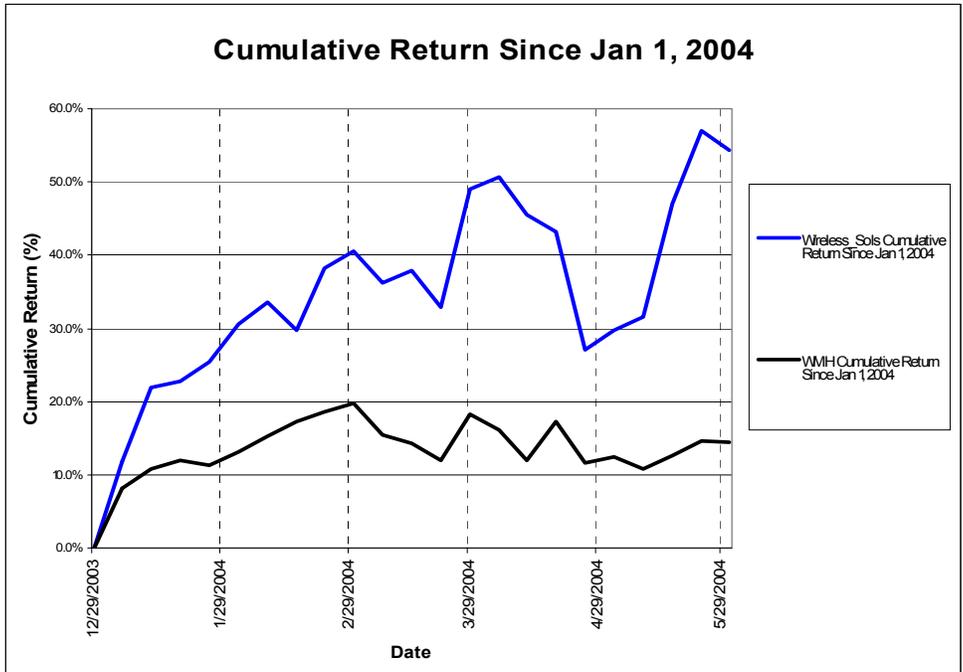


Figure 45: Product & Solution Provider Expenses Percent Chart



Product & Solution Provider Sector Year-to-Date Relative Performance Chart

Figure 46: Product & Solution Provider Cumulative Market Cap YTD Relative Performance



Mobile and Wireless Software Sector Profile

Mobile and Wireless Software Sector Overview

- Overall, the Mobile and Wireless Software Sector, as represented by the niche companies included in this analysis, has struggled to produce revenue growth or positive net earnings over the last 10 quarters. While the software oriented business models produce high gross margins (the highest gross margins of any wireless sector), high overall expenses negate that gross profit and result in negative operating and net results. Lack of positive bottom line results has, in turn, resulted in an underperformance of this sector relative to the overall industry.
- **Sector Characterization:** The Wireless and Mobile Software Sector is a niche segment of the wireless industry consisting of a smaller group of companies that are focused exclusively on mobile and wireless software. Certainly, the sector overall is much larger when the mobile and wireless initiatives from traditional software suppliers are included. But to isolate the sector dynamics, this analysis includes the results from three companies focused on this segment whose market capitalizations are over \$100 million, Openwave Systems (NASDAQ: OPWV), PalmSource (NASDAQ: PSRC) and Intellisync Corporation (NASDAQ: SYNC).
- **Revenue Trend:** Sector revenue was \$82 million in the March quarter, essentially flat over the last 10 quarters at approximately \$100 million, and exhibiting a trend line annual growth rate of just 1%. See Figure 47.
- **Gross Profit Trend:** Gross profit for the sector was \$82 million, or approximately 78% of revenue, for the March quarter and, like revenue, is also essentially flat over the last 10 quarters. See Figure 47 and Figure 48.
- **Expense Trends:** Total operating expenses were \$90 million or 86% of revenue and are exhibiting a declining trend line rate of 56% annually as the sector adjusts expenses to be better in-line with the business opportunity to eventually produce positive net results. As a percentage of revenue, total operating expenses exhibit a declining annual growth rate of 57%. SG&A was \$50 million, 47% of revenue, exhibiting a trend line declining 13% annually on an aggregate basis and declining 14% annually as a percentage of revenue. R&D for the March quarter was \$35 million or 33% of revenue, declining at a 3% annual trend line rate. As a percentage of revenue, R&D shows a trend line rate declining at 4% annually. See Figure 49 and Figure 50.
- **Operating & Net Earnings:** While operating and net results are improving for this sector, largely due to overall expense reductions, companies in this sector are generally still not producing positive operating and net earnings. For the March quarter, the sector showed a operating income loss of \$8 million and a net income was \$9 million. See Figure 47 and Figure 48.
- **Stock Market Relative Performance:** The continued lack of positive bottom line results for companies in this sector has resulted in a substantial underperformance relative to the Wireless Holders. Year-to-date the Mobile and Wireless Software Sector has experienced only a 2% market cap increase as compared to the 15% Wireless Holders Index return. See Figure 51.

Wireless Software Sector Cumulative Revenue & Profit Charts

Figure 47: Wireless Software Sector Revenue & Profits Chart

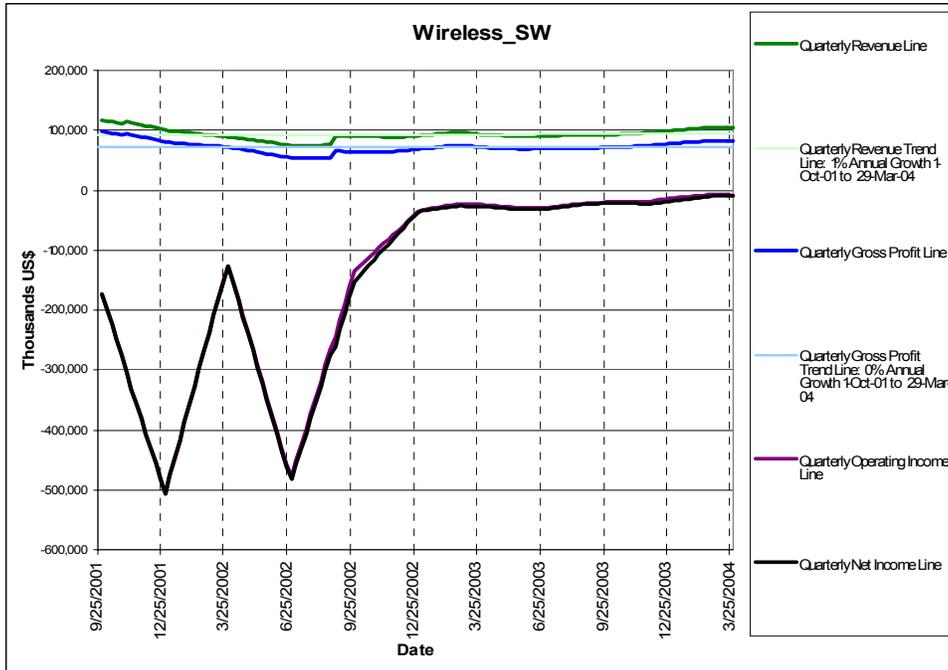
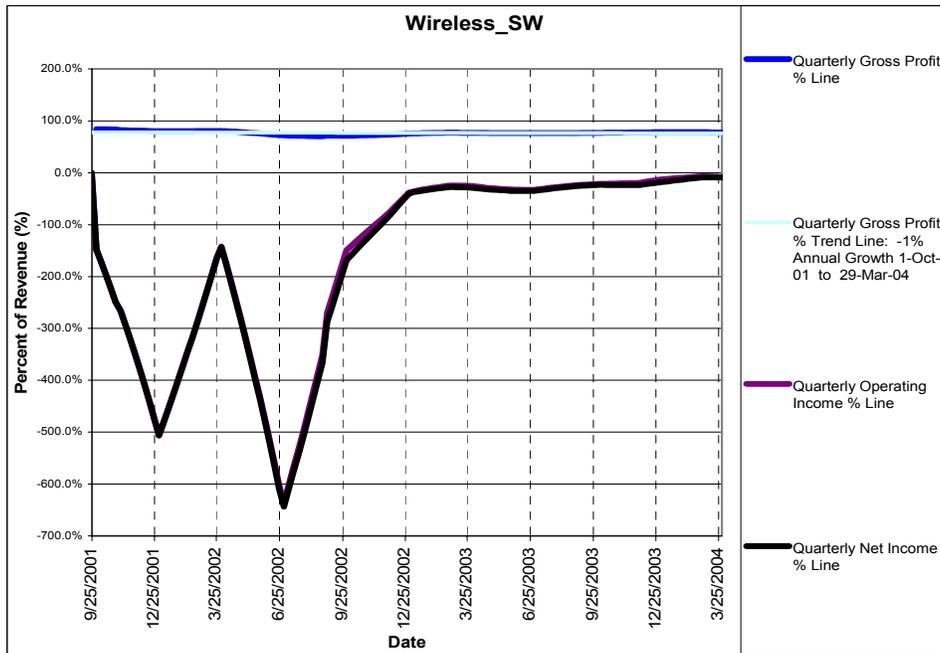


Figure 48: Wireless Software Sector Profit Percent Chart



Wireless Software Sector Cumulative Expenses Profile Charts

Figure 49: Wireless Software Sector Expenses Chart

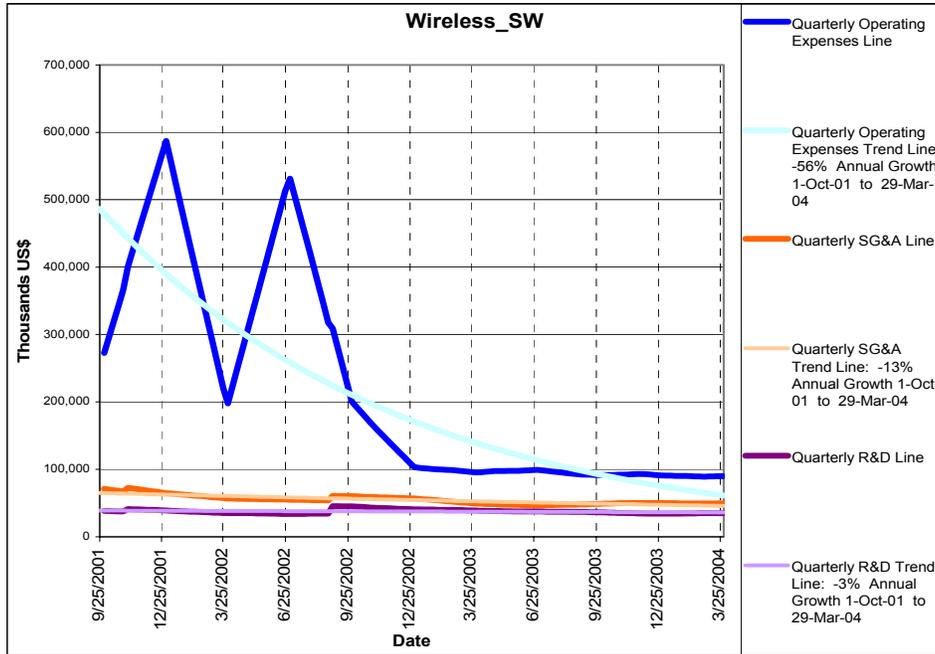
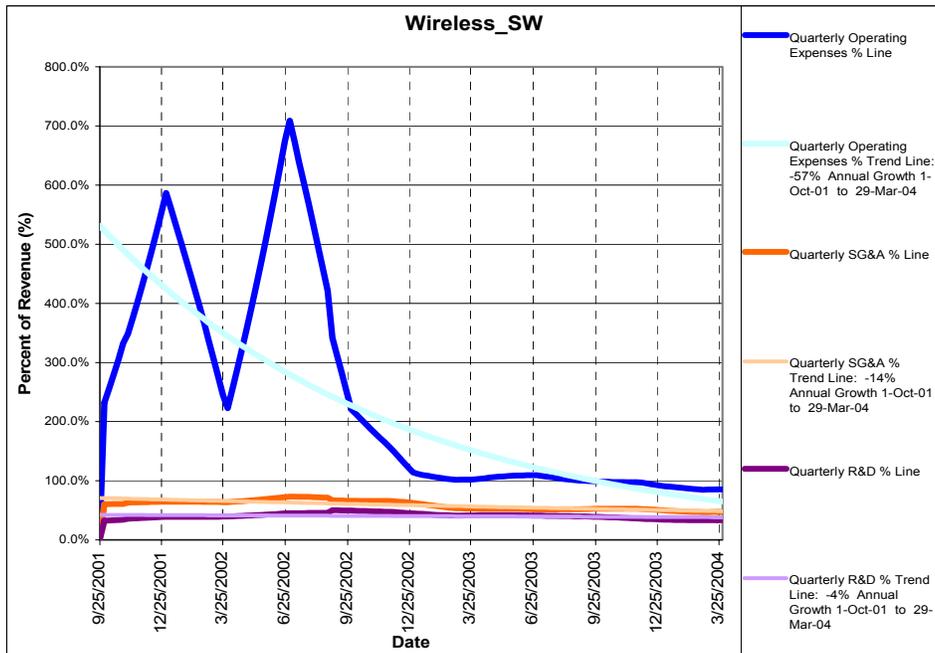
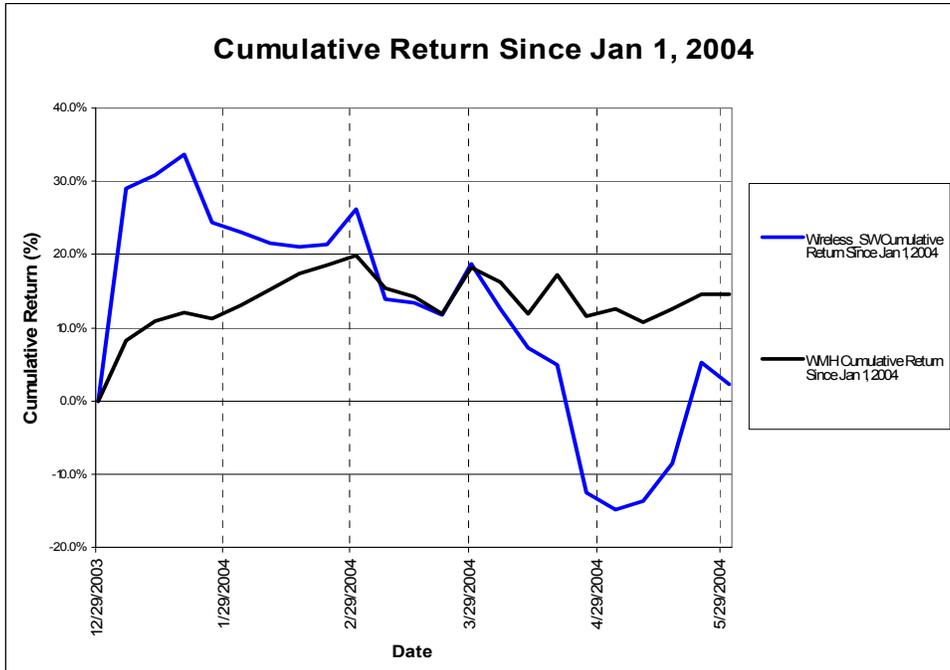


Figure 50: Wireless Software Sector Expenses Percent Chart



Wireless Software Sector Year-to-Date Relative Performance Chart

Figure 51: Wireless Software Sector Cumulative Market Cap YTD Relative Performance



Technology and Integrated Circuit Sector Profile

Technology and Integrated Circuit Sector Overview

- Overall, the Technology and Integrated Circuit Sector continues to be one of the better performing wireless sectors over the last 10 quarters with substantial growth in revenue, gross margin and bottom line profitability. As a result, this sector has outperformed the broader industry as represented by the Wireless Holders Index.
- **Sector Characterization:** The Technology and Integrated Circuit Sector consists of companies that derive the majority of their revenue from the sale of and / or the licensing of core technology and integrated circuits. The Moeller Ventures Wireless Universe aggregates the results from nine different companies, ANADIGICS (NASDAQ: ANAD), InterDigital Communications (NASDAQ: IDCC), Qualcomm (NASDAQ: QCOM), RF Micro Devices (NASDAQ: RFMD), Silicon Laboratories (NASDAQ: SLAB), Sirenza Microdevices (NASDAQ: SMDI), Skyworks Solutions (NASDAQ: SWKS), TriQuint Semiconductor (NASDAQ: TQNT) and WJ Communications (NASDAQ: WJCI) (represented Figure 52 through Figure 56). The Wireless Holders Fund Technology and IC Sector includes three of this companies, Qualcomm, RF Micro Devices and S.R. Telecom (from the broadband wireless sector). In the sector of these three, Qualcomm completely dominates the results. In the larger grouping of nine companies, Qualcomm's results are less of a dominate factors, and thus represent the broader sector dynamics.
- **Revenue Trend:** Sector revenue was \$1.8 billion in the March quarter and is exhibiting a trend line annual growth rate of 30%. See Figure 52.
- **Gross Profit Trend:** Gross profit for the sector was \$1.1 billion, or approximately 62% of revenue, for the March quarter. On an aggregate basis gross profits exhibit a trend line annual growth rate of 36%. As a percentage of revenue gross profit percent exhibits a trend line annual growth rate of 4%. See Figure 52 and Figure 53.
- **Expense Trends:** Total operating expenses were \$884 million or 48% of revenue and are exhibiting a trend line annual growth rate of 7%. As a percentage of revenue, total operating expenses exhibit a declining growth rate of 18% annually. SG&A was \$223 million, 12% of revenue, exhibiting a trend line annual growth rate of 14% on an aggregate basis and declining 12% annually as a percentage of revenue. R&D for the March quarter was \$301 million or 16% of revenue, growing at a 17% annual trend line rate. As a percentage of revenue, R&D shows a trend line rate declining at 10% annually. See Figure 54 and Figure 55.
- **Operating & Net Earnings:** Operating and net results are improving quite substantially for this sector from loss situations experienced in 2001 and 2002. For the March quarter, the sector posted operating income of \$595 million (32% of revenue) and net income of \$495 million (27% of revenue). The trend line growth rates are somewhat over exaggerated due to the recovering nature of operating and net results over the last four to six quarters, but nonetheless indicate the positive rebound in bottom line results. See Figure 52 and Figure 53.
- **Stock Market Relative Performance:** As a result of the rebound in bottom line results for companies in this sector, the cumulative market capitalization of these companies has outperformed the Wireless Holders with a year-to-date return of 21% versus 15% for the Wireless Holders. See Figure 56.

Technology and Integrated Circuit Sector Cumulative Revenue & Profit Charts

Figure 52: Technology and Integrated Circuit Sector Revenue & Profits Chart

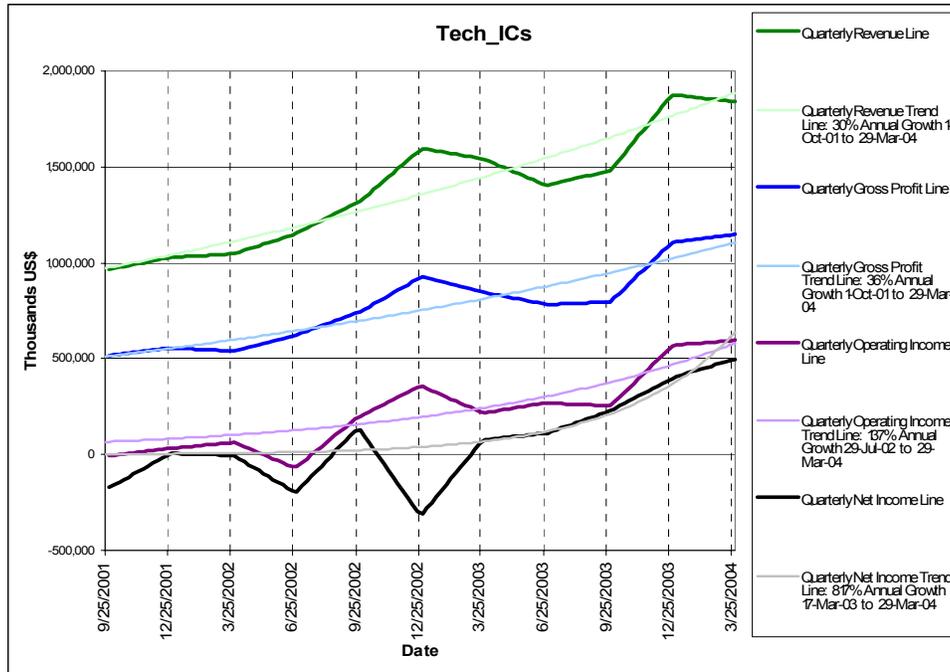
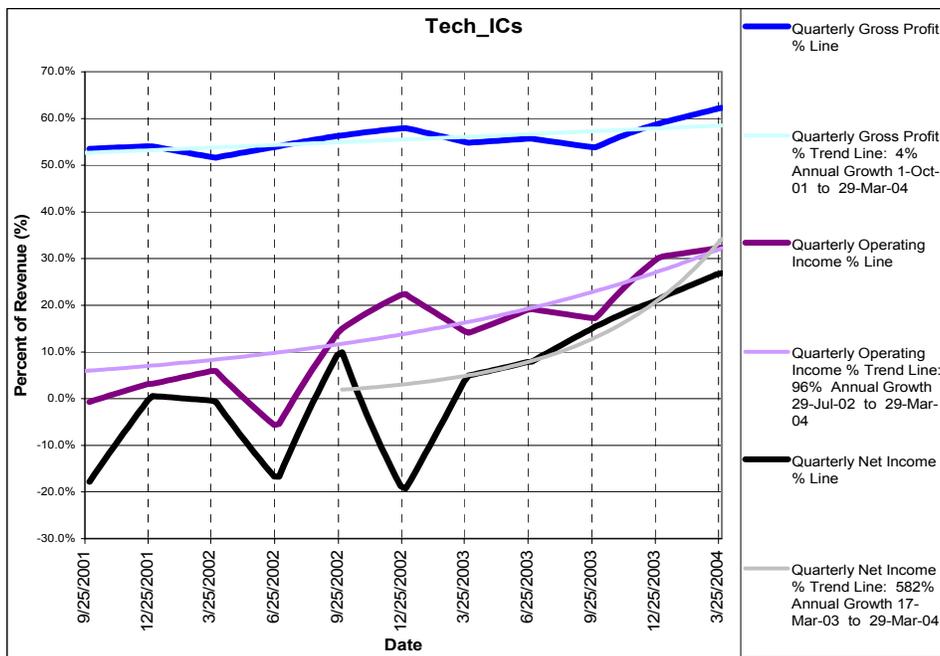


Figure 53: Technology and Integrated Circuit Sector Profit Percent Chart



Technology and Integrated Circuit Sector Cumulative Expenses Profile Charts

Figure 54: Technology and Integrated Circuit Sector Expenses Chart

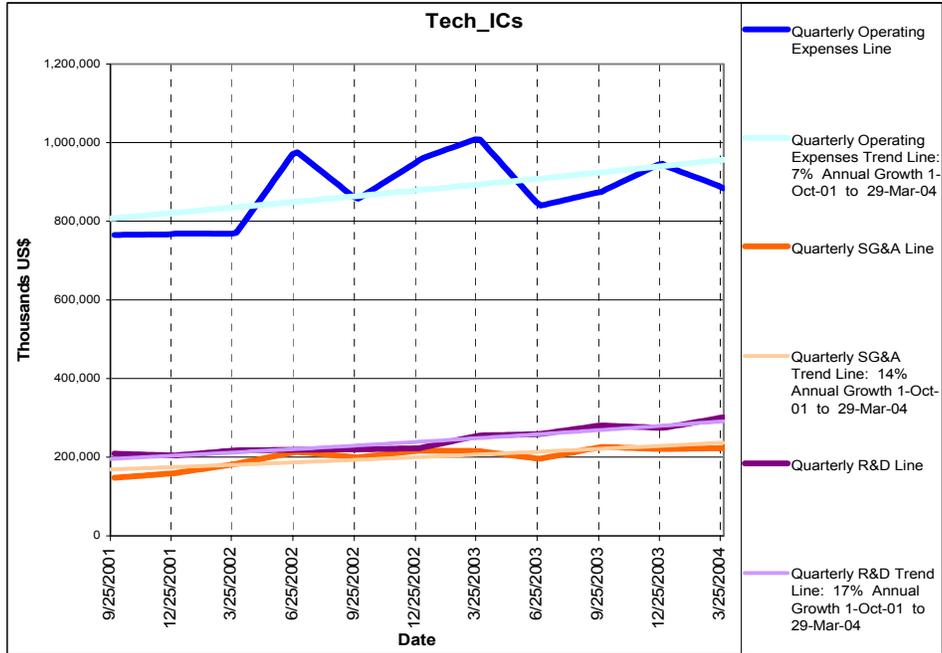
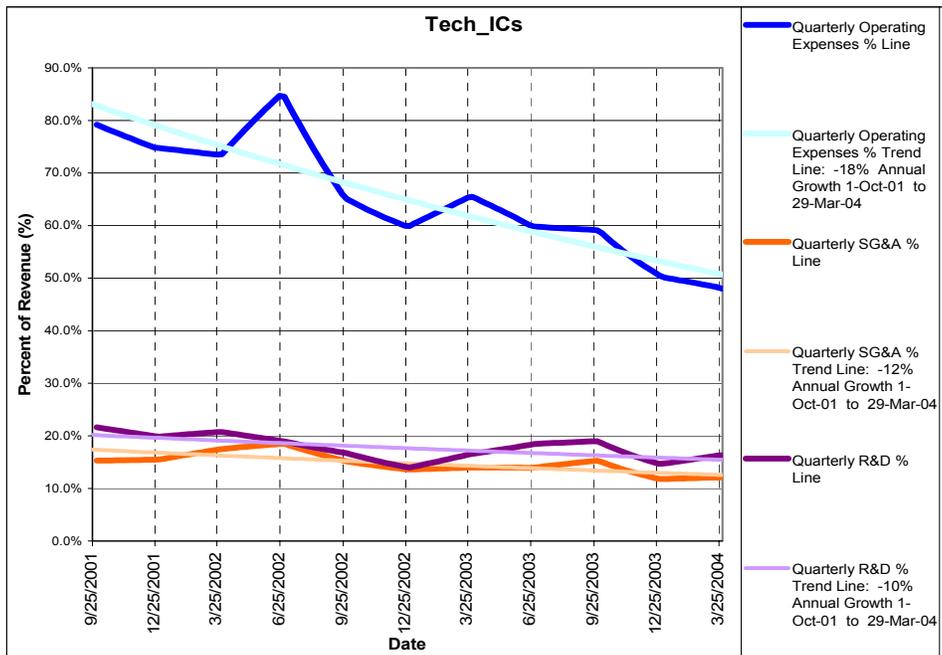
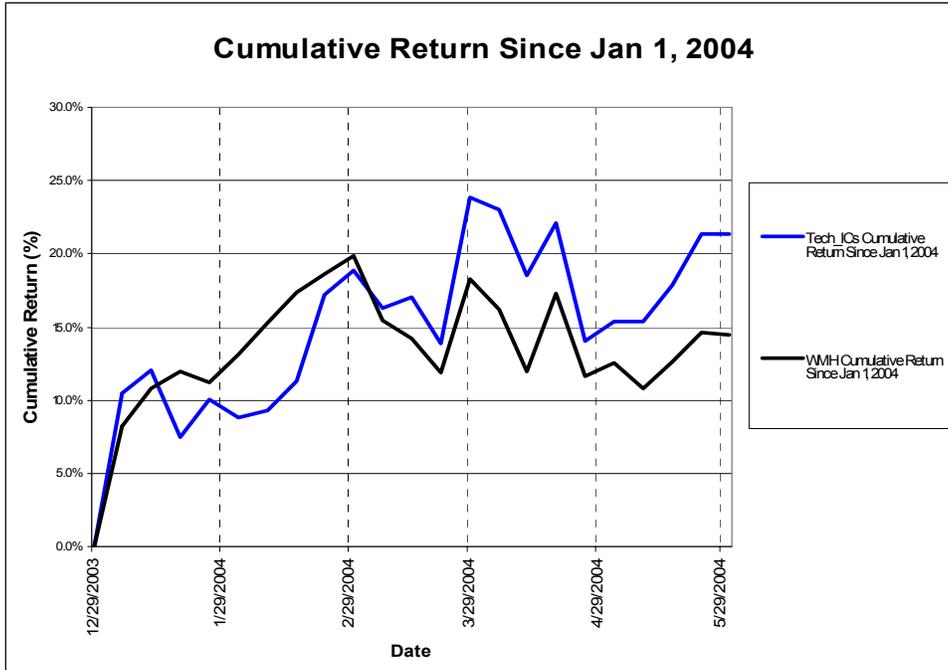


Figure 55: Technology and Integrated Circuit Sector Expenses Percent Chart



Technology and Integrated Circuit Sector Year-to-Date Relative Performance Chart

Figure 56: Technology and Integrated Circuit Sector Cumulative Market Cap YTD Relative Performance



Wireless Industry Performance Profile – March Quarter 2004 Results

Appendix A: Company Financial Performance Summary Tables

Wireless Holders Index (AMEX: WMH)

Wireless Holders Index (AMEX:WMH) Financial Performance Summary (in thousands US\$, except per share amounts)

5/3/2004		Growth Metrics										Valuation Metrics								Profitability Metrics								
Company Name	Ticker	Weekly Close Price (US\$) for the Week Beginning 05/31/04	% of WMH Index	Stock Price Weekly % Change	Stock Price Performance Relative to WMH Index	Most Recent Quarter End Date	Basic Share Count (in thousands of shares)	Market Cap (basic share count X price)	Current Quarter Revenue	Trailing 4 Qtrs. Rev. Growth	Forward 4 Qtrs. Rev. Growth (2)	Trailing 4 Qtrs. EBITDA Growth	Current Quarter Net Income	Trailing 4 Qtrs. Net Income Growth	Market Cap / Trailing 4 Qtrs. Rev	Market Cap / Forward 4 Qtrs. Rev (2)	Market Cap / Trailing 4 Qtrs. EBITDA	Price / Trailing 4 Qtrs. EPS	Book Value per Share (in US\$)	Price / Book Value	Cash per Share (in US\$)	Price / Cash per Share	Op Cash Flow per Share	Current Quarter Gross Profit %	Current Period EBITDA Profit %	Current Period Net Income %	Trailing 4 Qtrs. ROA	Trailing 4 Qtrs. ROE
WAN Cellular / PCS Service Providers																												
AT&T Wireless	AWE	14.22	10.18%	0.42%	0.55%	3/31/2004	2,721,000	38,692,620	4,075,000	3.2%	1.5%	-13.0%	(58,000)	NA	2.3x	2.3x	9.1x	164.0x	10.49	1.4x	1.56	9.1x	69.8x	57.0%	23.7%	-1.4%	0.5%	0.8%
Deutsche Telekom	DT	17.22	5.70%	2.26%	2.38%	3/31/2004	4,195,000	72,237,900	17,083,899	2.7%	5.4%	-15.0%	206,434	-80.2%	1.1x	1.0x	50.7x	103.9x	8.97	1.9x	2.73	6.3x	13.9x	45.9%	9.4%	1.2%	0.5%	1.9%
Nextel Communications	NXTL	23.04	6.60%	-0.39%	-0.26%	3/31/2004	1,106,000	25,482,240	3,103,000	30.9%	31.4%	31.9%	591,000	184.1%	2.2x	1.7x	6.0x	13.7x	6.05	3.8x	2.45	9.4x	20.5x	70.1%	38.3%	19.0%	8.7%	33.8%
Nextel Partners	NXTP	15.95	1.14%	-2.21%	-2.08%	3/31/2004	262,399	4,185,264	306,131	47.3%	47.6%	181.5%	4,654	NA	3.7x	2.6x	31.2x	-27.5x	-0.02	-905.9x	1.00	16.0x	110.7x	61.2%	23.6%	1.5%	-8.2%	NA
SK Telecom	SKM	20.60	6.27%	-1.29%	-1.17%	12/31/2003	740,000	15,244,000	2,360,471 (1)	16.4%	16.1%	11.9%	451,827 (1)	71.1%	0.9x	0.7x	1.9x	5.0x	7.22	2.9x	2.09	9.8x	10.2x	80.8%	43.4%	19.1%	24.1%	59.1%
Sprint Corporation	FON	17.15	3.22%	-2.72%	-2.60%	3/31/2004	1,424,200	24,425,030	6,707,000	5.8%	20.3%	7.5%	220,000	131.6%	1.4x	0.9x	6.7x	101.3x	9.59	1.8x	1.92	9.0x	23.4x	54.0%	29.2%	3.3%	0.7%	1.8%
Telesp Celular Partici	TCP	6.99	0.38%	-0.85%	-0.73%	3/31/2004	468,714	3,276,311	544,452	28.2%	31.1%	22.6%	(11,163)	NA	1.5x	1.2x	3.9x	-19.1x	2.27	3.1x	0.67	10.5x	#DIV/0!	63.3%	40.7%	-2.1%	-4.2%	-15.6%
U.S. Cellular	USM	35.50	0.64%	-0.31%	-0.18%	3/31/2004	86,153	3,058,432	657,850	10.4%	10.5%	37.6%	9,232	NA	1.2x	1.1x	4.8x	30.9x	28.75	1.2x	0.41	87.3x	35.4x	60.9%	21.6%	1.4%	2.0%	4.0%
Verizon Communications	VZ	34.96	10.64%	1.10%	1.22%	3/31/2004	2,770,000	96,839,200	17,136,000	3.9%	3.9%	-16.3%	1,199,000	-37.2%	1.4x	1.4x	4.9x	34.6x	12.09	2.9x	0.90	38.9x	24.0x	67.8%	34.6%	7.0%	1.7%	8.2%
Vodafone Group	VOD	23.14	8.70%	-1.82%	-1.70%	3/31/2004	6,810,000	157,583,400	30,870,924 (1)	116.8%	23.7%	NA	(7,476,027)(1)	NA	1.7x	1.2x	48.1x	-7.6x	30.24	0.8x	1.69	13.7x	13.2x	-14.2%	-12.6%	-24.2%	-7.3%	-9.5%
Western Wireless	WWCA	28.16	1.01%	2.85%	2.97%	3/31/2004	91,708	2,582,497	448,944	37.2%	34.8%	62.4%	31,443	NA	1.6x	1.2x	5.6x	46.8x	-2.29	-12.3x	1.36	20.7x	27.5x	62.3%	31.4%	7.0%	2.2%	NA
Service Provider Sector Total		236.93	54.47%	-0.08%	0.04%		20,675,174	443,606,894	83,293,471	31.0%	14.7%	-39.7%	(4,831,620)	NA	1.5x	1.2x	9.5x	-36.7x	16.18	1.3x	1.81	11.9x	17.3x	33.1%	12.9%	-1.6%	-1.7%	-3.5%
OEMs & Infrastructure System Providers																												
Crown Castle International	CCI	14.60	1.05%	-0.88%	-0.76%	3/31/2004	219,294	3,201,692	248,487	14.7%	17.7%	21.0%	(74,663)	NA	3.3x	2.9x	9.0x	-7.2x	11.30	1.3x	0.78	18.7x	118.9x	56.4%	44.9%	-30.0%	-6.7%	-17.3%
Ericsson	ERICY	28.25	3.74%	0.93%	1.05%	3/31/2004	1,574,900	44,490,925	3,752,819	8.7%	21.0%	NA	731,447	NA	2.8x	2.5x	-447.9x	-316.5x	5.37	5.3x	6.31	4.5x	103.2x	44.7%	16.1%	19.5%	-0.6%	-1.7%
Motorola	MOT	19.77	14.51%	0.00%	0.13%	4/3/2004	2,338,000	46,222,260	8,561,000	41.7%	50.1%	532.3%	609,000	260.4%	1.6x	1.0x	26.0x	34.7x	5.61	3.5x	3.60	5.5x	53.5x	33.5%	9.6%	7.1%	4.3%	10.7%
Nokia	NOK	13.97	5.75%	1.67%	1.80%	3/31/2004	4,680,000	65,379,600	8,092,438	-2.2%	9.5%	-19.5%	996,744	-16.5%	1.8x	1.8x	10.9x	15.6x	3.62	3.9x	2.97	4.7x	52.8x	40.5%	17.2%	12.3%	14.6%	23.7%
OEMs & Infrastructure Systems Sector Total		76.59	25.05%	0.47%	0.60%		8,812,194	159,294,477	20,654,743	14.8%	28.5%	154.5%	2,262,528	220.7%	1.9x	1.6x	19.9x	32.2x	4.66	3.9x	3.68	4.9x	62.4x	38.5%	14.2%	11.0%	5.4%	12.1%
Subsystem Product & Solution Suppliers																												
Aether Systems	AETH	3.50	0.06%	2.64%	2.76%	3/31/2004	43,273	151,456	12,469	-16.1%	-50.0%	NA	(8,769)	NA	1.9x	4.5x	-5.5x	-3.5x	4.34	0.8x	4.42	0.8x	-16.1x	46.3%	-49.0%	-70.3%	-10.5%	-22.9%
Research in Motion	RIMM	58.08	2.08%	-3.15%	-3.03%	2/28/2004	84,800	4,925,184	210,585	140.7%	137.0%	NA	41,537	NA	8.3x	3.4x	73.9x	95.0x	20.24	2.9x	14.06	4.1x	85.4x	49.1%	19.2%	19.7%	4.5%	5.4%
Subsystem Product & Solution Suppliers Total		61.58	2.14%	-2.84%	-2.71%		128,073	5,076,640	223,054	117.9%	126.5%	NA	32,768	NA	7.5x	3.4x	130.0x	605.7x	14.87	2.7x	10.81	3.7x	105.2x	49.0%	15.4%	14.7%	0.5%	0.7%
Technology & IC Suppliers																												
Qualcomm, Inc	QCOM	67.28	15.66%	0.31%	0.44%	3/28/2004	806,283	54,246,720	1,215,648	16.5%	36.4%	147.0%	441,289	328.4%	12.7x	9.1x	31.4x	42.5x	10.61	6.3x	6.95	9.7x	44.1x	72.4%	47.4%	36.3%	14.2%	16.3%
RF Micro Devices	RFMD	7.82	0.56%	-1.88%	-1.76%	3/31/2004	185,819	1,453,105	163,421	18.1%	37.3%	NA	(859)	NA	2.2x	1.7x	34.5x	47.4x	3.25	2.4x	1.76	4.4x	#DIV/0!	37.3%	0.7%	-0.5%	3.2%	5.3%
S.K. Telecom	SPOA	3.32	0.01%	-2.92%	-2.00%	3/31/2004	17,220	45,370	26,207	-11.3%	7.1%	NA	(10,000)	NA	0.9x	0.9x	-1.0x	-0.8x	0.01	0.9x	2.92	1.1x	-3.0x	47.0%	-31.0%	-64.4%	-16.1%	-33.0%
Technology & IC Sector Total		78.42	16.22%	-0.05%	0.07%		1,005,828	55,745,395	1,405,276	16.0%	35.9%	158.7%	423,545	414.3%	11.0x	8.0x	32.4x	44.5x	9.23	6.0x	5.94	9.3x	45.9x	67.9%	40.1%	30.1%	12.2%	14.7%
WMH Index Total		55.86	97.89%	-0.13%	0.00%		30,621,269	663,723,406	105,576,544	27.4%	17.9%	-23.5%	(2,112,780)	NA	1.7x	1.4x	11.7x	-112.8x	12.63	1.7x	2.52	8.6x	22.5x	34.6%	13.6%	1.3%	-0.7%	-1.5%
ERROR																												

(1) Company date only reported on a biannual basis. Quarterly numbers are estimated as biannual numbers divided by two.
(2) All forward looking metrics are computed from financial models that analytically project future line items based off of historic performance and do not reflect company guidance or expected results.
(3) Metrics are computed from models of GAAP and IASB financial results for the companies.
(4) "NA" represent metrics or ratios that cannot compute correctly typically due to negative numbers involved in the computation.
(5) "#DIV/0!" errors represent computations with a zero in the denominator and typically occur due to unavailable data, i.e. many company's cash completed cash flow information is not available.

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe

Moeller Ventures Wireless Universe Financial Performance Summary (in thousands US\$, except per share amounts)

5/3/2004										Growth Metrics					Valuation Metrics							Profitability Metrics						
Company Name	Ticker	Weekly Close Price (US\$) for the Week Beginning 05/31/04	Stock Price Weekly % Change	Stock Price Performance Relative to WMH Index	Most Recent Quarter End Date	Basic Share Count (in thousands of shares)	Market Cap (basic share count X price)	Current Quarter Revenue	Trailing 4 Qtrs. Rev. Growth	Forward 4 Qtrs. Rev. Growth (2)	Trailing 4 Qtrs. EBITDA Growth	Current Quarter Net Income	Trailing 4 Qtrs. Net Income Growth	Market Cap / Trailing 4 Qtrs. Rev	Market Cap / Forward 4 Qtrs. Rev (2)	Market Cap / Trailing 4 Qtrs. EBITDA	Price / Trailing 4 Qtrs. EPS	Book Value per Share (in US\$)	Price / Book Value	Cash per Share (in US\$)	Price / Cash per Share	Price / Op Cash Flow per Share	Current Quarter Gross Profit %	Current Period EBITDA Profit %	Current Period Net Income %	Trailing 4 Qtrs. ROA	Trailing 4 Qtrs. ROE	
WAN Cellular / PCS Service Providers																												
AT&T Wireless	AWE	14.22	0.42%	0.55%	3/31/2004	2,721,000	38,692,620	4,075,000	3.2%	1.5%	-13.0%	(58,000)	NA	2.3x	2.3x	9.1x	164.0x	10.49	1.4x	1.56	9.1x	69.6x	57.0%	23.7%	-1.4%	0.5%	0.8%	
Nextel Communications	NXTL	23.04	-0.39%	-0.26%	3/31/2004	1,106,000	25,462,240	3,103,000	30.9%	31.4%	31.9%	591,000	184.1%	2.2x	1.7x	6.0x	13.7x	6.05	3.8x	2.45	9.4x	20.5x	70.1%	38.3%	19.0%	8.7%	33.8%	
SK Telecom	SKM	20.60	6.27%	-1.29%	12/31/2003	740,000	15,244,000	2,360,471 (1)	16.4%	16.1%	11.9%	451,827 (1)	71.1%	0.9x	0.7x	1.9x	5.0x	7.22	2.9x	2.09	9.8x	10.2x	80.8%	43.4%	19.1%	24.1%	59.1%	
Telesp Celular Partici	TCP	6.99	-0.85%	-0.73%	3/31/2004	468,714	3,276,311	544,452	28.2%	31.1%	22.6%	(11,183)	NA	1.5x	1.2x	3.9x	-19.1x	2.27	3.1x	0.67	10.5x	#DIV/0!	63.3%	40.7%	-2.1%	-4.2%	-15.6%	
U.S. Cellular	USM	35.50	-0.31%	-0.18%	3/31/2004	86,153	3,068,432	657,650	10.4%	10.5%	37.6%	9,232	NA	1.2x	1.1x	4.8x	30.9x	28.75	1.2x	0.41	87.3x	35.4x	60.9%	21.6%	1.4%	2.0%	4.0%	
Western Wireless	WWCA	28.16	2.85%	2.97%	3/31/2004	91,708	2,582,497	448,944	37.2%	34.8%	62.4%	31,443	NA	1.6x	1.2x	5.6x	46.8x	-2.29	-12.3x	1.36	20.7x	27.5x	62.3%	31.4%	7.0%	2.2%	NA	
Service Provider Sector Total		128.51	0.24%	0.37%		5,213,575	88,336,100	11,189,517	15.4%	16.2%	11.7%	1,014,319	88.7%	1.7x	1.5x	4.8x	17.3x	8.42	2.0x	1.72	9.8x	25.4x	57.9%	28.3%	7.0%	5.5%	11.9%	
Cellular / PCS Infrastructure System Providers																												
American Tower Corp.	AMT	14.05	1.59%	1.72%	3/31/2004	220,408	3,096,732	186,179	12.9%	-24.0%	19.7%	(42,594)	NA	3.4x	4.9x	7.9x	-10.9x	7.59	1.9x	0.45	31.4x	97.6x	58.9%	48.8%	-22.9%	-5.3%	-16.7%	
Crown Castle International	CCI	14.60	-0.88%	-0.76%	3/31/2004	219,294	3,201,692	248,487	14.7%	17.7%	21.0%	(74,663)	NA	3.3x	2.9x	9.0x	-7.2x	11.30	1.3x	0.78	18.7x	118.9x	56.4%	44.9%	-30.0%	-6.7%	-17.3%	
SpectraSite Inc.	SSI	40.91	-1.52%	-1.39%	3/31/2004	47,880	1,958,771	84,590	3.9%	-5.0%	22.8%	7,597	NA	6.1x	6.3x	11.5x	198.9x	14.24	2.9x	1.76	23.2x	70.4x	69.6%	55.3%	9.0%	0.6%	1.5%	
Infrastructure System Provider Sector Total		69.56	-0.77%	-0.65%		487,582	8,257,196	519,256	12.1%	-1.0%	20.8%	(109,660)	NA	3.8x	4.0x	9.0x	-11.5x	9.91	1.7x	0.73	23.3x	95.5x	59.5%	48.0%	-21.1%	-5.3%	-14.5%	
Cellular / PCS OEMs																												
Ericsson	ERICY	28.25	0.93%	1.05%	3/31/2004	1,574,900	44,490,925	3,752,819	8.7%	21.0%	NA	731,447	NA	2.8x	2.5x	-447.9x	-316.5x	5.37	5.3x	6.31	4.5x	103.2x	44.7%	16.1%	19.5%	-0.6%	-1.7%	
Motorola	MOT	19.77	0.00%	0.13%	4/3/2004	2,338,000	46,222,260	8,561,000	41.7%	50.1%	532.3%	609,000	280.4%	1.6x	1.0x	26.0x	34.7x	5.61	3.5x	3.60	5.5x	53.9x	33.5%	9.6%	7.1%	4.3%	10.7%	
Nokia	NOK	13.97	1.67%	1.80%	3/31/2004	4,680,000	65,379,600	8,092,438	-2.2%	9.5%	-19.5%	996,744	-16.5%	1.8x	1.8x	10.9x	15.6x	3.62	3.9x	2.97	4.7x	52.8x	40.5%	17.2%	12.3%	14.6%	23.7%	
OEM Sector Total		61.99	0.80%	0.92%		8,592,900	156,092,785	20,406,256	14.8%	28.6%	166.2%	2,337,191	197.1%	1.9x	1.6x	20.4x	29.0x	4.49	4.0x	3.76	4.8x	61.8x	38.3%	13.8%	11.5%	6.4%	14.0%	
Infrastructure Subsystem & Product Suppliers																												
Anaren Inc.	ANEN	15.21	-4.46%	-4.33%	3/31/2004	20,566	312,809	22,387	16.7%	14.8%	NA	2,223	NA	3.9x	3.3x	171.0x	200.9x	9.18	1.7x	4.14	3.7x	30.1x	35.4%	12.2%	9.9%	0.8%	0.8%	
Andrew Corporation	ANDW	19.35	-1.53%	-1.40%	3/31/2004	158,820	3,073,167	447,146	122.1%	150.8%	4274.7%	10,212	NA	2.2x	0.9x	44.0x	144.3x	9.42	2.1x	1.26	15.3x	163.2x	24.7%	6.0%	2.3%	1.1%	1.6%	
Powerwave Technologies	PWAV	7.85	-2.00%	-1.87%	4/4/2004	63,393	497,635	63,224	21.2%	36.1%	NA	(3,263)	NA	2.0x	1.5x	-11.3x	-19.5x	4.25	1.8x	3.95	2.0x	-47.3x	17.0%	-8.9%	-5.2%	-6.0%	-9.2%	
REMEC, Inc.	REMC	6.51	-0.61%	-0.49%	1/31/2004	61,308	399,115	112,889	51.3%	56.1%	NA	(34,656)	NA	1.0x	0.7x	-7.2x	-8.1x	4.12	1.6x	0.91	7.1x	-8.9x	0.6%	-34.4%	-30.7%	-14.2%	-19.2%	
Infrastructure Subsystem & Product Sector Total		48.92	-2.41%	-2.29%		304,087	4,282,726	645,646	85.9%	118.3%	NA	(25,483)	NA	2.0x	1.0x	-153.7x	-82.2x	7.26	1.9x	1.95	7.2x	-164.9x	20.1%	-2.3%	-3.9%	-1.8%	-2.6%	
Broadband Wireless Product Suppliers																												
Alvarion LTD.	ALVR	11.08	-2.72%	-2.60%	3/31/2004	55,190	611,505	44,679	99.3%	83.8%	NA	1,436	NA	4.1x	2.3x	-76.3x	-95.4x	4.12	2.7x	2.92	3.8x	#DIV/0!	42.6%	1.1%	3.2%	-2.3%	-2.9%	
Airspan Networks Inc.	AIRN	5.34	-3.78%	-3.66%	4/4/2004	35,894	191,673	12,420	59.0%	66.8%	NA	(5,385)	NA	5.4x	2.9x	-5.9x	-6.6x	1.23	4.4x	1.23	4.3x	#DIV/0!	30.0%	-49.7%	-43.4%	-36.7%	-56.0%	
California Amplifier	CAMP	7.42	-1.07%	-0.94%	2/28/2004	14,885	110,447	41,605	59.6%	140.0%	114.1%	2,974	206.3%	0.9x	0.4x	18.5x	19.3x	4.39	1.7x	1.54	4.8x	#DIV/0!	15.4%	7.2%	7.1%	6.4%	9.4%	
Ceragon Networks LTD.	CRNT	5.09	-2.12%	-1.99%	3/31/2004	24,730	125,873	11,397	62.0%	59.8%	NA	39	NA	3.2x	2.0x	-47.1x	-58.5x	4.69	1.1x	0.90	5.7x	#DIV/0!	42.7%	-2.1%	0.3%	-3.5%	-2.7%	
Proxim	PROX	1.34	0.75%	0.88%	4/2/2004	123,182	165,064	26,697	-33.3%	-22.4%	NA	(16,888)	NA	1.2x	1.7x	-1.6x	-1.2x	-0.16	-8.6x	0.16	8.3x	-47.6x	34.9%	-38.7%	-65.5%	-113.7%	NA	
S.R.K. Telecom	SRXA	3.32	-2.92%	-2.80%	3/31/2004	13,726	45,570	26,207	-11.5%	7.1%	NA	(16,888)	NA	0.4x	0.4x	-1.0x	-0.8x	8.87	0.4x	2.92	1.1x	-3.0x	47.0%	-51.8%	-64.4%	-18.1%	-53.6%	
Stratex Networks	STXN	2.91	1.04%	1.17%	3/31/2004	83,589	244,408	44,250	-5.0%	7.4%	NA	(16,790)	NA	1.6x	1.4x	-7.2x	-6.6x	0.97	3.0x	0.59	4.9x	#DIV/0!	17.3%	-33.0%	-37.9%	-22.2%	-37.7%	
Broadband Wireless Product Suppliers Total		36.50	-2.07%	-1.94%		351,595	1,494,540	207,255	15.4%	53.1%	NA	(52,092)	NA	1.9x	1.4x	-6.7x	-5.6x	1.81	2.3x	1.02	4.1x	-80.7x	30.6%	-20.0%	-25.1%	-23.9%	-43.0%	

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- (3) Metrics are computed from models of GAAP and IASB financial results for the companies.
- (4) "NA" represent metrics or ratios that cannot compute correctly typically due to negative numbers involved in the computation.
- (5) "#DIV/0" errors represent computations with a zero in the denominator and typically occur due to unavailable data, i.e. many company's cash completed cash flow information is not available.

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe Financial Performance Summary continued (in thousands US\$, except per share amounts)

5/3/2004				Growth Metrics									Valuation Metrics							Profitability Metrics							
Company Name	Ticker	Weekly Close Price (US\$) for the Week Beginning 05/31/04	Stock Price Weekly % Change	Stock Price Performance Relative to WMH Index	Most Recent Quarter End Date	Basic Share Count (in thousands of shares)	Market Cap (basic share count X price)	Current Quarter Revenue	Trailing 4 Qtrs. Rev. Growth	Forward 4 Qtrs. Rev. Growth (2)	Trailing 4 Qtrs. EBITDA Growth	Current Quarter Net Income	Trailing 4 Qtrs. Net Income Growth	Market Cap / Trailing 4 Qtrs. Rev.	Market Cap / Forward 4 Qtrs. Rev. (2)	Market Cap / Trailing 4 Qtrs. EBITDA	Price / Trailing 4 Qtrs. EPS	Value per Share (in US\$)	Price / Book Value	Cash per Share (in US\$)	Price / Cash per Share	Price / Op Cash Flow per Share	Current Quarter Profit %	Current Period EBITDA Profit %	Current Period Net Income %	Trailing 4 Qtrs. ROA	Trailing 4 Qtrs. ROE
Subsystem Product & Solution Suppliers																											
Aether Systems	AETH	3.50	2.64%	2.76%	3/31/2004	43,273	151,456	12,469	-16.1%	-50.0%	NA	(8,769)	NA	1.9x	4.5x	-5.5x	-3.5x	4.34	0.8x	4.42	0.8x	-16.1x	46.3%	-49.0%	-70.3%	-10.5%	-22.9%
At Road Inc.	ARDI	9.29	4.50%	4.62%	3/31/2004	53,771	499,533	17,892	30.2%	25.4%	NA	3,110	NA	7.4x	6.0x	94.0x	82.2x	2.15	4.3x	2.01	4.6x	194.5x	53.2%	16.0%	17.4%	5.0%	6.3%
Novatel Wireless	NVTL	18.06	-0.88%	-0.75%	3/31/2004	15,276	275,885	15,144	102.2%	109.6%	NA	413	NA	6.7x	2.9x	-71.1x	1.33	13.6x	0.75	24.2x	28.7x	28.7x	28.7%	4.2%	2.7%	-50.8%	-114.8%
Research in Motion	RIMM	58.08	-3.15%	-3.03%	2/28/2004	84,800	4,925,184	210,585	140.7%	137.0%	NA	41,537	NA	8.3x	3.4x	73.9x	95.0x	20.24	2.9x	14.06	4.1x	85.4x	49.1%	19.2%	19.7%	4.5%	5.4%
Sierra Wireless	SWIR	27.24	-2.37%	-2.24%	3/31/2004	24,986	680,619	41,641	107.2%	102.4%	552.4%	4,570	1165.9%	4.1x	2.5x	62.0x	88.0x	6.07	4.5x	3.32	8.2x	128.2x	40.3%	14.0%	11.0%	5.8%	7.4%
Wavecom S.A.	WVCM	7.98	10.07%	10.19%	3/31/2004	15,241	121,623	47,315	-56.0%	-49.3%	NA	(18,086)	NA	0.4x	0.9x	-2.3x	-2.7x	10.12	0.8x	7.08	1.1x	-4.6x	18.6%	-45.5%	-38.2%	-13.4%	-25.8%
Subsystem Product & Solution Suppliers Total		124.15	-1.19%	-1.06%		237,347	6,654,298	345,046	37.4%	93.5%	NA	22,775	NA	5.4x	3.2x	-485.7x	-190.4x	9.88	2.8x	7.14	3.9x	243.7x	43.1%	6.4%	6.6%	-1.6%	-2.3%
Wireless & Mobile Software Suppliers																											
Openwave Systems Inc.	OPVV	11.29	1.07%	1.20%	3/31/2004	63,233	713,901	74,227	16.9%	16.7%	NA	(5,738)	NA	2.5x	2.2x	-15.5x	-13.0x	2.72	4.2x	3.93	2.9x	-15.0x	73.5%	-6.1%	-7.7%	-11.9%	-31.6%
PalmSource, Inc.	PSRC	17.17	-15.21%	-15.08%	2/29/2004	10,670	183,204	21,570	-17.9%	-7.8%	-46.0%	600	-17.8%	2.5x	2.4x	-14.1x	-11.6x	4.84	3.5x	2.96	5.8x	-16.0x	92.7%	5.3%	2.8%	-15.3%	-33.3%
Intelliscync Corporation	SYNC	2.61	3.16%	3.29%	4/30/2004	63,859	186,672	11,007	63.7%	71.4%	NA	(2,184)	NA	4.6x	2.7x	-16.6x	-17.5x	1.51	1.7x	0.86	3.0x	#DIV/0!	78.8%	-32.9%	-19.8%	-10.3%	-14.5%
Subsystem Product & Solution Suppliers Total		31.07	-8.48%	-8.36%		137,762	1,063,776	106,804	10.7%	17.4%	NA	(7,322)	NA	2.7x	2.3x	-15.4x	-13.3x	2.32	3.3x	2.43	3.2x	-18.0x	77.9%	-6.6%	-6.9%	-12.2%	-28.0%
Technology & IC Suppliers																											
ANADIGICS	ANAD	4.46	-9.53%	-9.41%	4/3/2004	31,658	141,195	21,195	31.8%	21.3%	NA	(12,752)	NA	1.2x	1.3x	-1.8x	-1.8x	3.60	1.2x	2.03	2.2x	-11.7x	9.5%	-59.8%	-60.2%	-36.3%	-60.4%
InterDigital Communications	IDCC	17.25	1.71%	1.84%	3/31/2004	55,146	951,269	33,016	-11.5%	-4.2%	-71.1%	5,800	-78.3%	8.6x	8.0x	47.2x	70.8x	2.00	8.6x	2.27	7.6x	59.2x	100.0%	24.5%	17.6%	5.9%	12.5%
Qualcomm, Inc.	QCOM	67.28	0.31%	0.44%	3/28/2004	806,283	54,246,720	1,215,648	16.5%	36.4%	147.0%	441,289	328.4%	12.7x	9.1x	31.4x	42.5x	10.61	6.3x	6.95	9.7x	44.1x	72.4%	47.4%	36.3%	14.2%	16.3%
RF Micro Devices	RFMD	7.82	-1.88%	-1.76%	3/31/2004	185,819	1,453,105	163,421	18.1%	37.3%	NA	(859)	NA	2.2x	1.7x	34.5x	47.4x	3.25	2.4x	1.76	4.4x	#DIV/0!	37.3%	0.7%	-0.5%	3.2%	5.3%
Silicon Laboratories	SLAB	49.86	-4.46%	-4.34%	4/3/2004	50,992	2,542,461	113,623	78.2%	96.0%	4291.2%	19,915	NA	6.8x	3.5x	25.9x	38.7x	6.21	8.0x	4.00	12.5x	160.5x	54.4%	25.0%	17.5%	20.7%	26.9%
Sirenza Microdevices	SMDI	4.41	9.98%	10.10%	3/31/2004	34,197	150,809	13,801	138.0%	121.5%	NA	162	NA	3.2x	1.6x	-48.4x	-31.9x	1.33	3.3x	0.33	13.4x	2217.8x	46.4%	4.1%	1.2%	-8.5%	-10.3%
Skyworks Solutions	SWKS	8.60	-3.80%	-3.68%	4/2/2004	149,396	1,284,806	183,471	16.6%	24.2%	NA	(9,421)	NA	2.0x	1.5x	-43.8x	-23.6x	4.52	1.9x	1.32	6.5x	28.5x	37.8%	-2.0%	-5.1%	-4.6%	-7.2%
TriQuint Semiconductor	TQNT	5.43	-2.69%	-2.56%	3/31/2004	135,774	737,253	89,903	25.5%	31.9%	NA	2	NA	2.2x	1.7x	-12.7x	-13.1x	3.41	1.6x	1.96	2.8x	-1155.6x	32.8%	1.2%	0.0%	-7.1%	-12.4%
WJ Communications	WJCI	3.17	-0.31%	-0.19%	3/28/2004	59,396	188,285	7,071	-8.1%	6.6%	NA	3,610	NA	7.3x	6.5x	-12.9x	-28.9x	0.85	3.7x	1.13	2.8x	-52.0x	54.8%	-42.6%	51.1%	-7.8%	-15.5%
Technology & IC Sector Total		168.28	-1.49%	-1.37%		1,508,661	61,695,902	1,841,149	19.5%	38.3%	170.7%	447,746	493.1%	9.3x	6.7x	36.2x	52.0x	7.25	5.6x	4.55	9.0x	47.6x	62.3%	32.4%	24.3%	9.2%	11.7%
Moeller Ventures Wireless Universe Total																											
Moeller Ventures Wireless Universe Total		668.98	-1.28%	-1.15%		16,833,509	327,877,323	35,260,929	16.2%	27.1%	56.8%	3,627,474	239.6%	2.2x	1.8x	11.6x	31.2x	6.16	3.2x	3.06	6.4x	44.9x	45.9%	19.3%	9.6%	5.0%	10.4%

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Wireless Industry Performance Profile – March Quarter 2004 Results

Appendix B: Company Revenue, Expenses Earnings Summary Tables

Wireless Holders Index (AMEX: WMH)

Wireless Holders Index (AMEX:WMH) Revenue, Expenses & Earnings Summary - Most Recent Quarter (in thousands US\$)

5/3/2004																	
Company Name	Ticker	Revenue	COGS	Gross Profit %	R&D	R&D %	SG&A	SG&A %	EBITDA	EBITDA %	Total Operating Expenses	Total Operating Expenses %	Operating Income	Operating Income %	Net Income	Net Margin %	Reported EPS
WAN Cellular / PCS Service Providers																	
AT&T Wireless	AWE	4,075,000	1,752,000	57.0%	0	0.0%	1,357,000	33.3%	966,000	23.7%	2,244,000	55.1%	79,000	1.9%	(58,000)	-1.4%	(0.02)
Deutsche Telekom	DT	17,083,899	9,246,755	45.9%	0	0.0%	5,374,600	31.5%	1,611,159	9.4%	6,225,986	36.4%	422,639	2.5%	206,434	1.2%	0.05
Nextel Communications	NXTL	3,103,000	927,000	70.1%	0	0.0%	971,000	31.3%	1,188,000	38.3%	1,431,000	46.1%	745,000	24.0%	591,000	19.0%	0.53
Nextel Partners	NXTP	306,131	118,637	61.2%	0	0.0%	113,422	37.1%	72,297	23.6%	151,766	49.6%	35,728	11.7%	4,654	1.5%	0.02
SK Telecom	SKM	2,360,471 (1)	452,828 (1)	80.8%	0 (1)	0.0%	634,997 (1)	26.9%	1,025,198 (1)	43.4%	1,230,387 (1)	52.1%	677,256 (1)	28.7%	451,827 (1)	19.1%	12.28
Sprint Corporation	FON	6,707,000	3,083,000	54.0%	0	0.0%	1,637,000	24.4%	1,957,000	29.2%	2,910,000	43.4%	714,000	10.6%	220,000	3.3%	0.15
Telesp Celular Partici	TCP	544,452	199,742	63.3%	0	0.0%	124,629	22.9%	221,380	40.7%	216,945	39.8%	127,765	23.5%	(11,183)	-2.1%	(0.03)
U.S. Cellular	USM	657,650	257,411	60.9%	0	0.0%	258,206	39.3%	142,176	21.6%	371,957	56.6%	28,282	4.3%	9,232	1.4%	0.11
Verizon Communications	VZ	17,136,000	5,510,000	67.8%	0	0.0%	5,703,000	33.3%	5,923,000	34.6%	9,131,000	53.3%	2,495,000	14.6%	1,199,000	7.0%	0.43
Vodafone Group	VOD	30,870,924 (1)	35,264,367 (1)	-14.2%	0 (1)	0.0%	0 (1)	0.0%	(3,896,696)(1)	-12.6%	34,767,621 (1)	112.6%	(3,896,696)(1)	-12.6%	(7,476,027)(1)	-24.2%	(2.19)
Western Wireless	WWCA	448,944	169,038	62.3%	0	0.0%	137,415	30.6%	140,744	31.4%	197,881	44.1%	82,025	18.3%	31,443	7.0%	0.34
Service Provider Sector Total		83,293,471	56,980,778	31.6%	0	0.0%	16,311,269	19.6%	9,350,257	11.2%	58,878,541	70.7%	1,509,999	1.8%	(4,831,620)	-5.8%	(0.23)
OEMs & Infrastructure System Providers																	
Crown Castle International	CCI	248,487	108,303	56.4%	0	0.0%	23,643	9.5%	111,491	44.9%	113,515	45.7%	26,669	10.7%	(74,663)	-30.0%	(0.34)
Ericsson	ERICY	3,752,819	2,075,124	44.7%	639,732	17.0%	526,257	14.0%	602,619	16.1%	1,075,076	28.6%	602,619	16.1%	731,447	19.5%	0.03
Motorola	MOT	8,561,000	5,693,000	33.5%	967,000	11.3%	1,144,000	13.4%	822,000	9.6%	2,046,000	23.9%	822,000	9.6%	609,000	7.1%	0.26
Nokia	NOK	8,092,438	4,816,375	40.5%	1,044,383	12.9%	812,298	10.0%	1,390,067	17.2%	1,885,996	23.3%	1,390,067	17.2%	996,744	12.3%	0.21
OEMs & Infrastructure Systems Sector Total		20,654,743	12,692,802	38.5%	2,651,115	12.8%	2,506,198	12.1%	2,926,177	14.2%	5,120,587	24.8%	2,841,355	13.8%	2,262,528	11.0%	0.26
Subsystem Product & Solution Suppliers																	
Aether Systems	AETH	12,469	6,694	46.3%	2,611	20.9%	8,799	70.6%	(6,104)	-49.0%	14,173	113.7%	(8,398)	-67.4%	(8,769)	-70.3%	(0.20)
Research in Motion	RIMM	210,585	107,109	49.1%	17,877	8.5%	32,310	15.3%	40,415	19.2%	69,763	33.1%	33,713	16.0%	41,537	19.7%	0.49
Subsystem Product & Solution Suppliers Total		223,054	113,803	49.0%	20,488	9.2%	41,109	18.4%	34,311	15.4%	83,936	37.6%	25,315	11.3%	32,768	14.7%	0.26
Technology & IC Suppliers																	
Qualcomm, Inc	QCOM	1,215,648	335,135	72.4%	169,023	13.9%	138,205	11.4%	576,570	47.4%	303,943	25.0%	576,570	47.4%	441,289	36.3%	0.55
RF Micro Devices	RFMD	163,421	102,517	37.3%	34,355	21.0%	17,243	10.6%	1,102	0.7%	59,802	36.6%	1,102	0.7%	(859)	-0.5%	(0.00)
S.R. Telecom	SRXA	26,207	13,882	47.0%	7,262	27.7%	18,646	71.1%	(13,583)	-51.8%	25,908	98.9%	(13,583)	-51.8%	(16,885)	-64.4%	(1.23)
Technology & IC Sector Total		1,405,276	451,534	67.9%	210,640	15.0%	174,094	12.4%	564,089	40.1%	389,653	27.7%	564,089	40.1%	423,545	30.1%	0.42
WMH Index Total		105,576,544	70,238,916	33.5%	2,882,243	2.7%	19,032,670	18.0%	12,874,834	12.2%	64,472,717	61.1%	4,940,758	4.7%	(2,112,780)	-2.0%	(0.07)

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

(1) Company date only reported on a biannual basis. Quarterly numbers are estimated as biannual numbers divided by two.

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe

Moeller Ventures Wireless Universe Revenue, Expenses & Earnings Summary - Most Recent Quarter (in thousands US\$)

5/3/2004																	
Company Name	Ticker	Revenue	COGS	Gross Profit %	R&D	R&D %	SG&A	SG&A %	EBITDA	EBITDA %	Total Operating Expenses	Total Operating Expenses %	Operating Income	Operating Income %	Net Income	Net Margin %	Reported EPS
WAN Cellular / PCS Service Providers																	
AT&T Wireless	AWE	4,075,000	1,752,000	57.0%	0	0.0%	1,357,000	33.3%	966,000	23.7%	2,244,000	55.1%	79,000	1.9%	(58,000)	-1.4%	(0.02)
Nextel Communications	NXTL	3,103,000	927,000	70.1%	0	0.0%	971,000	31.3%	1,188,000	38.3%	1,431,000	46.1%	745,000	24.0%	591,000	19.0%	0.53
SK Telecom	SKM	2,360,471 (1)	452,828 (1)	80.8%	0 (1)	0.0%	634,997 (1)	26.9%	1,025,198 (1)	43.4%	1,230,387 (1)	52.1%	677,256 (1)	28.7%	451,827 (1)	19.1%	12.28
Telesp Celular Partici	TCP	544,452	199,742	63.3%	0	0.0%	124,629	22.9%	221,380	40.7%	216,945	39.8%	127,765	23.5%	(11,183)	-2.1%	(0.03)
U.S. Cellular	USM	657,650	257,411	60.9%	0	0.0%	258,206	39.3%	142,176	21.6%	371,957	56.6%	28,282	4.3%	9,232	1.4%	0.11
Western Wireless	WWCA	448,944	169,038	62.3%	0	0.0%	137,415	30.6%	140,744	31.4%	197,881	44.1%	82,025	18.3%	31,443	7.0%	0.34
Service Provider Sector Total		11,189,517	3,758,019	66.4%	0	0.0%	3,483,247	31.1%	3,683,498	32.9%	5,692,169	50.9%	1,739,328	15.5%	1,014,319	9.1%	0.19
Cellular / PCS Infrastructure System Providers																	
American Tower Corp.	AMT	186,179	76,480	58.9%	0	0.0%	6,879	3.7%	90,853	48.8%	95,980	51.6%	13,719	7.4%	(42,594)	-22.9%	(0.19)
Crown Castle International	CCI	248,487	108,303	56.4%	0	0.0%	23,643	9.5%	111,491	44.9%	113,515	45.7%	26,669	10.7%	(74,663)	-30.0%	(0.34)
SpectraSite Inc.	SSI	84,590	25,743	69.6%	0	0.0%	12,042	14.2%	46,805	55.3%	37,458	44.3%	21,389	25.3%	7,597	9.0%	0.16
Infrastructure Sytem Provider Sector Total		519,256	210,526	59.5%	0	0.0%	42,564	8.2%	249,149	48.0%	246,953	47.6%	61,777	11.9%	-109,660	-21.1%	(0.22)
Cellular / PCS OEMs																	
Ericsson	ERICY	3,752,819	2,075,124	44.7%	639,732	17.0%	526,257	14.0%	602,619	16.1%	1,075,076	28.6%	602,619	16.1%	731,447	19.5%	0.03
Motorola	MOT	8,561,000	5,693,000	33.5%	967,000	11.3%	1,144,000	13.4%	822,000	9.6%	2,046,000	23.9%	822,000	9.6%	609,000	7.1%	0.26
Nokia	NOK	8,092,438	4,816,375	40.5%	1,044,383	12.9%	812,298	10.0%	1,390,067	17.2%	1,885,996	23.3%	1,390,067	17.2%	996,744	12.3%	0.21
OEM Sector Total		20,406,256	12,584,499	38.3%	2,651,115	13.0%	2,482,555	12.2%	2,814,686	13.8%	5,007,072	24.5%	2,814,686	13.8%	2,337,191	11.5%	0.27
Infrastructure Subsystem & Product Suppliers																	
Anaren Inc.	ANEN	22,387	14,473	35.4%	1,394	6.2%	3,783	16.9%	2,737	12.2%	5,177	23.1%	2,737	12.2%	2,223	9.9%	0.11
Andrew Corporation	ANDW	447,146	336,492	24.7%	28,459	6.4%	52,654	11.8%	26,773	6.0%	93,732	21.0%	16,922	3.8%	10,212	2.3%	0.06
Powerwave Technologies	PWAV	63,224	52,450	17.0%	9,281	14.7%	7,150	11.3%	(5,657)	-8.9%	16,431	26.0%	(5,657)	-8.9%	(3,263)	-5.2%	(0.05)
REMEC, Inc.	REMC	112,889	112,260	0.6%	13,036	11.5%	19,570	17.3%	(38,791)	-34.4%	39,420	34.9%	(38,791)	-34.4%	(34,655)	-30.7%	(0.57)
Infrastructure Subsystem & Product Sector Total		645,646	515,675	20.1%	52,170	8.1%	83,157	12.9%	-14,938	-2.3%	154,760	24.0%	-24,789	-3.8%	-25,483	-3.9%	(0.08)
Broadband Wireless Product Suppliers																	
Alvarion LTD.	ALVR	44,679	25,654	42.6%	6,614	14.8%	11,227	25.1%	504	1.1%	18,521	41.5%	504	1.1%	1,436	3.2%	0.03
Airspan Networks Inc.	AIRN	12,420	8,693	30.0%	5,046	40.6%	4,611	37.1%	(6,176)	-49.7%	9,903	79.7%	(6,176)	-49.7%	(5,385)	-43.4%	(0.15)
California Amplifier	CAMP	41,605	35,179	15.4%	1,427	3.4%	2,012	4.8%	2,987	7.2%	3,439	8.3%	2,987	7.2%	2,974	7.1%	0.20
Ceragon Networks LTD.	CRNT	11,397	6,532	42.7%	1,693	14.9%	3,259	28.6%	(245)	-2.1%	5,110	44.8%	(245)	-2.1%	39	0.3%	0.00
Proxim	PROX	26,697	17,377	34.9%	4,554	17.1%	11,371	42.6%	(10,345)	-38.7%	25,030	93.8%	(15,710)	-58.8%	(17,481)	-65.5%	(0.14)
S.R. Telecom	SRXA	26,207	13,882	47.0%	7,262	27.7%	18,646	71.1%	(13,583)	-51.8%	25,908	98.9%	(13,583)	-51.8%	(16,885)	-64.4%	(1.23)
Stratex Networks	STXN	44,250	36,600	17.3%	4,887	11.0%	11,505	26.0%	(14,614)	-33.0%	22,264	50.3%	(14,614)	-33.0%	(16,790)	-37.9%	(0.20)
Broadband Wireless Product Suppliers Total		207,255	143,917	30.6%	31,483	15.2%	62,631	30.2%	-41,472	-20.0%	110,175	53.2%	-46,837	-22.6%	-52,092	-25.1%	(0.15)

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

(1) Company date only reported on a biannual basis. Quarterly numbers are estimated as biannual numbers divided by two.

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe Revenue, Expenses & Earnings Summary - Most Recent Quarter continued (in thousands US\$)

5/3/2004																	
Company Name	Ticker	Revenue	COGS	Gross Profit %	R&D	R&D %	SG&A	SG&A %	EBITDA	EBITDA %	Total Operating Expenses	Total Operating Expenses %	Operating Income	Operating Income %	Net Income	Net Margin %	Reported EPS
Subsystem Product & Solution Suppliers																	
Aether Systems	AETH	12,469	6,694	46.3%	2,611	20.9%	8,799	70.6%	(6,104)	-49.0%	14,173	113.7%	(8,398)	-67.4%	(8,769)	-70.3%	(0.20)
At Road Inc.	ARDI	17,892	8,368	53.2%	1,367	7.6%	5,293	29.6%	2,860	16.0%	6,674	37.3%	2,850	15.9%	3,110	17.4%	0.06
Novatel Wireless	NVTL	15,144	10,798	28.7%	1,960	12.9%	1,753	11.6%	633	4.2%	3,780	25.0%	566	3.7%	413	2.7%	0.03
Research in Motion	RIMM	210,585	107,109	49.1%	17,877	8.5%	32,310	15.3%	40,415	19.2%	69,763	33.1%	33,713	16.0%	41,537	19.7%	0.49
Sierra Wireless	SWIR	41,641	24,839	40.3%	4,739	11.4%	6,237	15.0%	5,826	14.0%	11,612	27.9%	5,190	12.5%	4,570	11.0%	0.18
Wavecom S.A.	WVCM	47,315	38,525	18.6%	17,226	36.4%	11,796	24.9%	(21,548)	-45.5%	30,338	64.1%	(21,548)	-45.5%	(18,086)	-38.2%	(1.18)
Subsystem Product & Solution Suppliers Total		345,046	196,333	43.1%	45,780	13.3%	66,188	19.2%	22,082	6.4%	136,340	39.5%	12,373	3.6%	22,775	6.6%	0.10
Wireless & Mobile Software Suppliers																	
Openwave Systems Inc.	OPWW	74,227	19,673	73.5%	23,625	31.8%	33,100	44.6%	(4,547)	-6.1%	59,101	79.6%	(4,547)	-6.1%	(5,738)	-7.7%	(0.09)
PalmSource, Inc.	PSRC	21,570	1,570	92.7%	8,590	39.8%	10,080	46.7%	1,150	5.3%	18,850	87.4%	1,150	5.3%	600	2.8%	0.06
Intellisync Corporation	SYNC	11,007	2,331	78.8%	3,525	32.0%	6,605	60.0%	(3,616)	-32.9%	12,292	111.7%	(3,616)	-32.9%	(2,184)	-19.8%	(0.03)
Subsystem Product & Solution Suppliers Total		106,804	23,574	77.9%	35,740	33.5%	49,785	46.6%	-7,013	-6.6%	90,243	84.5%	-7,013	-6.6%	-7,322	-6.9%	(0.05)
Technology & IC Suppliers																	
ANADIGICS	ANAD	21,195	19,175	9.5%	8,902	42.0%	5,790	27.3%	(12,672)	-59.8%	14,692	69.3%	(12,672)	-59.8%	(12,752)	-60.2%	(0.40)
InterDigital Communications	IDCC	33,016	-	100.0%	12,914	39.1%	7,004	21.2%	8,098	24.5%	24,918	75.5%	8,098	24.5%	5,800	17.6%	0.11
Qualcomm, Inc.	QCOM	1,215,648	335,135	72.4%	169,023	13.9%	138,205	11.4%	576,570	47.4%	303,943	25.0%	576,570	47.4%	441,289	36.3%	0.55
RF Micro Devices	RFMD	163,421	102,517	37.3%	34,355	21.0%	17,243	10.6%	1,102	0.7%	59,802	36.6%	1,102	0.7%	(859)	-0.5%	(0.00)
Silicon Laboratories	SLAB	113,623	51,866	54.4%	18,142	16.0%	15,204	13.4%	28,411	25.0%	34,583	30.4%	27,174	23.9%	19,915	17.5%	0.39
Sirenza Microdevices	SMDI	13,801	7,391	46.4%	2,113	15.3%	3,728	27.0%	569	4.1%	6,275	45.5%	135	1.0%	162	1.2%	0.00
Skyworks Solutions	SWKS	183,471	114,167	37.8%	35,992	19.6%	21,154	11.5%	(3,601)	-2.0%	73,674	40.2%	(4,370)	-2.4%	(9,421)	-5.1%	(0.06)
TriQuint Semiconductor	TQNT	89,903	60,423	32.8%	16,075	17.9%	12,305	13.7%	1,100	1.2%	28,380	31.6%	1,100	1.2%	2	0.0%	0.00
WJ Communications	WJCI	7,071	3,195	54.8%	4,057	57.4%	2,834	40.1%	(3,015)	-42.6%	6,949	98.3%	(3,073)	-43.5%	3,610	51.1%	0.06
Technology & IC Sector Total		1,841,149	693,869	62.3%	301,573	16.4%	223,467	12.1%	596,562	32.4%	553,216	30.0%	594,064	32.3%	447,746	24.3%	0.30
Moeller Ventures Wireless Universe Total																	
Universe Total		35,260,929	18,126,412	48.6%	3,117,860	8.8%	6,493,594	18.4%	7,302,553	20.7%	11,990,928	34.0%	5,143,589	14.6%	3,627,474	10.3%	0.22

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

(1) Company date only reported on a biannual basis. Quarterly numbers are estimated as biannual numbers divided by two.

Appendix C: Company Balance Sheet Summary Tables

Wireless Holders Index (AMEX: WMH)

Wireless Holders Index (AMEX:WMH) Balance Sheet Summary - Most Recent Quarter (in thousands US\$)

5/3/2004															
Company Name	Ticker	Most Recent Quarter End Date	Cash & ST Inv. (in thousands US\$)	Accounts Receivable	TTM DSO	Inventories	Current Assets	Fixed Assets	Total Assets	Current Liabilities	Long Term Debt	Total Liabilities	Shareholder Equity / Book Value	Market Cap (basic share count X price)	Enterprise Value
WAN Cellular / PCS Service Providers															
AT&T Wireless	AWE	3/31/2004	4,250,000	1,994,000	45	226,000	7,173,000	27,092,000	47,058,000	2,889,000	10,410,000	18,505,000	28,553,000	38,692,620	34,442,620
Deutsche Telekom	DT	3/31/2004	11,450,341	6,721,915	36	1,714,986	23,215,829	56,996,412	141,647,583	13,197,086	65,181,683	104,011,947	37,635,637	72,237,900	60,787,559
Nextel Communications	NXTL	3/31/2004	2,713,000	1,243,000	37	306,000	4,616,000	15,185,000	21,621,000	2,920,000	9,953,000	14,934,000	6,687,000	25,482,240	22,769,240
Nextel Partners	NXTP	3/31/2004	262,115	151,952	45	28,851	458,320	1,364,815	1,875,967	176,474	1,640,647	1,880,587	(4,620)	4,185,264	3,923,149
SK Telecom	SKM	12/31/2003	1,549,886	1,421,238	27	28,364	3,906,119	8,991,788	12,436,395	4,077,819	2,037,151	7,092,320	5,344,076	15,244,000	13,694,115
Sprint Corporation	FON	3/31/2004	2,728,000	2,927,000	40	513,000	6,906,000	54,317,000	42,456,000	7,037,000	17,547,000	28,805,000	13,651,000	24,425,030	21,697,030
Telesp Celular Partici	TCP	3/31/2004	311,795	402,431	67	60,540	1,354,795	1,615,553	4,211,983	1,866,712	787,470	3,148,105	1,063,878	3,276,311	2,964,516
U.S. Cellular	USM	3/31/2004	35,035	260,934	36	55,978	428,578	3,549,751	4,848,957	499,765	1,146,764	2,372,241	2,476,716	3,058,432	3,023,397
Verizon Communications	VZ	3/31/2004	2,492,000	9,499,000	51	1,309,000	17,194,000	181,754,000	163,421,000	24,956,000	38,132,000	129,926,000	33,495,000	96,839,200	94,347,200
Vodafone Group	VOD	3/31/2004	11,495,070	12,696,460	38	0	24,191,530	33,269,103	270,687,934	27,644,835	23,871,405	64,770,159	205,917,775	157,583,400	146,088,330
Western Wireless	WWCA	3/31/2004	124,925	241,599	49	27,165	403,604	1,884,391	2,549,512	374,836	2,167,648	2,759,267	(209,755)	2,582,497	2,457,572
Service Provider Sector Total			37,412,166	37,559,528	43	4,269,885	89,847,775	386,019,814	712,814,331	85,639,527	172,874,768	378,204,625	334,609,706	443,606,894	406,194,727
OEMs & Infrastructure System Providers															
Crown Castle International	CCI	3/31/2004	171,485	83,252	31	17,435	355,102	6,023,557	6,446,880	396,872	3,138,866	3,968,217	2,478,663	3,201,692	3,030,207
Ericsson	ERICY	3/31/2004	9,933,068	4,377,599	106	1,926,005	18,238,503	811,814	25,107,345	7,261,466	5,006,517	16,647,317	8,460,029	44,490,925	34,557,858
Motorola	MOT	4/3/2004	8,415,000	4,976,000	53	2,632,000	18,768,000	18,190,000	32,350,000	9,608,000	6,679,000	19,227,000	13,123,000	46,222,260	37,807,260
Nokia	NOK	3/31/2004	13,921,436	5,771,588	65	1,353,422	24,069,658	1,871,338	29,010,625	11,477,214	23,209	12,047,655	16,962,971	65,379,600	51,458,165
OEMs & Infrastructure Systems Sector Total			32,440,988	15,208,438	64	5,928,862	61,431,263	26,896,709	92,914,850	28,743,552	14,847,592	51,890,188	41,024,662	159,294,477	126,853,489
Subsystem Product & Solution Suppliers															
Aether Systems	AETH	3/31/2004	191,453	14,284	105	10,962	235,568	8,309	390,976	184,061	0	203,329	187,647	151,456	(39,998)
Research in Motion	RIMM	2/28/2004	1,192,680	95,213	41	42,836	1,355,405	147,709	1,931,378	208,875	6,240	215,115	1,716,263	4,925,184	3,732,504
Subsystem Product & Solution Suppliers Total			1,384,133	109,497	73	53,798	1,590,973	156,018	2,322,354	392,936	6,240	418,444	1,903,910	5,076,640	3,692,507
Technology & IC Suppliers															
Qualcomm, Inc	QCOM	3/28/2004	5,606,429	596,784	45	97,041	6,914,466	1,141,485	9,649,494	813,021	0	1,093,185	8,556,309	54,246,720	48,640,291
RF Micro Devices	RFMD	3/31/2004	327,845	86,287	48	58,552	482,782	280,356	988,016	55,884	324,626	384,878	603,138	1,453,105	1,125,260
S.R. Telecom	SRXA	3/31/2004	40,144	68,564	239	54,630	173,349	88,483	312,131	111,381	77,106	190,449	121,682	43,570	5,426
Technology & IC Sector Total			5,974,418	751,635	111	210,223	7,570,597	1,510,324	10,949,641	980,286	401,732	1,668,512	9,281,129	55,745,395	49,770,977
WMH Index Total			77,211,705	53,629,098	290	10,462,767	160,440,608	414,582,864	819,001,176	115,756,301	188,130,331	432,181,769	386,819,407	663,723,406	586,511,700

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe

Moeller Ventures Wireless Universe Balance Sheet Summary - Most Recent Quarter (in thousands US\$)

5/3/2004															
Company Name	Ticker	Most Recent Quarter End Date	Cash & ST Inv. (in thousands US\$)	Accounts Receivable	TTM DSO	Inventories	Current Assets	Fixed Assets	Total Assets	Current Liabilities	Long Term Debt	Total Liabilities	Shareholder Equity / Book Value	Market Cap (basic share count X price)	Enterprise Value
WAN Cellular / PCS Service Providers															
AT&T Wireless	AWE	3/31/2004	4,250,000	1,994,000	45	226,000	7,173,000	27,092,000	47,058,000	2,889,000	10,410,000	18,505,000	28,553,000	38,692,620	34,442,620
Nextel Communications	NXTL	3/31/2004	2,713,000	1,243,000	37	306,000	4,616,000	15,185,000	21,621,000	2,920,000	9,953,000	14,934,000	6,687,000	25,482,240	22,769,240
SK Telecom	SKM	12/31/2003	1,549,886	1,421,238	27	28,364	3,906,119	8,991,788	12,436,395	4,077,819	2,037,151	7,092,320	5,344,076	15,244,000	13,694,115
Telesp Celular Partici	TCP	3/31/2004	311,795	402,431	67	60,540	1,354,795	1,615,553	4,211,983	1,866,712	787,470	3,148,105	1,063,878	3,276,311	2,964,516
U.S. Cellular	USM	3/31/2004	35,035	260,934	36	55,978	428,578	3,549,751	4,848,957	499,765	1,146,764	2,372,241	2,476,716	3,058,432	3,023,397
Western Wireless	WWCA	3/31/2004	124,925	241,599	49	27,165	403,604	1,884,391	2,549,512	374,836	2,167,648	2,759,267	(209,755)	2,582,497	2,457,572
Service Provider Sector Total			8,984,640	5,563,202	44	704,048	17,882,096	58,318,484	92,725,847	12,628,132	26,502,033	48,810,932	43,914,915	88,336,100	79,351,460
Cellular / PCS Infrastructure System Providers															
American Tower Corp.	AMT	3/31/2004	98,698	46,310	23	0	334,374	2,483,604	5,197,910	254,392	3,216,627	3,525,859	1,672,051	3,096,732	2,998,034
Crown Castle International	CCI	3/31/2004	171,485	83,252	31	17,435	355,102	6,023,557	6,446,880	396,872	3,138,866	3,968,217	2,478,663	3,201,692	3,030,207
SpectraSite Inc.	SSI	3/31/2004	84,329	9,067	10	0	107,888	1,268,230	1,515,272	138,388	639,155	833,599	681,673	1,958,771	1,874,442
Infrastructure Sytem Provider Sector Total			354,512	138,629	21	17,435	797,364	9,775,391	13,160,062	789,652	6,994,648	8,327,675	4,832,387	8,257,196	7,902,684
Cellular / PCS OEMs															
Ericsson	ERICY	3/31/2004	9,933,068	4,377,599	106	1,926,005	18,238,503	811,814	25,107,345	7,261,466	5,006,517	16,647,317	8,460,029	44,490,925	34,557,858
Motorola	MOT	4/3/2004	8,415,000	4,976,000	53	2,632,000	18,768,000	18,190,000	32,350,000	9,608,000	6,679,000	19,227,000	13,123,000	46,222,260	37,807,260
Nokia	NOK	3/31/2004	13,921,436	5,771,588	65	1,353,422	24,069,658	1,871,338	29,010,625	11,477,214	23,209	12,047,655	16,962,971	65,379,600	51,458,165
OEM Sector Total			32,269,503	15,125,186	75	5,911,427	61,076,161	20,873,152	86,467,970	28,346,680	11,708,726	47,921,971	38,545,999	156,092,785	123,823,282
Infrastructure Subsystem & Product Suppliers															
Anaren Inc.	ANEN	3/31/2004	85,076	13,356	54	14,853	118,311	61,666	205,333	10,964	0	16,530	188,803	312,809	227,733
Andrew Corporation	ANDW	3/31/2004	200,855	391,912	80	326,628	968,249	633,314	2,221,038	376,096	288,663	725,433	1,495,605	3,073,167	2,872,312
Powerwave Technologies	PWAV	4/4/2004	250,354	51,204	74	17,326	329,440	117,004	452,544	53,033	130,000	183,152	269,392	497,635	247,281
REMEC, Inc.	REMC	1/31/2004	55,846	68,344	55	79,496	215,311	79,961	367,200	110,619	0	114,618	252,582	399,115	343,269
Infrastructure Subsystem & Product Sector Total			592,131	524,816	66	438,303	1,631,311	891,945	3,246,115	550,712	418,663	1,039,733	2,206,382	4,282,726	3,690,595
Broadband Wireless Product Suppliers															
Alvarion LTD.	ALVR	3/31/2004	160,915	22,985	47	38,484	227,825	11,712	295,833	57,044	0	68,504	0	611,505	450,590
Airspan Networks Inc.	AIRN	4/4/2004	44,141	12,853	94	16,506	80,764	3,581	92,794	48,769	0	0	44,025	191,673	147,532
California Amplifier	CAMP	2/28/2004	22,885	18,579	41	20,253	67,768	4,381	97,642	24,513	7,766	32,279	65,363	110,447	87,562
Ceragon Networks LTD.	CRNT	3/31/2004	22,187	7,436	60	13,045	45,276	2,654	66,702	15,003	0	0	49,157	125,873	103,686
Proxim	PROX	4/2/2004	19,996	9,945	34	19,358	53,170	11,187	105,559	98,240	736	124,760	(19,201)	165,064	145,068
S.R. Telecom	SRXA	3/31/2004	40,144	68,564	239	54,630	173,349	88,483	312,131	111,381	77,106	190,449	121,682	45,570	5,426
Stratex Networks	STXN	3/31/2004	49,963	34,295	71	33,101	128,291	31,175	163,244	61,751	0	82,062	0	244,408	194,445
Broadband Wireless Product Suppliers Total			360,231	174,657	84	195,377	776,443	153,173	1,133,905	416,701	85,608	498,054	261,026	1,494,540	1,134,309

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe Balance Sheet Summary - Most Recent Quarter (in thousands US\$), continued

5/3/2004															
Company Name	Ticker	Most Recent Quarter End Date	Cash & ST Inv. (in thousands US\$)	Accounts Receivable	TTM DSO	Inventories	Current Assets	Fixed Assets	Total Assets	Current Liabilities	Long Term Debt	Total Liabilities	Shareholder Equity / Book Value	Market Cap (basic share count X price)	Enterprise Value
Subsystem Product & Solution Suppliers															
Aether Systems	AETH	3/31/2004	191,453	14,284	105	10,962	235,568	8,309	390,976	184,061	0	203,329	187,647	151,456	(39,998)
At Road Inc.	ARDI	3/31/2004	108,238	6,105	31	4,019	131,511	2,300	142,441	20,227	0	26,635	115,806	499,533	391,295
Novatel Wireless	NVTL	3/31/2004	11,420	12,617	76	3,580	29,000	1,703	36,559	16,204	0	16,204	20,355	275,885	264,465
Research in Motion	RIMM	2/28/2004	1,192,680	95,213	41	42,836	1,355,405	147,709	1,931,378	208,875	6,240	215,115	1,716,263	4,925,184	3,732,504
Sierra Wireless	SWIR	3/31/2004	82,970	22,652	50	2,096	109,674	6,551	184,432	30,857	0	32,792	151,640	680,619	597,649
Wavecom S.A.	WVCM	3/31/2004	107,860	46,485	90	48,522	227,579	31,904	311,366	149,885	624	157,190	154,177	121,623	13,764
Subsystem Product & Solution Suppliers Total			1,694,621	197,356	65	112,015	2,088,737	198,476	2,997,152	610,109	6,864	651,265	2,345,888	6,654,298	4,959,678
Wireless & Mobile Software Suppliers															
Openwave Systems Inc.	OPVV	3/31/2004	248,673	59,348	73	0	339,003	29,932	485,581	108,979	146,336	313,606	171,975	713,901	465,228
PalmSource, Inc.	PSRC	2/29/2004	31,610	6,060	26	0	41,090	2,610	99,580	21,510	15,000	47,930	51,650	183,204	151,594
Intellisync Corporation	SYNC	4/30/2004	54,775	9,284	77	200	66,081	1,505	171,713	14,877	0	75,518	96,195	166,672	111,897
Subsystem Product & Solution Suppliers Total			335,058	74,692	59	200	446,174	34,047	756,874	145,366	161,336	437,054	319,820	1,063,776	728,718
Technology & IC Suppliers															
ANADIGICS	ANAD	4/3/2004	64,329	11,110	48	12,274	93,096	131,090	199,066	15,511	66,700	85,229	113,837	141,195	76,866
InterDigital Communications	IDCC	3/31/2004	125,366	36,342	100	0	169,733	11,213	225,938	37,800	1,734	115,479	110,459	951,269	825,903
Qualcomm, Inc	QCOM	3/28/2004	5,606,429	596,784	45	97,041	6,914,466	1,141,485	9,649,494	813,021	0	1,093,185	8,556,309	54,246,720	48,640,291
RF Micro Devices	RFMD	3/31/2004	327,845	86,287	48	58,552	482,782	280,356	988,016	55,884	324,626	384,878	603,138	1,453,105	1,125,260
Silicon Laboratories	SLAB	4/3/2004	204,024	55,836	45	28,606	302,661	33,913	399,046	72,977	0	82,228	316,818	2,542,461	2,338,437
Sirenza Microdevices	SMDI	3/31/2004	11,294	9,040	60	7,427	28,653	9,038	54,966	9,423	38	9,461	45,505	150,809	139,515
Skyworks Solutions	SWKS	4/2/2004	197,085	142,708	71	72,334	423,995	372,613	1,118,195	162,795	275,000	443,551	674,644	1,284,806	1,087,721
TriQuint Semiconductor	TQNT	3/31/2004	265,981	50,304	51	66,015	420,875	217,693	795,192	54,788	268,755	331,679	463,513	737,253	471,272
WJ Communications	WJCI	3/28/2004	66,937	5,684	73	2,674	76,871	9,860	86,948	13,501	0	36,481	50,467	188,285	121,348
Technology & IC Sector Total			6,869,290	994,095	60	344,923	8,913,132	2,207,261	13,516,861	1,235,700	936,853	2,582,171	10,934,690	61,695,902	54,826,612
Moeller Ventures Wireless Universe Total			51,459,986	22,792,633	59	7,723,727	93,611,417	92,451,929	214,004,786	44,723,052	46,814,730	110,268,855	103,361,106	327,877,323	276,417,337

Sources: Company SEC filings, Reuters, Thompson Financial and Moeller Ventures, LLC

Appendix D: Company Relative Performance Statistics Tables

Wireless Holders Index (AMEX: WMH)

Wireless Holders Index (AMEX:WMH) Relative Performance Statistics

5/3/2004																			
Company Name	Ticker	Market Cap (basic share count X price, in thousands US\$)	Weekly Close Price (US\$) for the Week Beginning 05/31/04	% of WMH Index	1 Week Rolling % Change	1 Week Variance to WMH Index	1 Week Rolling Correlation Factor	4 Week Rolling % Change	4 Week Variance to WMH Index	4 Week Rolling Correlation Factor	13 Week Rolling % Change	13 Week Variance to WMH Index	13 Week Rolling Correlation Factor	26 Week Rolling % Change	26 Week Variance to WMH Index	26 Week Rolling Correlation Factor	52 Week Rolling % Change	52 Week Variance to WMH Index	52 Week Rolling Correlation Factor
WAN Cellular / PCS Service Providers																			
AT&T Wireless	AWE	38,692,620	14.22	10.18%	0.49%	0.32%	1.00	2.23%	-0.02%	0.96	4.94%	10.60%	(0.02)	95.74%	71.94%	0.74	87.98%	40.03%	0.86
Deutsche Telekom	DT	72,237,900	17.22	5.70%	-0.36%	-0.54%	(1.00)	4.03%	1.79%	0.99	-15.08%	-9.42%	0.60	0.00%	-23.80%	0.17	13.99%	-33.96%	0.80
Nextel Communications	NXTL	25,482,240	23.04	6.60%	0.43%	0.25%	1.00	-4.60%	-6.84%	(0.41)	-11.74%	-6.08%	0.49	-8.44%	-32.23%	(0.19)	62.90%	14.95%	0.77
Nextel Partners	NXTP	4,185,264	15.95	1.14%	-1.72%	-1.90%	(1.00)	4.23%	1.98%	0.95	16.84%	22.49%	(0.12)	36.77%	12.98%	0.03	193.59%	145.64%	0.86
SK Telecom	SKM	15,244,000	20.60	6.27%	-0.67%	-0.85%	(1.00)	0.14%	-2.10%	0.95	-14.02%	-8.36%	0.70	17.45%	-6.35%	0.75	25.87%	-22.09%	0.83
Sprint Corporation	FON	24,425,030	17.15	3.22%	-2.76%	-2.94%	(1.00)	-2.76%	-5.00%	(0.01)	-8.38%	-2.72%	0.71	13.99%	-9.80%	0.74	25.78%	-22.17%	0.95
Telesp Celular Partici	TCP	3,276,311	6.99	0.38%	-1.42%	-1.60%	(1.00)	4.83%	2.58%	0.74	-13.77%	-8.11%	0.72	-1.28%	-25.07%	0.53	67.87%	19.92%	0.91
U.S. Cellular	USM	3,058,432	35.50	0.64%	-0.87%	-1.05%	(1.00)	5.88%	3.63%	0.86	-16.65%	-10.99%	0.68	6.49%	-17.31%	0.59	34.73%	-13.22%	0.90
Verizon Communications	VZ	96,839,200	34.96	10.64%	1.74%	1.56%	1.00	-4.35%	-6.59%	(0.93)	-8.81%	-3.16%	0.18	7.55%	-16.24%	0.77	-6.49%	-54.44%	0.74
Vodafone Group	VOD	157,583,400	23.14	8.70%	-0.93%	-1.11%	(1.00)	-5.81%	-8.05%	(0.29)	-7.49%	-1.83%	0.17	-0.43%	-24.22%	(0.12)	10.98%	-36.97%	0.87
Western Wireless	WWCA	2,582,497	28.16	1.01%	3.40%	3.22%	1.00	15.55%	13.31%	0.97	9.52%	15.17%	(0.01)	61.40%	37.61%	0.67	155.05%	107.09%	0.89
Service Provider Sector Total		443,606,894	236.93	54.47%	-0.40%	-0.58%	(1.00)	-2.34%	-4.58%	0.98	-10.35%	-4.69%	0.67	8.68%	-15.11%	0.64	14.83%	-33.12%	0.95
OEMs & Infrastructure System Providers																			
Crown Castle International	CCI	3,201,692	14.60	1.05%	-2.24%	-2.42%	(1.00)	-0.28%	-2.52%	0.96	6.43%	12.09%	0.10	14.29%	-9.51%	0.39	68.42%	20.47%	0.81
Ericsson	ERICY	44,490,925	28.25	3.74%	-1.39%	-1.57%	(1.00)	0.73%	-1.51%	0.98	-10.97%	-5.31%	0.78	65.57%	41.77%	0.89	163.86%	115.91%	0.96
Motorola	MOT	46,222,260	19.77	14.51%	1.32%	1.14%	1.00	6.94%	4.70%	0.96	11.03%	16.69%	0.30	50.83%	27.03%	0.68	128.39%	80.44%	0.95
Nokia	NOK	65,379,600	13.97	5.75%	-0.80%	-0.98%	(1.00)	-1.80%	-4.05%	0.85	-40.17%	-34.51%	0.55	-23.12%	-46.92%	0.35	-21.71%	-69.67%	0.48
OEMs & Infrastructure Systems Sector Total		159,294,477	76.59	25.05%	0.95%	0.77%	1.00	2.57%	0.32%	0.97	-24.72%	-19.06%	0.69	-1.32%	-25.12%	0.57	10.07%	-37.89%	0.83
Subsystem Product & Solution Suppliers																			
Aether Systems	AETH	151,456	3.50	0.06%	0.29%	0.11%	1.00	-4.20%	-6.45%	0.52	-22.97%	-17.32%	0.59	-27.70%	-51.49%	(0.11)	-35.59%	-83.55%	(0.62)
Research in Motion	RIMM	4,925,184	58.08	2.08%	-0.80%	-0.98%	(1.00)	31.17%	28.92%	0.99	19.02%	24.68%	0.45	164.61%	140.82%	0.69	437.35%	389.40%	0.97
Subsystem Product & Solution Suppliers Total		5,076,640	61.58	2.14%	-3.17%	-3.35%	(1.00)	27.06%	24.81%	0.97	14.28%	19.94%	0.49	165.19%	141.39%	0.73	411.44%	363.49%	0.97
Technology & IC Suppliers																			
Qualcomm, Inc	QCOM	54,246,720	67.28	15.66%	1.36%	1.18%	1.00	7.63%	5.39%	0.99	6.59%	12.24%	0.78	37.75%	13.95%	0.65	103.84%	55.88%	0.97
RF Micro Devices	RFMD	1,453,105	7.82	0.56%	-2.38%	-2.56%	(1.00)	6.28%	4.04%	0.85	-18.02%	-12.36%	0.82	-24.25%	-48.04%	(0.24)	36.01%	-11.94%	(0.07)
S.R. Telecom	SRXA	45,570	3.32	0.01%	-9.94%	-10.12%	(1.00)	-22.61%	-24.86%	(0.02)	-53.33%	-47.68%	0.42	-54.03%	-77.83%	0.18	#N/A	#N/A	#N/A
Technology & IC Sector Total		55,745,395	78.42	16.22%	0.27%	0.09%	1.00	6.63%	4.39%	1.00	5.17%	10.82%	0.81	35.07%	11.27%	0.66	104.03%	56.08%	0.97
WMH Index Total	WMH	663,723,406	55.86	97.89%	-0.16%	-0.34%	(1.00)	-1.51%	-3.75%	0.99	-13.26%	-7.60%	0.74	6.78%	-17.01%	0.64	13.97%	-33.99%	0.94

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe

Moeller Ventures Wireless Universe Relative Performance Statistics

5/3/2004																			
Company Name	Ticker	Market Cap (basic share count X price, in thousands US\$)	Weekly Close Price (US\$) for the Week Beginning 05/31/04	% of WMH Index	1 Week Rolling % Change	1 Week Variance to WMH Index	1 Week Rolling Correlation Factor	4 Week Rolling % Change	4 Week Variance to WMH Index	4 Week Rolling Correlation Factor	13 Week Rolling % Change	13 Week Variance to WMH Index	13 Week Rolling Correlation Factor	26 Week Rolling % Change	26 Week Variance to WMH Index	26 Week Rolling Correlation Factor	52 Week Rolling % Change	52 Week Variance to WMH Index	52 Week Rolling Correlation Factor
WAN Cellular / PCS Service Providers																			
AT&T Wireless	AWE	38,692,620	14.22	10.18%	0.49%	0.32%	1.00	2.23%	-0.02%	0.96	4.94%	10.60%	(0.02)	95.74%	71.94%	0.74	87.98%	40.03%	0.86
Nextel Communications	NXTL	25,482,240	23.04	6.60%	0.43%	0.25%	1.00	-4.60%	-6.84%	(0.41)	-11.74%	-6.08%	0.49	-8.44%	-32.23%	(0.19)	62.90%	14.95%	0.77
SK Telecom	SKM	15,244,000	20.60	6.27%	-0.67%	-0.85%	(1.00)	0.14%	-2.10%	0.95	-14.02%	-8.36%	0.70	17.45%	-6.35%	0.75	25.87%	-22.09%	0.83
Telesp Celular Partici	TCP	3,276,311	6.99	0.38%	-1.42%	-1.60%	(1.00)	4.83%	2.58%	0.74	-13.77%	-8.11%	0.72	-1.28%	-25.07%	0.53	67.87%	19.92%	0.91
U.S. Cellular	USM	3,058,432	35.50	0.64%	-0.87%	-1.05%	(1.00)	5.88%	3.63%	0.86	-16.65%	-10.99%	0.68	6.49%	-17.31%	0.59	34.73%	-13.22%	0.90
Western Wireless	WWCA	2,582,497	28.16	1.01%	3.40%	3.22%	1.00	15.55%	13.31%	0.97	9.52%	15.17%	(0.01)	61.40%	37.61%	0.67	155.05%	107.09%	0.89
Service Provider Sector Total		88,336,100	128.51		-0.88%	-0.76%	1.00	-0.63%	-2.57%	0.92	-11.43%	-5.49%	0.73	20.82%	-2.60%	0.88	31.66%	-15.84%	0.92
Cellular / PCS Infrastructure System Providers																			
American Tower Corp.	AMT	3,096,732	14.05		1.30%	1.12%	1.00	6.62%	4.38%	0.93	18.83%	24.49%	(0.08)	28.18%	4.38%	0.15	61.03%	13.08%	0.71
Crown Castle International	CCI	3,201,692	14.60	1.05%	-2.24%	-2.42%	(1.00)	-0.28%	-2.52%	0.96	6.43%	12.09%	0.10	14.29%	-9.51%	0.39	68.42%	20.47%	0.81
SpectraSite Inc.	SSI	1,958,771	40.91		-2.02%	-2.20%	(1.00)	8.07%	5.83%	0.88	8.82%	14.48%	0.20	17.46%	-6.34%	0.33	55.05%	7.09%	0.78
Infrastructure Sytem Provider Sector Total		8,257,196	69.56		0.06%	0.18%	(1.00)	5.67%	3.74%	0.96	14.00%	19.94%	0.01	23.64%	0.21%	0.29	75.02%	27.52%	0.81
Cellular / PCS OEMs																			
Ericsson	ERICY	44,490,925	28.25	3.74%	-1.39%	-1.57%	(1.00)	0.73%	-1.51%	0.98	-10.97%	-5.31%	0.78	65.57%	41.77%	0.89	163.86%	115.91%	0.96
Motorola	MOT	46,222,260	19.77	14.51%	1.32%	1.14%	1.00	6.94%	4.70%	0.96	11.03%	16.69%	0.30	50.83%	27.03%	0.68	128.39%	80.44%	0.95
Nokia	NOK	65,379,600	13.97	5.75%	-0.80%	-0.98%	(1.00)	-1.80%	-4.05%	0.85	-40.17%	-34.51%	0.55	-23.12%	-46.92%	0.35	-21.71%	-69.67%	0.48
OEM Sector Total		156,092,785	61.99		0.95%	1.08%	(1.00)	2.57%	0.63%	0.96	-24.72%	-18.78%	0.70	-1.32%	-24.74%	0.58	10.07%	-37.44%	0.83
Infrastructure Subsystem & Product Suppliers																			
Anaren Inc.	ANEN	312,809	15.21		1.13%	0.95%	1.00	7.33%	5.09%	0.97	-7.36%	-1.71%	0.70	13.30%	-10.50%	0.36	63.45%	15.50%	0.85
Andrew Corporation	ANDW	3,073,167	19.35		-1.78%	-1.96%	(1.00)	13.26%	11.02%	0.98	3.54%	9.20%	0.52	75.77%	51.98%	0.72	96.94%	48.99%	0.91
Powerwave Technologies	PWAV	497,635	7.85		-2.12%	-2.30%	(1.00)	14.96%	12.71%	0.95	-20.89%	-15.23%	0.79	1.82%	-21.98%	0.30	12.64%	-35.31%	0.43
REMEC, Inc.	REMC	399,115	6.51		2.29%	2.11%	1.00	7.20%	4.96%	0.94	-4.83%	0.83%	0.73	-39.26%	-63.05%	(0.28)	-14.65%	-62.60%	(0.51)
Infrastructure Subsystem & Product Sector Total		4,282,726	48.92		-0.14%	-0.01%	1.00	17.94%	16.01%	0.99	10.00%	15.94%	0.41	53.61%	30.19%	0.62	130.30%	82.79%	0.92
Broadband Wireless Product Suppliers																			
Alvarion LTD.	ALVR	611,505	11.08		1.40%	1.23%	1.00	13.46%	11.21%	0.91	-30.96%	-25.30%	0.63	1.32%	-22.48%	0.53	214.71%	166.76%	0.91
Airspan Networks Inc.	AIRN	191,673	5.34		-3.24%	-3.42%	(1.00)	4.88%	2.64%	0.85	-12.11%	-6.45%	0.73	67.29%	43.49%	0.73	210.40%	162.45%	0.94
California Amplifier	CAMP	110,447	7.42		-0.53%	-0.71%	(1.00)	-4.36%	-6.60%	0.96	-49.76%	-44.11%	0.56	-15.42%	-39.22%	0.08	119.41%	71.46%	0.81
Ceragon Networks LTD.	CRNT	125,873	5.09		-1.92%	-2.10%	(1.00)	-13.71%	-15.95%	(0.45)	-25.98%	-20.32%	0.52	-27.35%	-51.15%	(0.10)	87.50%	39.55%	0.68
Proxim	PROX	165,064	1.34		2.26%	2.08%	1.00	2.26%	0.01%	0.50	-46.88%	-41.22%	0.35	-8.72%	-32.52%	0.26	-17.58%	-65.53%	0.54
S.R. Telecom	SRXA	45,570	3.32	0.01%	-9.94%	-10.12%	(1.00)	-22.61%	-24.86%	(0.02)	-53.33%	-47.68%	0.42	-54.03%	-77.83%	0.18	#N/A	#N/A	#N/A
Stratex Networks	STXN	244,408	2.91		4.51%	4.34%	1.00	10.66%	8.42%	0.44	-40.28%	-34.62%	0.64	-22.22%	-46.02%	0.21	-2.90%	-50.86%	0.39
Broadband Wireless Product Suppliers Total		1,494,540	36.50		0.82%	0.94%	(1.00)	5.59%	3.65%	0.83	-34.13%	-28.18%	0.65	-2.50%	-25.92%	0.45	88.61%	41.10%	0.89

Wireless Industry Performance Profile – March Quarter 2004 Results

Moeller Ventures Wireless Universe Relative Performance Statistics continued

5/3/2004																			
Company Name	Ticker	Market Cap (basic share count X price, in thousands US\$)	Weekly Close Price (US\$) for the Week Beginning 05/31/04	% of WMH Index	1 Week Rolling % Change	1 Week Variance to WMH Index	1 Week Rolling Correlation Factor	4 Week Rolling % Change	4 Week Variance to WMH Index	4 Week Rolling Correlation Factor	13 Week Rolling % Change	13 Week Variance to WMH Index	13 Week Rolling Correlation Factor	26 Week Rolling % Change	26 Week Variance to WMH Index	26 Week Rolling Correlation Factor	52 Week Rolling % Change	52 Week Variance to WMH Index	52 Week Rolling Correlation Factor
Subsystem Product & Solution Suppliers																			
Aether Systems	AETH	151,456	3.50	0.06%	0.29%	0.11%	1.00	-4.20%	-6.45%	0.52	-22.97%	-17.32%	0.59	-27.70%	-51.49%	(0.11)	-35.59%	-83.55%	(0.62)
At Road Inc.	ARDI	499,533	9.29		0.22%	0.05%	1.00	18.17%	15.93%	1.00	-23.65%	-17.99%	0.60	-27.44%	-51.24%	(0.11)	-10.00%	-57.95%	(0.35)
Novatel Wireless	NVTL	275,885	18.06		6.48%	6.30%	1.00	28.99%	26.74%	0.95	-2.02%	3.64%	0.62	205.03%	181.24%	0.76	527.83%	479.88%	0.89
Research in Motion	RIMM	4,925,184	58.08	2.08%	-0.80%	-0.98%	(1.00)	31.17%	28.92%	0.99	19.02%	24.68%	0.45	164.61%	140.82%	0.69	437.35%	389.40%	0.97
Sierra Wireless	SWIR	680,619	27.24		-2.01%	-2.19%	(1.00)	19.96%	17.72%	0.90	-12.60%	-6.94%	0.52	75.59%	51.80%	0.63	504.87%	456.91%	0.88
Wavecom S.A.	WVCM	121,623	7.98		-4.00%	-4.18%	(1.00)	-16.75%	-18.99%	(0.90)	-43.78%	-38.12%	0.49	-61.67%	-85.47%	(0.20)	-51.73%	-99.69%	(0.51)
Subsystem Product & Solution Suppliers Total		6,654,298	124.15		-2.74%	-2.62%	1.00	25.78%	23.85%	0.99	9.53%	15.48%	0.63	128.98%	105.56%	0.77	321.90%	274.39%	0.98
Wireless & Mobile Software Suppliers																			
Openwave Systems Inc.	OPWW	713,901	11.29		0.72%	0.54%	1.00	22.95%	20.71%	0.96	-26.71%	-21.05%	0.61	-3.18%	-26.98%	0.34	35.38%	-12.57%	0.29
PalmSource, Inc.	PSRC	183,204	17.17		-14.96%	-15.14%	(1.00)	-9.61%	-11.85%	0.24	-25.13%	-19.47%	0.50	-23.70%	-47.50%	(0.21)	#N/A	#N/A	#N/A
Intellisync Corporation	SYNC	166,672	2.61		-4.35%	-4.53%	(1.00)	32.97%	30.72%	0.99	-27.54%	-21.89%	0.69	-54.17%	-77.96%	(0.21)	-39.50%	-87.45%	(0.37)
Subsystem Product & Solution Suppliers Total		1,063,776	31.07		-2.89%	-2.77%	1.00	17.46%	15.53%	0.98	-24.60%	-18.66%	0.71	-12.62%	-36.04%	0.24	55.04%	7.54%	0.51
Technology & IC Suppliers																			
ANADIGICS	ANAD	141,195	4.46		-7.91%	-8.09%	(1.00)	-3.61%	-5.85%	0.75	-30.15%	-24.50%	0.71	-29.50%	-53.30%	0.11	41.43%	-6.52%	0.58
InterDigital Communications	IDCC	951,269	17.25		0.94%	0.76%	1.00	0.53%	-1.72%	0.98	-37.20%	-31.54%	0.76	-13.40%	-37.20%	0.17	-35.49%	-83.45%	0.38
Qualcomm, Inc	QCOM	54,246,720	67.28	15.66%	1.36%	1.18%	1.00	7.63%	5.39%	0.99	6.59%	12.24%	0.78	37.75%	13.95%	0.65	103.84%	55.88%	0.97
RF Micro Devices	RFMD	1,453,105	7.82	0.56%	-2.38%	-2.56%	(1.00)	6.28%	4.04%	0.85	-18.02%	-12.36%	0.82	-24.25%	-48.04%	(0.24)	36.01%	-11.94%	(0.07)
Silicon Laboratories	SLAB	2,542,461	49.86		-4.14%	-4.32%	(1.00)	2.50%	0.25%	0.93	-12.72%	-7.06%	0.81	13.63%	-10.17%	0.82	72.58%	24.62%	0.68
Sirenza Microdevices	SMDI	150,809	4.41		-0.25%	-0.43%	(1.00)	0.00%	-2.24%	(0.33)	-18.20%	-12.54%	0.62	-21.57%	-45.36%	0.03	78.57%	30.62%	0.47
Skyworks Solutions	SWKS	1,284,806	8.60		-4.47%	-4.65%	(1.00)	-5.32%	-7.57%	0.22	-29.42%	-23.76%	0.66	4.79%	-19.01%	0.64	20.45%	-27.50%	0.45
TriQuint Semiconductor	TQNT	737,253	5.43		-1.43%	-1.61%	(1.00)	-0.90%	-3.15%	0.62	-34.45%	-28.79%	0.66	-25.07%	-48.86%	0.13	29.11%	-18.85%	0.52
WJ Communications	WJCI	188,285	3.17		2.52%	2.34%	1.00	10.88%	8.64%	0.97	-39.29%	-33.63%	0.72	-27.56%	-51.35%	(0.09)	185.96%	138.01%	0.40
Technology & IC Sector Total		61,695,902	168.28		0.00%	0.12%	1.00	6.04%	4.10%	1.00	1.30%	7.24%	0.89	30.54%	7.12%	0.76	93.09%	45.59%	0.97
Moeller Ventures Wireless Universe Total																			
Moeller Ventures Wireless Universe Total		327,877,323	668.98		-0.25%	-0.43%	(1.00)	0.46%	-1.78%	0.95	-16.57%	-10.91%	0.74	12.05%	-11.75%	0.77	23.23%	-24.72%	0.92



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Moeller Ventures is a wireless market research, consulting and strategic advisory firm that focuses on bridging the classical gap between the details of technology and the issues of business and finance that drive success by leveraging core industry research into market reports, customized due diligence, strategic partnering and other executive-level consulting. This focus incorporates extensive expertise and a proven track record in dealing with technology, competitors, market trends, regulatory issues and financial analysis, and leveraging extensive relationships across technology suppliers, OEMs/system integrators and end customers, as well as venture capitalists and institutional investors. The net results reflect a real-world understanding of the

details of growth businesses and markets as well as the integrated issues of technology, business and finance and how those issues can be leveraged to create value and maximize success for client organizations.

Moeller Ventures was established by Jim Moeller in March 2002. The company leverages his experience as an analyst in the investment banking business with [RBC Capital Markets](#) (formerly Dain Rauscher Wessels and Wessels, Arnold & Henderson) as well as his 10-year experience in the technology industry, where he worked with companies such as [ADC Telecommunications](#), a wireless technology startup company named Uniplex, the ETA Systems division of Control Data Corporation and IBM. In addition, Mr. Moeller has served as a consultant and freelance analyst, designing technology for projects such as CATV video conferencing and embedded wireless applications as well as writing technology market reports for an independent research firm.

While at [RBC Capital Markets](#) and Dain Rauscher Wessels from 1997 through 2001, Mr. Moeller was the lead wireless technology analyst and studied a large number of public and private companies. During this time, he developed relationships with key industry executives. Mr. Moeller initiated [coverage](#) of the wireless semiconductor and broadband wireless sectors with [insightful reports](#) that resulted in DRW winning underwriting positions on numerous initial public offerings and secondary offerings in those segments. The lead-managed IPO of Aironet (a broadband wireless LAN company) by DRW continues, to this day, to be the firm's most successful wireless transaction, going public in July of 1999 for a valuation of \$150 million and subsequently being purchased by Cisco in a sole-managed M&A transaction by DRW that closed in March of 2000 for \$1.4 billion. In addition, in 1996 Mr. Moeller was a freelance technology market analyst who wrote [reports for Datapro](#) (acquired by the Gartner Group) on topics such as cellular and PCS wireless technology, wireless data communications and mobile computing.

At ADC Telecommunications from 1994 through 1996, Mr. Moeller was a senior project engineer with the Broadband Communications division, leading research, development and systems integration on parts of ADC's Hybrid Fiber Coax (HFC) local-loop telephony and data system. In 1989, Mr. Moeller was one of the initial employees of Uniplex Corporation, a startup company in St. Paul, leading the company's development of early wireless LAN spread spectrum digital radio technology. During his five years at Uniplex, a high-performance, direct sequence spread spectrum radio was designed and implemented for the 902-928MHz unlicensed band and was deployed in early wireless local area networking applications in the 1992 to 1993 timeframe. Additional independent consulting projects include a high frequency video modulator for CATV video conferencing as well as other embedded wireless projects for short-range data networking.

Mr. Moeller holds Master and Bachelor of Science degrees in Electrical Engineering from the [University of Illinois](#) and a Master of Business Administration degree from the [University of St. Thomas](#), in Minneapolis.

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