

FOCUS Telecom  
Technology and Services Group  
Carrier-Focused  
Telecom Technology  
Quarterly

Winter 2014 Report

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FOCUS

Investment Banking

Seasoned, Systematic, Successful<sup>SM</sup>

## Investment Banking and Advisory Services

FOCUS Investment Banking LLC is a leading investment bank with specialized telecom technology and services expertise, concentrating on providing four highly-tailored services to emerging middle market and larger organizations in this sector:

Sellside Assignments  
Buyside Engagements  
Capital Formation  
Valuation and Fairness Options

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# Carrier-Focused Telecom Technology Quarterly

By Richard Pierce, FOCUS Managing Director and Telecom Technology and Services Team Leader

The FOCUS Telecom Technology and Services group consists of four professionals with a mix of backgrounds that include both C-level operating expertise and experience at leading middle market investment banks. The FOCUS Telecom team is uniquely qualified to help middle market clients reach their strategic objectives because the group:

- Devotes significant senior level resources to executing transactions for lower middle market clients,
- Has a breadth of knowledge that covers most segments of the telecom industry,
- Has bankers with C-level operating experience in the telecom industry,
- Has a proven transaction methodology for delivering results,
- Is equally comfortable with buy side and sell side M&A,
- Leverages an experienced team of research professionals,
- Has a national presence with coverage of both east and west coasts.

In 2013, members of the FOCUS Telecom team will be attending many conferences and meetings throughout the U.S. and are always delighted to receive introductions to

innovative companies in the industry. We hope to see you at one of these events, and look forward to exploring your capital market needs as you continue to grow your enterprise.

## Sub Sector Definitions

- **Large Cap:** Large, diversified companies with products across a variety of sub sectors
- **OSS/BSS Software:** Software systems that manage and bill the customer base and monitor and maintain telecom networks
- **IP Networking:** Carrier Ethernet switching, routers and IP Multimedia Subsystem (“IMS”) components
- **Wireline Access and Transport:** DSL equipment, PON equipment and WDM-based transport
- **Cable and Video:** Products such as headends and servers that support video delivery as well as broadband products for cable networks
- **Broadband Wireless:** High capacity, fixed wireless equipment
- **Test and Measurement:** Equipment used by both service providers and manufacturers to test and monitor networks and equipment

# Summary Comments

## Public Markets

Unfortunately FOCUS' Carrier-Focused Telecom Technology Index (CFTTI) did not have the same robust performance this period as the broader market. While the S&P 500 and NASDAQ enjoyed gains of 10.7% and 12.7%, respectively, for the three months ended November 30, 2013, the CFTTI fell 0.9%. This breaks the CFTTI's streak of three straight periods in positive territory. Performance looked much better measured over the 12 month period, with the CFTTI up 24.5%. While this still trailed the 12 month gains of the S&P 500 (27.5%) and the NASDAQ (34.9%), it still represents a very strong return. Sector multiples also are up year-over-year. The CFTTI revenue multiple expanded from 1.0x to 1.3x over this time frame, while the sub sector EBITDA multiple jumped from 7.1x to 8.7x.

## Large Cap

The Large Cap sub sector fell 2.2% for the three month period. Despite the drop in the overall sub sector index, Alcatel-Lucent was still able to turn in a star performance with a three month gain of nearly 65%. Ericsson and Juniper also turned in solid mid-single digit gains. However, these gains were not strong enough to offset an 8.8% decline in Cisco. For the full year, the Large Cap sub sector is up 24.6% with all stocks in the index strongly in positive territory. Alcatel-Lucent once again is the best performer over the 12 month period, nearly tripling during this time frame. ZTE also turned in a strong performance with a year-over-year gain of 115.1%. The sub sector ended the period with a revenue multiple of 1.2x and an EBITDA multiple of 7.8x, both higher than the sub sector multiples from the year-ago period.

## OSS/BSS/Software

The OSS/BSS Software sub sector bucked the overall negative sector trend and turned in a strong gain of 11.1% for the most recent three month period. This made it the second best performing sub sector for the period. Gains were broad-based with ten of the 13 stocks in the sub sector posting gains. Redknee was the top performer with a gain of 64.2%, followed closely by a 58.2% rebound at Subex. Over the past year, the OSS/BSS Software sub sector is up 29.2%. Sub sector multiples also are up over the past year with the sub sector revenue multiple increasing from 1.3x to 1.6x and the sub sector EBITDA multiple increasing from 8.0x to 10.2x.

## IP Networking

The IP Networking sub sector could not maintain the positive momentum it enjoyed in our last report and instead experienced a drop of 4.9% for the three month period. The hardest hit stocks were Dialogic (down 63.2%), Radisys (down 33.9%), and Broadsoft (down 17.5%). Conversely, the three best performing stocks were Sandvine (up 38.9%), Procera Networks (up 17.9%), and Allot Communications (up 6.9%). All three companies are in the deep packet inspection space. The sub sector ended the period at a revenue multiple of 2.2x, consistent with the year-ago period. Sub sector EBITDA is negative, so the sub sector EBITDA multiple is not meaningful.

## Wireline Access and Transport

The Wireline Access and Transport sub sector continued its steady but unspectacular series of gains with an increase of 3.1% for the three month period. Access provider Zhone Technologies was far and away the best performer, more than doubling in the past three months and increasing more than ten times over the past year. Competitor Calix did not fare nearly as well with a loss of 20.3% for the three month period. Another stock that fared poorly is the sub-sector's most recent IPO, Cyan. Cyan dropped more than 50% this period and now only trades at a revenue multiple of 1.1x. For the full year, the sub sector is now up more than 20%, with sub sector multiples at 1.3x revenue and 34.7x EBITDA, respectively. In addition to the previously mentioned Zhone Technologies, transport vendors CIENA, Infinera, and Transmode Systems also are top performers over the past year.

## Cable and Video

The Cable and Video sub sector took the crown as top performing sub sector for this three month period with a gain of 23.3%. With the exception of set top box provider Amino, all the stocks in the index showed gains. SeaChange was the sub sector leader for the period with a gain of 48.4%, while Arris also posted a strong gain of 31.0% as the market continues to react positively to its acquisition of Motorola's cable business. Year-over-year, the sub sector is up 57.5%. Multiple expansion certainly contributed to this gain. The sub sector revenue multiple is 1.1x compared to 0.7x a year ago, while the EBITDA multiple grew from 8.0x to 12.7x during this same period.

## Broadband Wireless

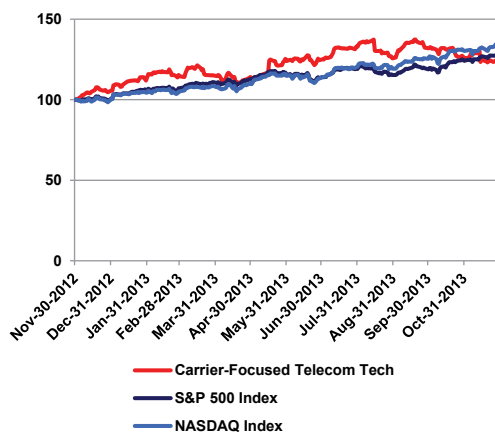
The Broadband Wireless sub sector increased 9.0% for the period. This was driven primarily by a gain of 12.4% at Ubiquiti Networks. With the exception of Alvarion, all the other stocks in the sub sector were down for the three month period. The increases in sub sector multiples over the past year also are primarily attributable to Ubiquiti Networks, which now trades at more than 8x revenue and 26x EBITDA. This is up significantly from the company's year-ago multiples and has helped power the sub sector's revenue multiple from 0.9x a year ago to its current level of 2.7x.

## Test and Measurement

Unfortunately for the test and Measurement sector, it maintained its position as the worst performing sub sector for the third straight report. The sub sector was down 5.9% for the three month period with six of the eight stocks in the index posting losses. The lone exceptions were Ascom and EXFO, which also are the top performing stocks for the 12 month period. The sub sector revenue and EBITDA multiples now stand at 1.7x and 12.5x, respectively. The revenue multiple is flat from a year ago, while the EBITDA multiple is actually up. This indicates that sector EBITDA margins have compressed over the past year; a likely contributor to the sub sector's poor performance during this time frame.

## Carrier-Focused Telecom Technology: Public Market Summary

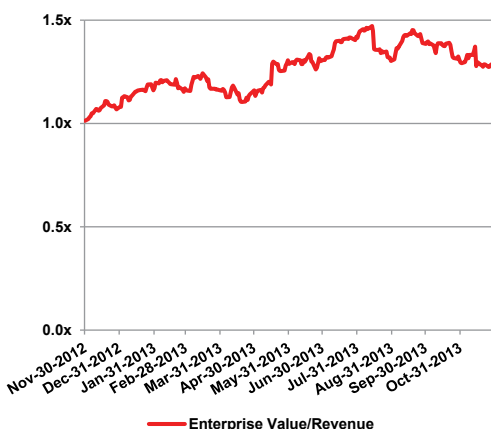
Twelve Month Index Returns



Sector and Sub Sector Returns

	12 Month	3 Month
Carrier-Focused Telecom Tech	24.5%	-0.9%
Large Cap	24.6%	-2.2%
OSS/BSS	29.2%	11.1%
IP Networking	3.8%	-4.9%
Wireline Access and Transport	20.1%	3.1%
Cable and Video	57.5%	23.3%
Broadband Wireless	155.4%	9.0%
Test and Measurement	-6.1%	-5.9%
S&P 500	27.5%	10.7%
NASDAQ	34.9%	12.7%

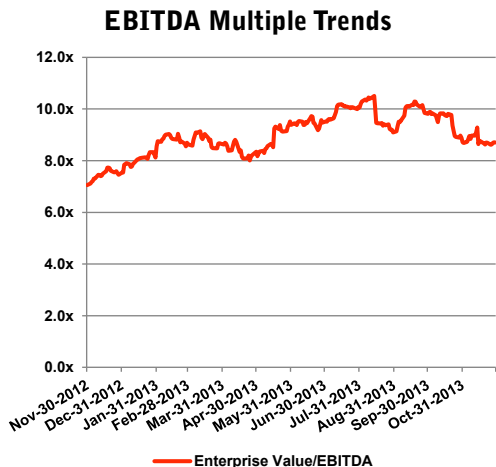
Revenue Multiple Trends



Sector and Sub Sector Revenue Multiples

	11/31/2013	11/31/2012
Carrier-Focused Telecom Tech	1.3x	1.0x
Large Cap	1.2x	1.0x
OSS/BSS	1.6x	1.3x
IP Networking	2.2x	2.2x
Wireline Access and Transport	1.3x	0.9x
Cable and Video	1.1x	0.7x
Broadband Wireless	2.7x	0.9x
Test and Measurement	1.7x	1.7x

Source: Capital IQ



Sector and Sub Sector EBITDA Multiples

	11/31/2013	11/31/2012
Carrier-Focused Telecom Tech	8.7x	7.1x
Large Cap	7.8x	6.4x
OSS/BSS	10.2x	8.0x
IP Networking	NM	58.5x
Wireline Access and Transport	34.7x	23.1x
Cable and Video	12.7x	8.0x
Broadband Wireless	35.4x	13.1x
Test and Measurement	12.5x	10.7x

Source: Capital IQ

## Carrier-Focused Telecom Technology Stocks

### M&A

With only one month remaining in 2013, M&A transaction numbers continue to be well behind what we saw in 2012. Conversely, dollar volume remains relatively high. The year-to-date total of nearly \$7.8 billion guarantees that this will be at least the second highest year of the last five in terms of announced dollar volume of transactions, behind only 2012. This most recent three month period was active both in terms of announced transactions and dollar volume. We counted 20 transactions for approximately \$1.3 billion in announced dollar volume, which means that the sector is closing out the year with some solid momentum.

### OSS/BSS Software

After a slow spell in our Autumn report, M&A activity in the OSS/BSS Software sector picked up dramatically with ten transactions for the period. Wireless network planning and optimization software was a particularly active area. Amdocs purchased two such companies, Actix and Celcite, for a combined total of nearly \$250 million. The acquisitions bolster Amdocs' capabilities in both analytics and Self Optimizing Networks (SONs). The two other acquisitions in this space were TEOCO's purchase of Aircom and Infovista's purchase of Aexio. Other transactions included IBM's acquisition of customer experience analytics company The Now Factory and Transaction Network Services' purchase of roaming services platform RoamEX.

### IP Networking

There were no transactions in the IP Networking sub sector this period.

### Wireline Access and Transport

Marlin Equity continued its run of acquisitions in the wireline access and transport sub sector with its purchase of Tellabs for approximately \$330 million. The acquisition builds on Marlin Equity's previous acquisitions of Sycamore Networks and the optical assets of Nokia Siemens Networks (both now combined to form the Coriant platform). A number of strategic and financial buyers reviewed the Tellabs transaction, but Marlin Equity offered the best price and was also willing to acquire the entire company (instead of just certain pieces).

### Cable and Video

The Cable and Video sub sector was extremely active with four transactions for the period. The major deal in the sub sector was Pace's acquisition of Aurora Networks. After losing out to Arris in the purchase of Motorola's cable business, the Aurora Networks purchase serves as a nice consolation prize that broadens Pace's product portfolio to include optical access and transport equipment. In addition, Aurora has a strong customer base that includes many large MSOs so Pace expects that the acquisition will strengthen relationships with many of its existing customers.

## Broadband Wireless

The Broadband Wireless sub sector saw two transactions this period. The first was Ericsson's acquisition of Airvana's EVDO business. While not a growth market, the acquisition strengthens Ericsson's position with several key CDMA customers and also resolves a law suit between the two companies. In the second transaction, Bird Technologies acquired distributed antenna systems provider DeltaNode.

## Test and Measurement

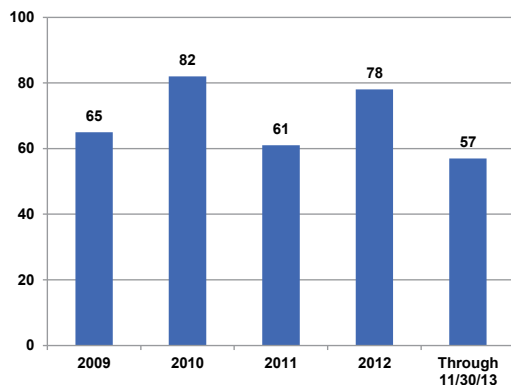
While the Test and Measurement sub sector continued to have challenges in the public markets, this did not seem to dampen M&A activity in the sub sector. We saw three Test and Measurement transactions for the period. Thoma Bravo followed up its acquisition of Keynote Systems from our last report with the purchase of privately held Empirix. In the other notable acquisition for the period, Ixia acquired application-aware network performance monitoring vendor Net Optics for \$190 million.

## Transactions with Multiples

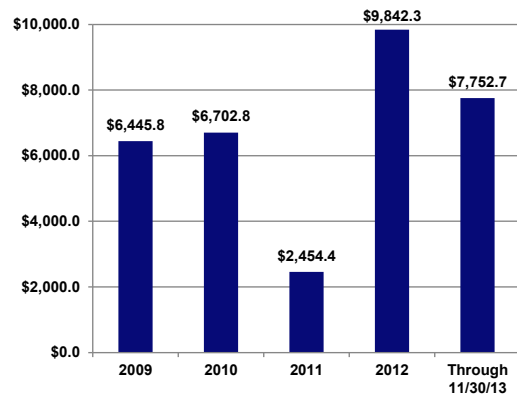
The period saw three transactions with multiples. The highest multiple belonged to the Ixia/Net Optics transaction, which was done at 3.4x revenue. While the multiple was high, Net Optics had been growing between 20% and 30% per year and Ixia expects that the acquisition will be accretive to its earnings. The second transaction with a multiple was Pace's acquisition of Aurora Networks. The revenue multiple for this transaction was a solid if not spectacular 1.4x, but the 10.3x EBITDA multiple certainly indicates Pace's willingness to pay a strategic price. Finally, the Marlin Equity acquisition of struggling Tellabs was for only 0.4x revenue. While the EBITDA multiple was extremely high at 84.6x, this high multiple was more a function of Tellabs' low margins and the likelihood that Marlin Equity believes that it can drive cost saving post-acquisition.

## Carrier-Focused Telecom Technology: M&A Summary

**M&A Activity: Number of Transactions**



**M&A Activity (\$ Value of Transactions in Millions)**



## Announced Transactions (9/1/13 – 11/30/13)

Acquiror	Target	Date Announced	Sector	Purchase Price	Description
Boku	Qubecell	11/22/13	OSS/BSS Software	NA	Mobile billing platform with direct carrier billing connections with four of the largest carrier networks in India.
TEOCO Corporation	AIRCOM	11/20/13	OSS/BSS Software	NA	Network planning, optimization and management software for mobile networks.
Hon Hai Precision Industry	Ubee Intercative	11/13/13	Cable and Video	\$204.8	Broadband access customer premises equipment and related software for data, voice, video and wireless networks.
Amdocs	Celcite	11/5/13	OSS/BSS Software	\$129.0	Self-organizing/self optimizing network and network management solutions for wireless network operators.
Ixia	Net Optics	10/29/13	Test and Measurement	\$190.0	Network and virtualization taps and application-aware network performance monitoring solutions and network packet brokers.
Evolving Systems	Telespree	10/25/13	OSS/BSS Software	NA	SaaS provider of service activation, self-service mobile applications and data enablement solutions to wireless carriers and MVNOs.
Pace	Aurora Networks	10/23/13	Cable and Video	\$310.0	Optical transport systems including headend and hub products, CWDM Ethernet access systems and optical node products.
Infovista	Aexio	10/23/13	OSS/BSS Software	NA	Network optimization software that enables RF engineers to optimize mobile networks based on live network measurements.
Marlin Equity	Tellabs	10/21/13	Wireline Access and Transport	\$329.9	Digital cross-connect systems, managed transport systems and Metro Ethernet switching products as well as access solutions.
ENTRE PRENEUR	Alexon	10/18/13	Cable and Video	NA	Communication equipment and cable broadcast equipment for the small office and home office market.
Nectar Services	NetSocket (Cloud Experience Manager Solution)	10/10/13	OSS/BSS Software	NA	Service assurance software for the unified communications industry that correlates session, content and topology data in real time.
Thoma Bravo	Empirix	10/9/13	Test and Measurement	NA	Network performance visibility solutions for data sourcing, collection, aggregation, analysis, information generation and presentation.
IBM Corporation	The Now Factory	10/1/13	OSS/BSS Software	NA	Customer experience management, network planning, service assurance, customer care and marketing solutions.
Xinwei Telecom Enterprise Group	Beijing Zhongchuang Telecom Test	9/26/13	Test and Measurement	NA	Test instrument products including GSM/GPRS enhanced signaling analyzers, IMS protocol analyzers and NGN protocol analyzers.
Bird Technologies	DeltaNode	9/24/13	Broadband Wireless	NA	RF-over-fiber distributed antenna systems and repeaters for commercial wireless and public safety communication systems.
Quintech Electronics	DEV Systemtechnik	9/12/13	Cable and Video	NA	Products for the optical and electrical transmission of RF signals for satellite, cable and broadcast television head ends.
Transaction Network Services	RoamEX	9/12/13	OSS/BSS Software	NA	Wireless roaming fraud detection and prevention services to GSM and CDMA mobile operators around the world.
Genband	fring	9/11/13	OSS/BSS Software	NA	White-label service that includes capabilities for mobile group video chat, 2-way video chat, voice-only calls and text chat.
Ericsson	Airvana (EVDO Business)	9/6/13	Broadband Wireless	NA	EVDO software that enables data transmission in CDMA wireless networks.
Amdocs	Actix	9/3/13	OSS/BSS Software	\$120.0	Network analytics and optimization solutions that help to automate mobile network optimization activities.

## Announced Transactions with Revenue Multiples (12/1/12 – 11/30/13)

Acquiror	Target	Date Announced	Sector	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Ixia	Net Optics	10/29/13	Test and Measurement	\$190.0	3.4 x	NA	Network and virtualization taps and application-aware network performance monitoring solutions and network packet brokers.
Pace	Aurora Networks	10/23/13	Cable and Video	\$310.0	1.4 x	10.3 x	Optical transport systems including headend and hub products, CWDM Ethernet access systems and optical node products.
Marlin Equity	Tellabs	10/21/13	Wireline Access and Transport	\$329.9	0.4 x	84.6 x	Digital cross-connect systems, managed transport systems and Metro Ethernet switching products as well as access solutions.
Valley Telecom	Alvarion	8/26/13	Broadband Wireless	\$3.9	0.1 x	NM	Wireless products that enable the delivery of business and residential broadband access over a variety of frequency bands.
Anite	Genetel	7/2/13	Test and Measurement	\$2.0	0.2 x	NA	Solutions for mobile networks including quality of service/experience, network optimization and planning and performance management.
Nokia	Nokia Siemens Networks	7/1/13	Large Cap	\$2,758.6	0.2 x	1.2 x	Provides telecommunications infrastructure primarily related to the mobile broadband market.
Thoma Bravo	Keynote Systems	6/24/13	Test and Measurement	\$340.8	2.8 x	23.1 x	Mobile and Web cloud testing and monitoring services that offer visibility into the performance and availability of Web transactions.
CITIC Capital Partners	AsialInfo-Linkage	5/12/13	OSS/BSS Software	\$533.9	0.9 x	8.1 x	Provides telecommunications software solutions and information technology products and services to telecommunications operators.
Westell	Kentrox	3/18/13	OSS/BSS Software	\$30.0	1.0 x	NA	Site monitoring, management and control solutions for wireless, broadband, utilities and enterprises.
Aurora Networks	Harmonic (Optical Transmission Business)	2/19/13	Cable and Video	\$46.0	0.9 x	NA	Cable access product portfolio including optical transmitters, amplifiers, receivers and nodes.
Oracle	Acme Packet	2/4/13	IP Networking	\$1,645.6	6.0 x	192.0 x	Session Border Controllers and other session delivery network solutions that enable the delivery of services across IP networks.
ARRIS	Motorola Mobility (Home Business Unit)	12/19/12	Cable and Video	\$2,350.0	0.7 x	NA	Set-top boxes, transport, encoders/decoders and broadband access infrastructure for cable and telecom service providers.



## Sub Sector Analysis: Large Cap

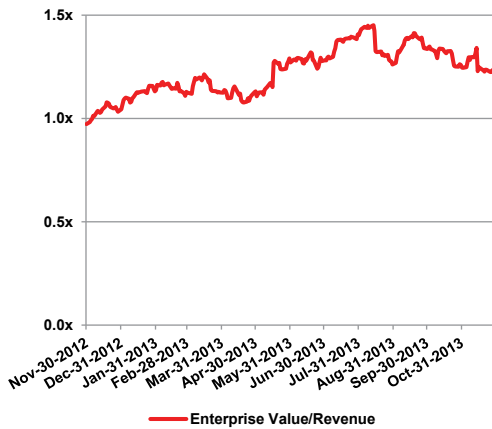
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Large Cap Index	24.6%	-2.2%
Aicatel-Lucent	286.9%	64.8%
Cisco	12.4%	-8.8%
Ericsson	33.2%	6.2%
Juniper	12.7%	7.2%
ZTE	115.1%	-0.2%

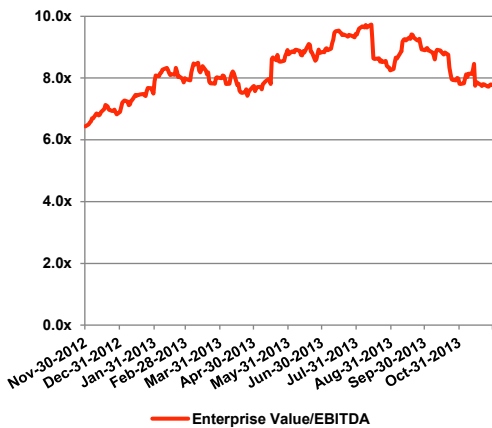
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
Large Cap Index	1.2x	1.0x
Aicatel-Lucent	0.6x	0.2x
Cisco	1.7x	1.5x
Ericsson	1.0x	0.7x
Juniper	1.8x	1.6x
ZTE	1.0x	0.6x

### EBITDA Multiple Trends



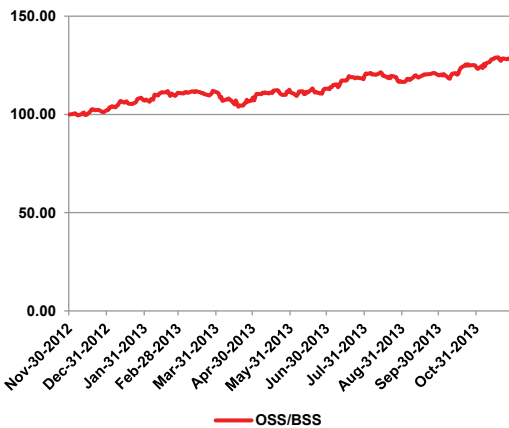
### Company EBITDA Multiples

	11/30/2013	11/30/2012
Large Cap Index	7.8x	6.4x
Aicatel-Lucent	7.9x	4.6x
Cisco	5.9x	5.4x
Ericsson	8.3x	6.5x
Juniper	11.4x	11.9x
ZTE	26.1x	59.7x

Source: Capital IQ

## Sub Sector Analysis: OSS/BSS Software

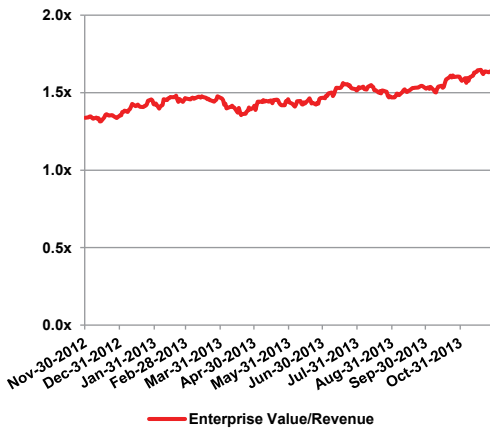
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
OSS/BSS Index	29.2%	11.1%
Amdocs	21.6%	9.8%
AsialInfo-Linkage	1.1%	2.8%
Astellia	-5.7%	-6.4%
Comptel	29.0%	3.1%
Comverse	NM	10.7%
CSG Systems	55.6%	22.6%
Evolving Systems	54.2%	18.9%
NetScout Systems	20.6%	22.5%
Radcom	67.3%	-17.0%
Redknee	402.3%	64.2%
Subex	-56.8%	58.2%
Synchronoss	72.2%	-7.7%
Tecnotree	41.8%	3.1%

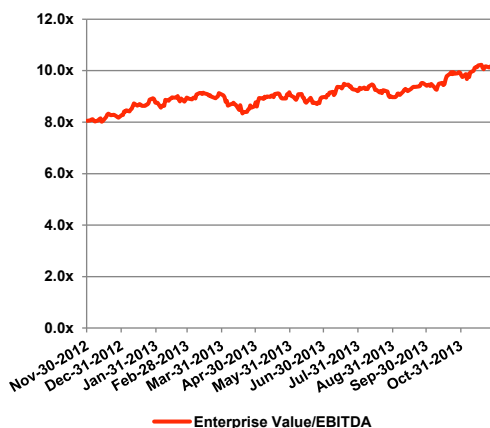
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
OSS/BSS Index	1.6x	1.3x
Amdocs	1.6x	1.4x
AsialInfo-Linkage	0.9x	1.1x
Astellia	0.6x	0.6x
Comptel	0.7x	0.5x
Comverse	0.7x	NM
CSG Systems	1.3x	0.9x
Evolving Systems	4.0x	2.6x
NetScout Systems	3.1x	2.6x
Radcom	1.8x	0.9x
Redknee	6.1x	1.7x
Subex	2.7x	2.2x
Synchronoss	3.7x	2.2x
Tecnotree	0.7x	0.7x

### EBITDA Multiple Trends



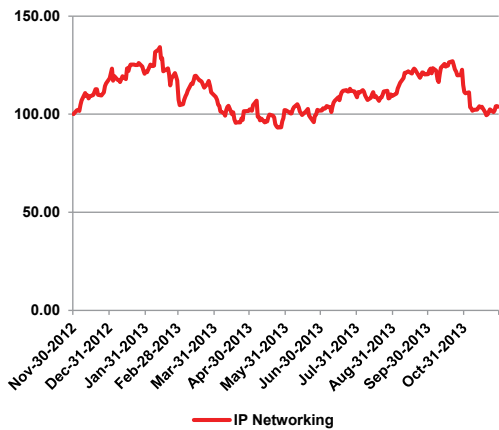
### Company EBITDA Multiples

	11/30/2013	11/30/2012
OSS/BSS Index	10.2x	8.0x
Amdocs	8.7x	7.6x
AsialInfo-Linkage	7.8x	8.6x
Astellia	NM	6.4x
Comptel	7.8x	NM
Comverse	7.0x	NM
CSG Systems	7.9x	4.4x
Evolving Systems	15.0x	14.3x
NetScout Systems	14.0x	11.3x
Radcom	NM	NM
Redknee	82.9x	14.6x
Subex	11.5x	12.3x
Synchronoss	18.4x	10.5x
Tecnotree	NM	NM

Source: Capital IQ

## Sub Sector Analysis: IP Networking

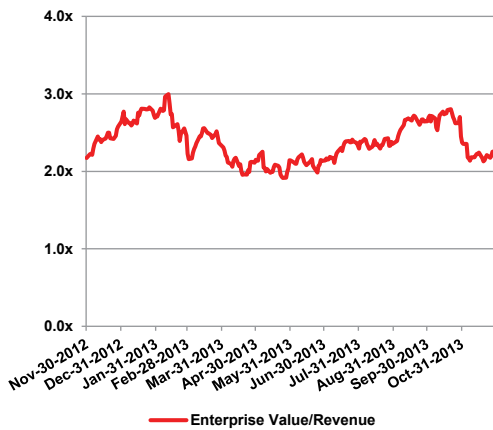
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
IP Networking Index	3.8%	-4.9%
Allot Communications	-40.3%	6.9%
Audiocodes	133.5%	0.2%
Broadsoft	-16.0%	-17.5%
Dialogic	-74.7%	-63.2%
Mavenir Systems	NA	NA
Performance Technologies	241.1%	4.7%
Procera Networks	-26.1%	17.9%
Radisys	-0.4%	-33.9%
Ruckus Wireless	-1.5%	-4.0%
Sandvine	95.7%	38.9%
SONUS Networks	74.3%	-15.7%

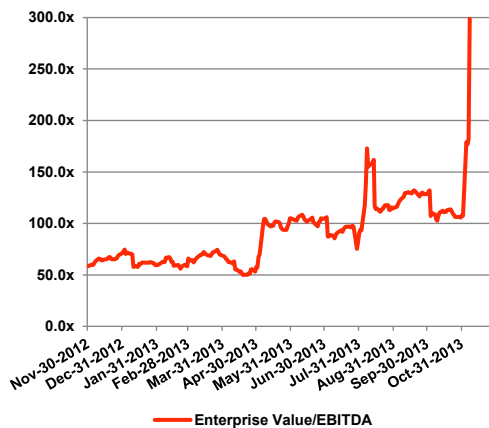
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
IP Networking Index	2.2x	2.2x
Allot Communications	3.2x	5.4x
Audiocodes	1.6x	0.8x
Broadsoft	4.0x	4.9x
Dialogic	0.7x	0.5x
Mavenir Systems	3.2x	NA
Performance Technologies	0.8x	NM
Procera Networks	2.9x	4.5x
Radisys	0.3x	0.2x
Ruckus Wireless	3.5x	5.3x
Sandvine	2.5x	1.3x
SONUS Networks	2.2x	0.8x

### EBITDA Multiple Trends



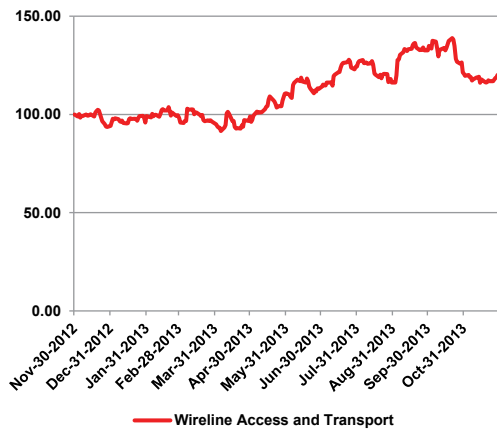
### Company EBITDA Multiples

	11/30/2013	11/30/2012
IP Networking Index	NM	58.5x
Allot Communications	NM	35.1x
Audiocodes	39.4x	NM
Broadsoft	92.8x	25.2x
Dialogic	NM	NM
Mavenir Systems	NM	NA
Performance Technologies	13.9x	NM
Procera Networks	NM	37.0x
Radisys	24.8x	7.4x
Ruckus Wireless	90.8x	46.3x
Sandvine	12.9x	NM
SONUS Networks	NM	NM

Source: Capital IQ

## Sub Sector Analysis: Wireline Access and Transport

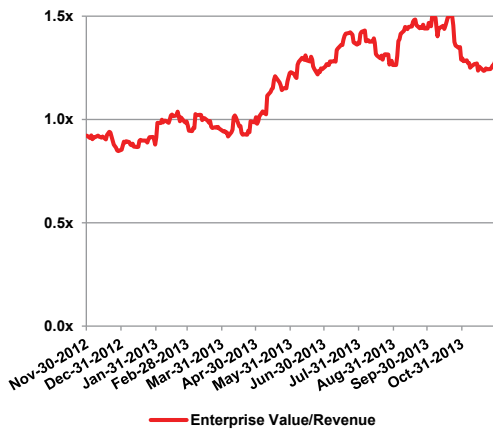
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Wireline Access & Transport Index	20.1%	3.1%
ADTRAN	30.6%	6.5%
ADVA	-4.9%	2.2%
BATM	7.3%	38.7%
Calix	38.8%	-20.3%
CIENA	49.3%	11.5%
Communications Systems	9.5%	-5.0%
Cyan	NA	-52.4%
Infinera	66.7%	0.3%
MRV Communications	13.7%	15.4%
Net Insight	-19.8%	2.9%
Orckit Communications	-20.6%	-24.7%
Tellabs	-31.2%	10.4%
Transmode Systems	64.1%	10.8%
Zhone Technologies	1118.2%	108.6%

**Revenue Multiple Trends**

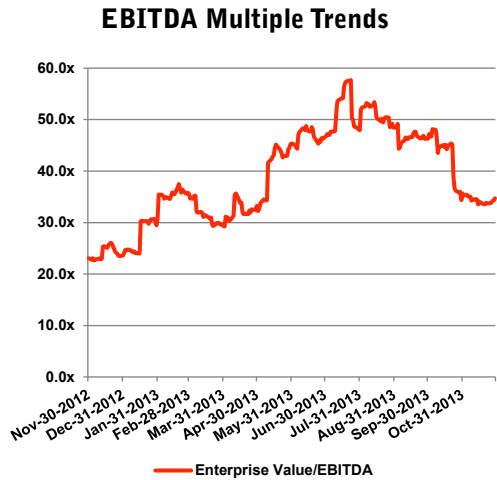


**Company Revenue Multiples**

	11/30/2013	11/30/2012
Wireline Access & Transport Index	1.3x	0.9x
ADTRAN	2.1x	1.6x
ADVA	0.5x	0.5x
BATM	0.7x	0.7x
Calix	1.1x	0.9x
CIENA	1.5x	1.2x
Communications Systems	0.6x	0.6x
Cyan	1.1x	NA
Infinera	1.7x	1.1x
MRV Communications	0.4x	0.5x
Net Insight	1.2x	1.5x
Orckit Communications	2.0x	1.5x
Tellabs	0.4x	0.3x
Transmode Systems	2.4x	1.5x
Zhone Technologies	1.4x	0.1x

Source: Capital IQ

## Sub Sector Analysis: Wireline Access and Transport *continued*



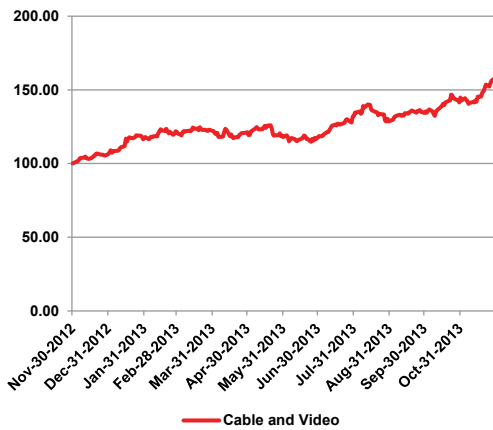
### Company EBITDA Multiples

	11/30/2013	11/30/2012
Wireline Access & Transport Index	34.7x	23.1x
ADTRAN	24.1x	9.7x
ADVA	7.5x	5.1x
BATM	34.8x	26.8x
Calix	36.5x	NM
CIENA	26.1x	36.9x
Communications Systems	8.8x	12.2x
Cyan	NM	NA
Infinera	NM	NM
MRV Communications	NM	NM
Net Insight	40.1x	19.2x
Orckit Communications	NM	NM
Tellabs	NM	14.1x
Transmode Systems	13.3x	8.3x
Zhone Technologies	38.8x	NM

Source: Capital IQ

## Sub Sector Analysis: Cable and Video

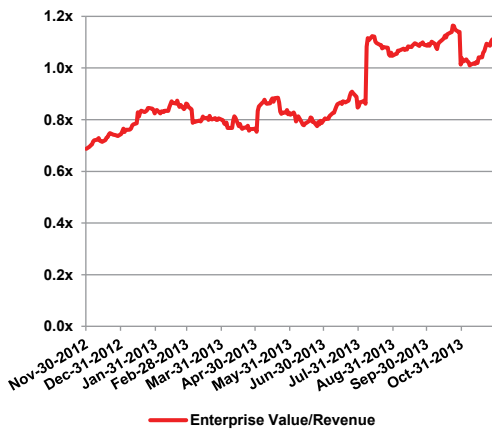
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Cable and Video Index	57.5%	23.3%
Amino	60.9%	-7.3%
Arris	46.9%	31.0%
Envivio	81.5%	18.5%
Harmonic	68.1%	8.9%
NetGem	2.3%	3.8%
Pace	76.1%	17.0%
SeaChange	60.4%	48.4%

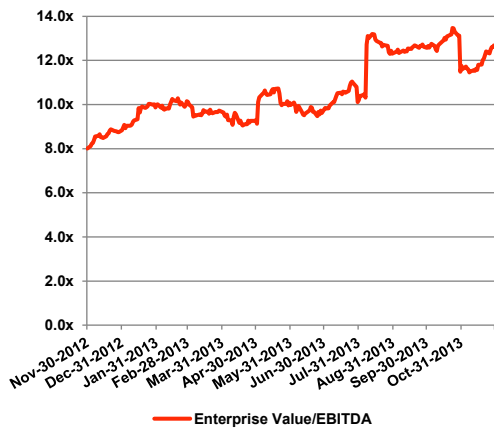
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
Cable and Video Index	1.1x	0.7x
Amino	0.7x	0.4x
Arris	1.6x	1.0x
Envivio	NM	NM
Harmonic	1.2x	0.7x
NetGem	0.8x	0.7x
Pace	0.6x	0.5x
SeaChange	2.4x	1.3x

### EBITDA Multiple Trends



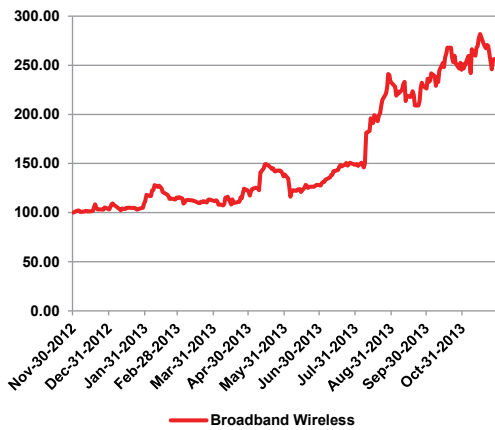
### Company EBITDA Multiples

	11/30/2013	11/30/2012
Cable and Video Index	12.7x	8.0x
Amino	6.8x	5.2x
Arris	14.7x	8.5x
Envivio	NM	NM
Harmonic	19.3x	9.9x
NetGem	5.4x	5.1x
Pace	7.9x	6.6x
SeaChange	21.9x	22.4x

Source: Capital IQ

## Sub Sector Analysis: Broadband Wireless

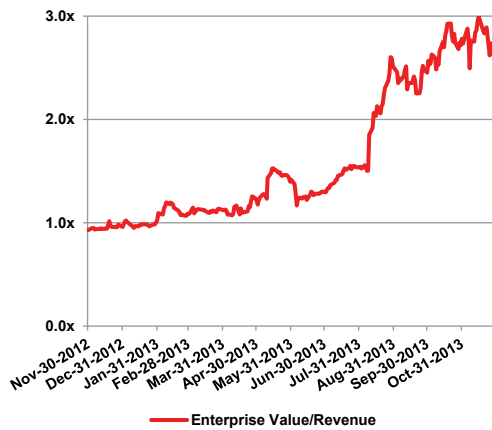
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Broadband Wireless Index	155.4%	9.0%
Alvarion	-84.1%	10.4%
Aviat Networks	-8.0%	-0.4%
Ceragon Networks	-49.0%	-27.4%
DragonWave	-50.2%	-55.2%
Redline Communications	-44.3%	-43.1%
Ubiquiti Networks	235.3%	12.4%

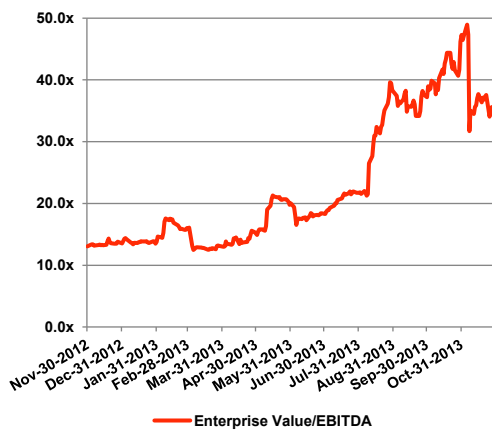
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
Broadband Wireless Index	2.7x	0.9x
Alvarion	0.2x	0.2x
Aviat Networks	0.2x	0.2x
Ceragon Networks	0.4x	0.4x
DragonWave	0.6x	0.7x
Redline Communications	1.1x	1.2x
Ubiquiti Networks	8.4x	2.9x

### EBITDA Multiple Trends



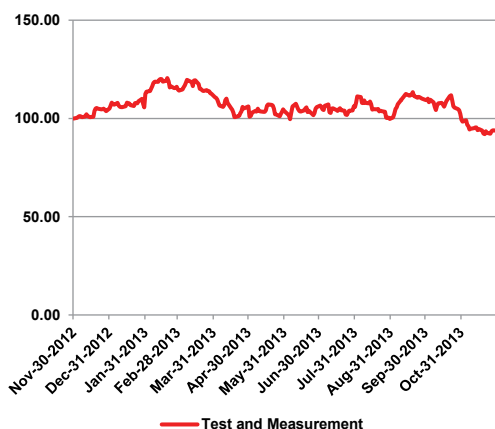
### Company EBITDA Multiples

	11/30/2013	11/30/2012
Broadband Wireless Index	35.4x	13.1x
Alvarion	NM	NM
Aviat Networks	76.9x	20.7x
Ceragon Networks	NM	NM
DragonWave	NM	NM
Redline Communications	NM	13.3x
Ubiquiti Networks	26.0x	8.4x

Source: Capital IQ

## Sub Sector Analysis: Test and Measurement

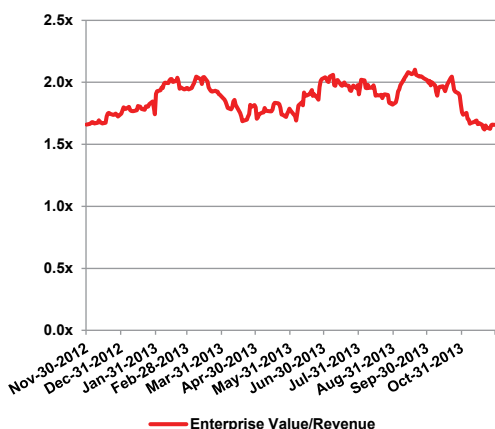
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Test and Measurement Index	-6.1%	-5.9%
Anite	-35.0%	-18.9%
Anritsu	-7.4%	-2.8%
Ascom	76.6%	18.8%
EXFO	12.2%	11.2%
Gigamon	NA	-13.6%
Ixia	-13.5%	-10.5%
JDS Uniphase	0.1%	-5.4%
Spirint	-26.5%	-8.7%

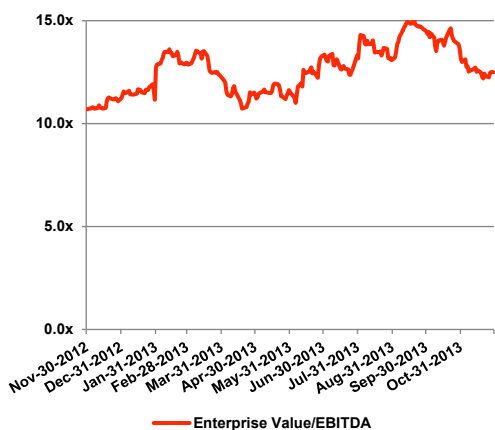
### Revenue Multiple Trends



### Company Revenue Multiples

	11/30/2013	11/30/2012
Test and Measurement Index	1.7x	1.7x
Anite	2.0x	3.0x
Anritsu	1.5x	1.4x
Ascom	1.2x	0.8x
EXFO	1.1x	0.8x
Gigamon	6.2x	NA
Ixia	2.0x	3.3x
JDS Uniphase	1.4x	1.5x
Spirint	2.1x	2.8x

### EBITDA Multiple Trends



### Company EBITDA Multiples

	11/30/2013	11/30/2012
Test and Measurement Index	12.5x	10.7x
Anite	7.9x	12.3x
Anritsu	9.0x	6.8x
Ascom	8.3x	7.8x
EXFO	17.8x	18.0x
Gigamon	NM	NA
Ixia	9.1x	14.1x
JDS Uniphase	15.9x	15.0x
Spirint	9.9x	10.1x

Source: Capital IQ



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Eric Oganessoff has conducted over forty M&A, debt, and capital raise transactions with an aggregate value of over \$300 million and has served as the CEO or President of several companies. Mr. Oganessoff has over twenty years of senior executive level experience in leading businesses ranging from wireless solutions, software, and RFID services to manufacturing, industrial products, energy, and environmental products and government contracting.

## About FOCUS Investment Banking LLC

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