



FOCUS Telecom  
Technology and Services Group  
**U.S. Communications  
Service Provider  
Quarterly**

**Fall 2017 Report**

Vol. 7, No. 4

**FOCUS**

**Investment Banking**

**Strategic, Personal, Dedicated**

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

**Mergers & Acquisition Advisory**  
**Corporate Development Consulting**  
**Strategic Partnering & Alliances**  
**Capital Financing, Debt & Equity**  
**Corporate Valuations**

**In this Issue**

- 2** Introduction and Sub Sector Definitions
- 3** U.S. Summary Comments: Public Markets
- 4** Public Market Summary Charts 1-6
- 5** U.S. Summary Comments: M&A M&A Summary Charts 1-2
- 6** Announced Transactions
- 8** Announced Transactions with Revenue Multiples
- 9** Sub Sector Analysis: Large Cap Telecom Charts 1-6
- 10** Sub Sector Analysis: Alternative Telecom Charts 1-6
- 11** Sub Sector Analysis: Hosted and Managed Services Charts 1-6
- 12** Sub Sector Analysis: ILEC and Diversified ILEC Charts 1-6
- 13** Sub Sector Analysis: Cable and Video Charts 1-6
- 14** FOCUS Telecom Technology and Services Team

# U.S. Communications Service Provider Quarterly

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

FOCUS believes that the need for communications services has never been greater. Large enterprises, small and medium sized businesses, and individuals have all come to rely upon ubiquitous access to voice, video, and data services to run their day-to-day activities. Furthermore, the importance of Communications Service Providers (CSPs) appears poised to increase further as they begin to enable a variety of new services ranging from hosted PBX and videoconferencing platforms to in-home security and energy management solutions.

Access to capital and the benefits of scale will mean that a small number of large companies will continue to dominate certain areas such as mobile wireless and video. However, FOCUS continues to see opportunities for middle market CSPs. While not as large as the industry giants, they continue to thrive by developing innovative business models that share one or more characteristics such as capital efficiency, customer responsiveness, an advanced technology platform and a focus on an underserved industry vertical or geography.

Furthermore, it often is the middle market CSPs that point the direction for the future of the industry. FOCUS is proud of its commitment to the CSP sector and we are excited about the prospects for middle market companies in this space.

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, and
- Has a national presence with coverage of both east and west coasts.

## Sub Sector Definitions

**Large Cap:** Large, diversified communications service providers that control a significant number of former RBOC access lines and/or have a nationwide wireless operation.

**Alternative Telecom:** Competitive carriers that primarily provide basic voice, data and transport services to businesses and other telecom service providers.

**Hosted and Managed Services:** Companies that provide hosted VoIP telecom services as well as additional hosted offerings such as audio and video conferencing.

**ILEC and Diversified ILEC:** Non-RBOC incumbent carriers, many of which have branched out into other sectors of communications services.

**Cable and Video:** Incumbent cable service providers, satellite video providers, and competitive video providers whose core business is providing video services to residential customers.

## Summary Comments

### Public Markets

The FOCUS Communications Service Provider Index (CSPI) broke its string of two straight reporting periods in negative territory with a three month gain of 1.5%. Even so, the CSPI still lagged the broader indices as the S&P 500 gained 4.0% and the NASDAQ gained 5.8% during the corresponding time period. For the full year, the CSPI was flat. This performance once again compares unfavorably to the S&P 500 and NASDAQ, both of which enjoyed strong year-over-year gains. Sector multiples are up slightly compared to the prior year. The sector revenue multiple increased from 2.4x to 2.5x, while the sector EBITDA multiple went from 7.3x to 7.7x.

### Large Cap

After a difficult summer reporting period, the Large Cap sub sector bounced back in the fall to post a three month gain of 6.0%. This was good enough to make it the top performing sub sector for this reporting period. Verizon was the sub sector's top performer with a gain of 10.8%, while AT&T notched a 3.8% gain. CenturyLink and Sprint did not fare as well, dropping 20.9% and 5.2%, respectively. The sub sector remains in negative territory for the year with a drop of 5.0%. Over this time frame, Sprint was the only company in the index in positive territory. Sub sector multiples closed out the period at 2.4x revenue and 7.2x EBITDA. Both represent increases from year-ago multiples of 2.3x revenue and 6.8x EBITDA.

### Alternative Telecom

The 7.7% drop in the Alternative Telecom sub sector over the past three months made it the CSPI's worst performing sub sector over this time period. Large drops at Level 3 (down 10.1%), Uniti (down 41.7%), and Windstream (down 54.4%) served to drag down the index. Even so, there were still some bright spots this period as Boingo, Cogent Communications, and Zayo all experienced double digit gains. Over the past 12 months, the Alternative Telecom sub sector is up 4.6%. Five of the seven stocks in the index had strong gains during this period, but once again steep losses at Windstream and Uniti had a negative impact on sub sector performance. Sub sector multiples are up slightly year-over-year. The sub sector revenue multiple ended the period at 3.6x (up from 3.5x a year ago) while the sub sector EBITDA multiple was 10.0x (up from 9.4x a year ago).

### Hosted and Managed Services

Other than the Large Cap sub sector, the Hosted and Managed Services sub sector was the only other component of the CSPI that managed to turn in a positive return for the current reporting period. The sub sector gained 1.3% in the past three months. RingCentral and Vonage were the two-star performers, turning in gains of 14.2% and 24.5%, respectively. On the other end of the spectrum, j2 Global and Glowpoint both suffered double digit losses. The Hosted and Managed Services sub sector remains in negative territory for the full year with a drop of 6.5%. The chief culprit for this substandard performance was Twilio, which has shed more than half of its value over the past year. One of the reasons for the sub sector's decline in the past year is that multiples have contracted. The sub sector revenue multiple fell from 3.8x a year ago to 3.4x currently, while the sub sector EBITDA multiple dropped from 17.2x to 16.9x over the same time period.

### ILEC and Diversified ILEC

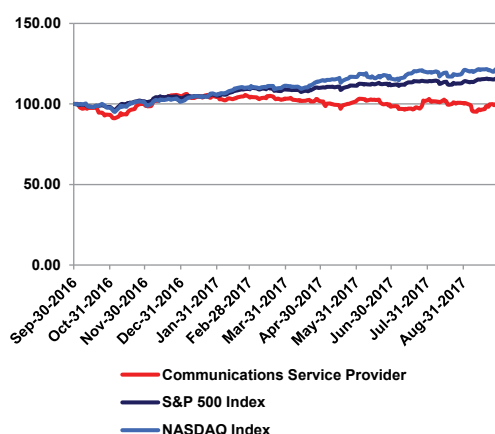
The ILEC and Diversified ILEC sub sector had yet another difficult reporting period as it dropped 7.6% in the past three months. Frontier continued to be the worst performing stock in the index with a 32.2% drop for the period, but Consolidated Communications also dropped 11.1%. The sub sector's year-over-year performance also was dismal with a drop of nearly 40%. Sub sector multiples are down steeply from this same time last year. Year-ago multiples for the sub sector were 2.3x revenue and 7.3x EBITDA. These have plummeted to 1.7x revenue and 5.4x EBITDA at the end of the current reporting period.

### Cable and Video

The Cable and Video sub sector also had a rough go of it in our fall reporting period as the sub sector dropped 4.1%. Altice, Dish Network, and WOW all suffered double digit declines. On the plus side, both Charter and General Communication delivered solid gains. Even after this period's losses, the sub sector remains in positive territory for the year with a gain of 12.9%. Multiples also are higher, with the sub sector revenue multiple increasing from 2.7x to 3.0x over the past year and the sub sector EBITDA multiple increasing from 8.8x to 9.5x over the same time period.

## U.S. Communications Service Provider Sector: Public Market Summary

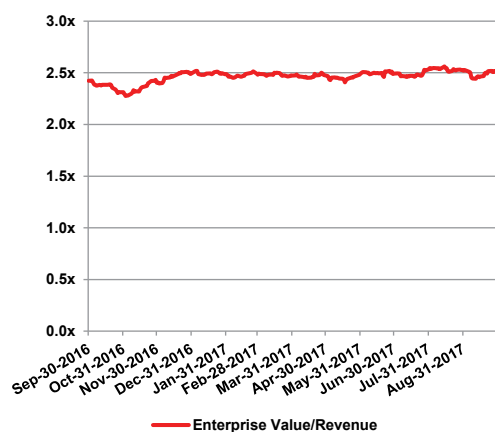
### Twelve Month Index Returns



### Sector and Sub Sector Returns

	12 Month	3 Month
Communications Service Provider	0.0%	1.5%
Large Cap	-5.0%	6.0%
Alternative Telecom	4.6%	-7.7%
Hosted and Managed Services	-6.5%	1.3%
ILEC and Diversified ILEC	-39.1%	-7.6%
Cable and Video	12.9%	-4.1%
S&P 500	16.2%	4.0%
NASDAQ	22.3%	5.8%

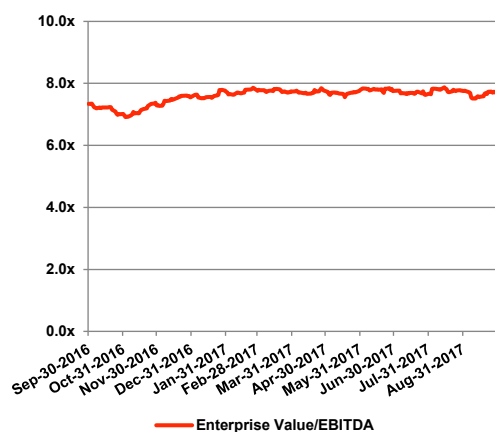
### Revenue Multiple Trends



### Sector and Sub Sector Revenue Multiples

	9/30/2017	9/30/2016
Communications Service Provider	2.5x	2.4x
Large Cap	2.4x	2.3x
Alternative Telecom	3.6x	3.5x
Hosted and Managed Services	3.4x	3.8x
ILEC and Diversified ILEC	1.7x	2.3x
Cable and Video	3.0x	2.7x

### EBITDA Multiple Trends



### Sector and Sub Sector EBITDA Multiples

	9/30/2017	9/30/2016
Communications Service Provider	7.7x	7.3x
Large Cap	7.2x	6.8x
Alternative Telecom	10.0x	9.4x
Hosted and Managed Services	16.9x	17.2x
ILEC and Diversified ILEC	5.4x	7.3x
Cable and Video	9.5x	8.8x

Source: Capital IQ

# U.S. Communications Service Provider Stocks: M&A Summary

## M&A

The final M&A tally for the Communication Service Provider sector for our fall reporting period was a solid 20 total transactions with a total announced transaction dollar volume of \$9.9 billion. For year-to-date 2017, we count 57 transactions with a total announced transaction dollar value of \$23.8 billion. This puts 2017 on pace to be one of our more active years in the last five in terms of the total number of transactions. Conversely, the announced M&A transaction dollar volume for 2017 is on pace to be one of the lower years in the last five.

## Alternative Telecom

The pace of M&A activity in the Alternative Telecom sub sector continued to increase as the sub sector had 10 transactions in the most recent three months. The blockbuster deal in the sub sector, and also the single largest transaction this reporting period, was Crown Castle's \$7.1 billion acquisition of Lighttower Fiber Networks. The move continues Crown Castle's aggressive push into the fiber infrastructure space. Other significant deals in the fiber space include EQT Infrastructure's acquisition of Spirit Communications, FirstLight Fiber's acquisition of 186 Communications, and Verizon's acquisition of fiber assets in the Chicago region from WOW. On the asset light side of the ledger, Fusion Communications announced its intention to merge with Birch Communications in a transaction valued at nearly \$740 million.

## Hosted and Managed Services

The Hosted and Managed Services sub sector also was active this reporting period with five total deals. Most of these transactions were for smaller hosted voice providers including the nexVortex acquisition of the hosted voice business from Northwest VOX, the Packet Fusion acquisition of Advanced Call Processing, the Ntiva acquisition of IN Communications, and the acquisition of VoIPTel Communications by RMK Consulting. In addition, Intermedia acquired AnyMeeting, a provider of web and video-conferencing solutions.

## ILEC and Diversified ILEC

The only transaction in the ILEC and Diversified ILEC sub sector this reporting period was Cincinnati Bell's acquisition of Hawaiian Telecom. The enterprise value for this transaction was just north of \$650 million.

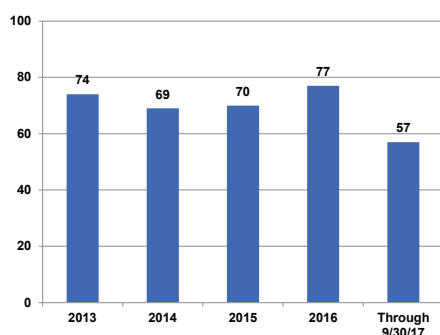
## Cable and Video

The Cable and Video sub sector continued to be active with four transactions for the period. The most visible of these was the acquisition of Metrocast by Cogeco Cable for \$1.4 billion. The remaining deals all were for smaller properties. These were the acquisition by Block Communications of Ripley Video Cable Company in Mississippi and the acquisitions by Telephone and Data Systems of both K2 Communications and Crestview Communications operating out of Colorado and Central Oregon, respectively.

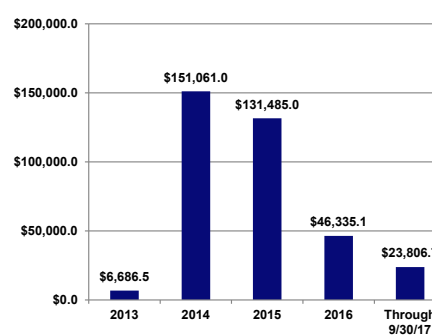
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## U.S. Communication Service Provider Sector: M&A Summary

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



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



## Transactions with Announced Multiples

We counted three transactions with announced multiples this reporting period. Not surprisingly, the highest multiple was for fiber infrastructure provider Lightower Networks. This transaction was done at 8.3x revenue and 13.7x EBITDA, which continues the trend of high multiples for companies that have built out robust fiber

infrastructures. In addition, the acquisition of Metrocast by Cogeco Cable also went for healthy multiples of 1.7x revenue and 11.6x EBITDA. The lowest multiple transaction was for incumbent provider Hawaiian Telecom. This transaction was done at 1.7x revenue and 6.0x EBITDA. While low in comparison to our other sub sectors, the deal certainly is in line with asset values we are seeing in the ILEC and Diversified ILEC sub sector.

## M&A Announced Transactions (4/1/17 – 9/30/17)

Acquiror	Target	Date Announced	Sector	Purchase Price	Description
Packet Fusion	Advanced Call Processing	9/26/17	Hosted & Managed Services	NA	Offers unified communications services and solutions.
Clarus Communications	Innovative Telecom Consultants	9/21/17	Alternative Telecom	NA	Offers telecommunications solutions through partnerships with more than 100 service providers.
Quant House	Victory Networks	9/21/17	Alternative Telecom	NA	Designs, implements and manages high-speed networks for bulge-bracket banks, boutique financial firms and hedge funds.
Metro Partners	Skywire Networks	9/14/17	Alternative Telecom	NA	Provides fixed wireless broadband services in New York City.
Intermedia	AnyMeeting	9/6/17	Hosted & Managed Services	NA	Web and video conferencing and webinar services.
Block Communications	Ripley Video Cable Company	9/5/17	Cable and Video	NA	Offers digital cable television, Internet and digital phone service in Ripley, Mississippi.
Ntiva	IN Communications	9/5/17	Alternative Telecom	NA	Telecom provider specializing in business communications and collaboration solutions.
Telephone & Data Systems	K2 Communications	9/5/17	Cable and Video	NA	Provider of broadband, video and voice products.
Fusion Telecommunications	Birch Communications (Business Cloud and Communications Assets)	8/28/17	Alternative Telecom	\$739.1	Fixed-line telephone, wireless and broadband Internet as well as wholesale telecom services for businesses in the U.S.
nexVortex	Northwest Vox (Hosted Voice Business)	8/15/17	Hosted & Managed Services	NA	Provider of hosted voice services.
RMK Consulting	VoIPTel Communications	8/12/17	Hosted & Managed Services	NA	Provides telecommunications hosting services including enterprise class VoIP, SIP and cloud-based PBX.
EQT Infrastructure	Spirit Communications	8/9/17	Alternative Telecom	NA	Provider of fiber-based data and broadband services to enterprises, governments and wireless carriers in the Carolinas and Georgia.
Telephone & Data Systems	Crestview Cable Communications	8/4/17	Cable and Video	NA	Provides broadband internet, cable TV and wireline access for consumers and businesses in Central Oregon.
Verizon Communications	WideOpenWest (Chicago Fiber Assets)	8/1/17	Alternative Telecom	NA	Fiber network covering more than 500 macro-cell wireless sites and more than 500 small-cell wireless sites in the Chicago area.
ExteNet Systems	Axiom Fiber Networks	7/26/17	Alternative Telecom	NA	Operates a fiber network in the greater New York City metropolitan region.
Crown Castle	Lightower Fiber Networks	7/18/17	Alternative Telecom	\$7,100.0	Fiber networking solutions for offices, data centers, cloud providers and carriers.
FirstLight Fiber	186 Communications	7/12/17	Alternative Telecom	NA	Operates 1,900 route miles of fiber-optic bandwidth infrastructure in Massachusetts, New Hampshire and Vermont.
NetForward	RRB Telecom	7/11/17	Hosted and Managed Telecom Services	NA	Provides fully managed business phone systems, voice over Internet protocol services and shared hosted phone services.
Cincinnati Bell	Hawaiian Telecom	7/10/17	Diversified ILEC	\$653.2	Provides communications services and products to residential and business customers in Hawaii.
Cogeco Cable	Metrocast	7/10/17	Cable and Video	\$1,400.0	Operates digital cable and communications networks that offer video, broadband Internet, digital phone and business services.
CityNet	StratusWave Communications	6/19/17	Alternative Telecom	NA	Supplies internet and telephone services to business and residences.
GTT	Perseus	6/1/17	Alternative Telecom	\$40.5	Provides high-speed network connectivity services focusing on financial services and eCommerce companies.
LOGIX Communications	Alpheus Communications	5/30/17	Alternative Telecom	NA	Operates a metro-regional fiber network in Texas with 2,800 route miles of long-haul fiber and 1,900 route miles of metro fiber.
ControlScan	EchoSat Communications Group	5/25/17	Alternative Telecom	NA	Secure data communication services for the convenience-store, petroleum, retail, utility and grocery markets in the United States.

## M&A Announced Transactions (4/1/17 – 9/30/17) *continued*

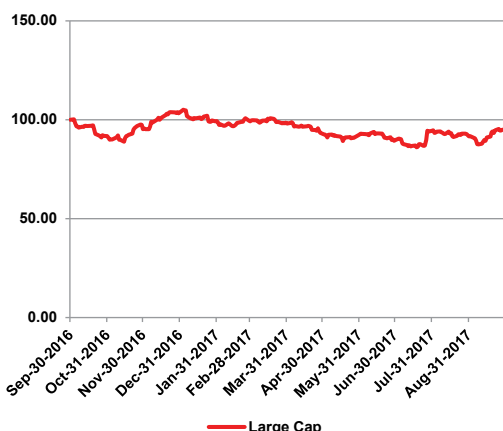
Acquiror	Target	Date Announced	Sector	Purchase Price	Description
RCN Corporation	Wave Broadband	5/23/17	Cable and Video	\$2,365.0	Provides video, Internet and phone services to customers in Washington, Oregon and California.
Apollo Global Management	West Corporation	5/9/17	Hosted & Managed Services	\$4,950.0	Telecommunications and hosted conference call and online messaging services and contact center services for businesses.
Digerati Technologies	T3 Communications	5/9/17	Hosted & Managed Services	NA	Cloud communication and broadband solutions in Southwest Florida.
EATELCORP	Clear Choice Communications	4/24/17	Cable and Video	NA	High speed Internet, digital phone and video services in Plaquemine, Louisiana.
ConvergeOne	Rockefeller Group Technology Solutions	4/18/17	Alternative Telecom	NA	Offers voice, data, cloud computing, cabling, broadband transport, wireless, mobility and unified communications solutions.
Crown Castle	Wilcon Holdings	4/17/17	Alternative Telecom	\$600.0	Owns and operates a network with 1,900 route miles of fiber, primarily in Los Angeles and San Diego.
Windstream	Broadview Networks	4/13/17	Alternative Telecom	\$201.8	Provides communications and information technology solutions to small and medium sized business and enterprise customers.
ScanSource	Kingcom (Channel Business)	4/10/17	Alternative Telecom	NA	Sells communication solutions through the Verizon Partner Program.
Uniti	Southern Light	4/10/17	Alternative Telecom	\$699.1	Designs, builds, operates and maintains fiber optic infrastructure throughout the Gulf Coast region.
Wave Broadband	Cascadelink	4/6/17	Alternative Telecom	NA	Delivers high-speed connectivity to customers in multi-unit residential and office buildings in the Seattle area.
Liberty Global	General Communication	4/4/17	Cable and Video	\$3,061.7	Wireless, data, video, voice and managed services to residential customers, businesses and government entities primarily in Alaska.
BAI Communications	inMOTION Wireless	4/3/17	Alternative Telecom	NA	Designs, builds, owns and operates wireless infrastructure to enable Wi-Fi and telecom services for Boston rail and ferry commuters.

## M&A Announced Transactions with Revenue Multiples (10/1/16 – 9/30/17)

Acquiror	Target	Date Announced	Sector	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Crown Castle	Lighttower Fiber Networks	7/18/17	Alternative Telecom	\$7,100.0	8.3 x	13.7 x	Fiber networking solutions for offices, data centers, cloud providers and carriers.
Cincinnati Bell	Hawaiian Telecom	7/10/17	Diversified ILEC	\$653.2	1.7 x	6.0 x	Provides communications services and products to residential and business customers in Hawaii.
Cogeco Cable	Metrocast	7/10/17	Cable and Video	\$1,400.0	6.1 x	11.6 x	Operates digital cable and communications networks that offer video, broadband Internet, digital phone and business services.
GTT	Global Capacity	6/26/17	Alternative Telecom	\$160.0	0.8 x	NA	Provides network integration and network-based managed services to telecommunication carriers and businesses.
Apollo Global Management	West Corporation	5/9/17	Hosted & Managed Services	\$4,950.0	2.2 x	7.6 x	Telecommunications and hosted conference call and online messaging services and contact center services for businesses.
Windstream	Broadview Networks	4/13/17	Alternative Telecom	\$201.8	0.7 x	4.5 x	Provides communications and information technology solutions to small and medium sized business and enterprise customers.
Uniti	Southern Light	4/10/17	Alternative Telecom	\$699.1	8.3 x	17.1 x	Designs, builds, operates and maintains fiber optic infrastructure throughout the Gulf Coast region.
Liberty Global	General Communication	4/4/17	Cable and Video	\$3,061.7	3.3 x	11.2 x	Wireless, data, video, voice and managed services to residential customers, businesses and government entities primarily in Alaska.
Uniti	Hunt Telecom	2/23/17	Alternative Telecom	\$170.0	4.9 x	11.3 x	2,600 fiber route miles in Louisiana that provide data transport to K-12 schools and government agencies.
EQT Infrastructure	Lumos Networks	2/20/17	Alternative Telecom	\$869.5	4.2 x	10.3 x	Provides fiber-based bandwidth infrastructure and services in the Mid-Atlantic region.
Consolidated Communications	Fairpoint Communications	12/5/16	Diversified ILEC	\$1,467.6	1.8 x	3.2 x	Communications services to business, wholesale and residential customers in 17 states.
GTT	Reliance Globalcom (Ethernet Business Division)	11/18/16	Alternative Telecom	\$28.0	0.7 x	NA	Provides Ethernet connectivity services.
Fusion Telecommunications	Apptix	11/15/16	Hosted & Managed Services	\$28.0	1.1 x	NA	Provider of hosted business communication, collaboration and IT solutions to businesses of all sizes.
Windstream	EarthLink	11/7/16	Alternative Telecom	\$1,019.1	1.0 x	5.1 x	Managed network, security and cloud services to business and residential customers.
Onvoy	Inteliquent	11/2/16	Alternative Telecom	\$671.8	2.1 x	9.8 x	Provides voice telecommunications services on a wholesale basis including local transit, long distance, switched access and toll-free.
CenturyLink	Level 3 Communications	10/31/16	Alternative Telecom	\$34,725.8	4.2 x	13.1 x	Facilities-based provider of communications services including Internet services, virtual private network and Ethernet.
Midcontinent Communications	WOW (Lawrence, KS Operations)	10/21/16	Cable and Video	\$215.0	4.7 x	9.2 x	Offers high-speed Internet, cable television, phone, business data, voice and cloud services to residential and business customers.

## Sub Sector Analysis: Large Cap

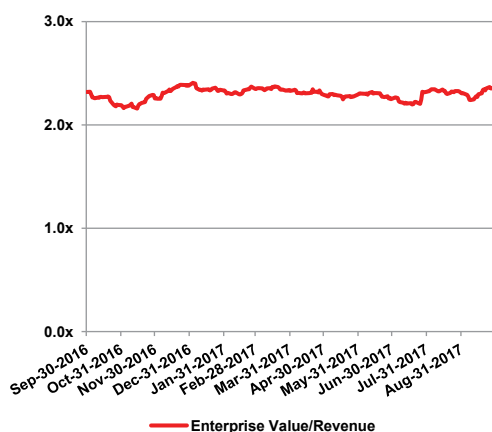
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Large Cap Index	-5.0%	6.0%
AT&T	-3.5%	3.8%
CenturyLink	-31.1%	-20.9%
Sprint	17.3%	-5.2%
Verizon	-4.8%	10.8%

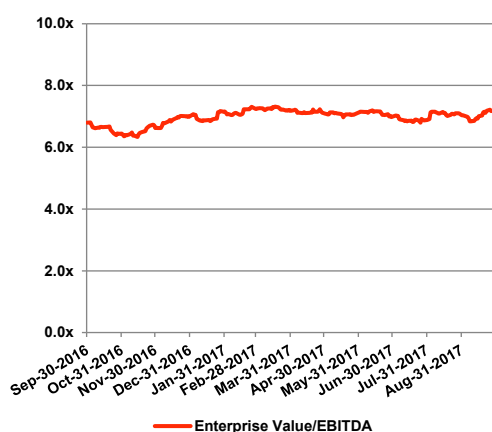
**Revenue Multiple Trends**



**Company Revenue Multiples**

	9/30/2017	9/30/2016
Large Cap Index	2.4x	2.3x
AT&T	2.2x	2.3x
CenturyLink	2.1x	1.9x
Sprint	1.9x	1.8x
Verizon	2.6x	2.4x

**EBITDA Multiple Trends**



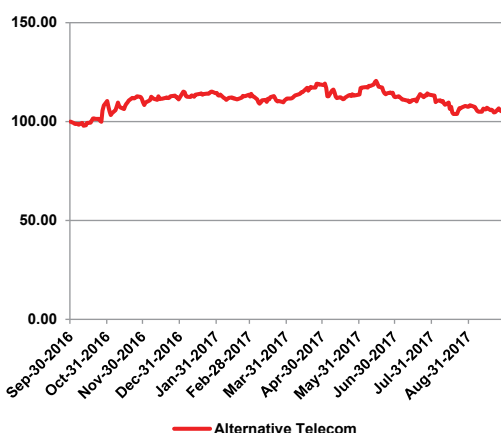
**Company EBITDA Multiples**

	9/30/2017	9/30/2016
Large Cap Index	7.2x	6.8x
AT&T	7.3x	6.9x
CenturyLink	5.8x	5.1x
Sprint	5.9x	6.2x
Verizon	7.2x	6.4x

Source: Capital IQ

## Sub Sector Analysis: Alternative Telecom

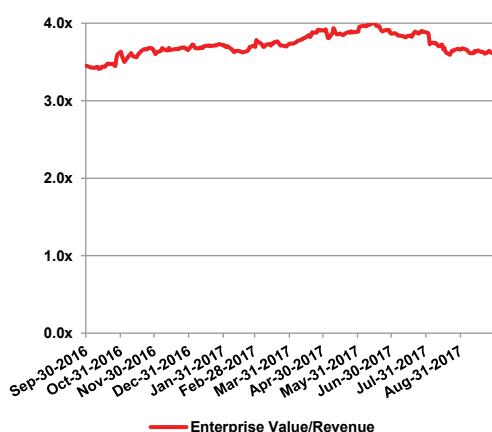
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Alternative Telecom Index	4.6%	-7.7%
Boingo	107.9%	42.8%
Cogent Communications	32.8%	21.9%
GTT	34.5%	0.0%
Level 3	14.9%	-10.1%
Uniti	-53.3%	-41.7%
Windstream	-82.4%	-54.4%
Zayo Group	15.9%	11.4%

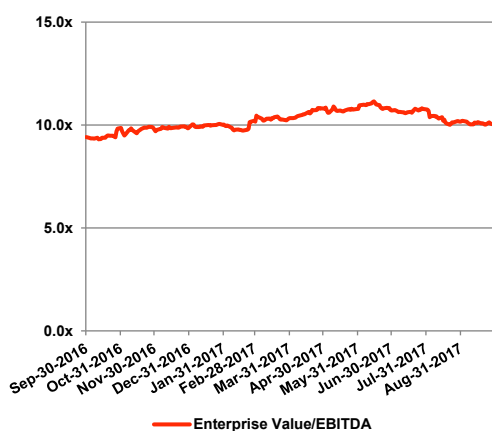
**Revenue Multiple Trends**



**Company Revenue Multiples**

	9/30/2017	9/30/2016
Alternative Telecom Index	3.6x	3.5x
Boingo	4.8x	2.7x
Cogent Communications	5.8x	4.8x
GTT	3.7x	2.6x
Level 3	3.4x	3.2x
Uniti	7.5x	8.9x
Windstream	2.0x	2.0x
Zayo Group	6.3x	6.0x

**EBITDA Multiple Trends**



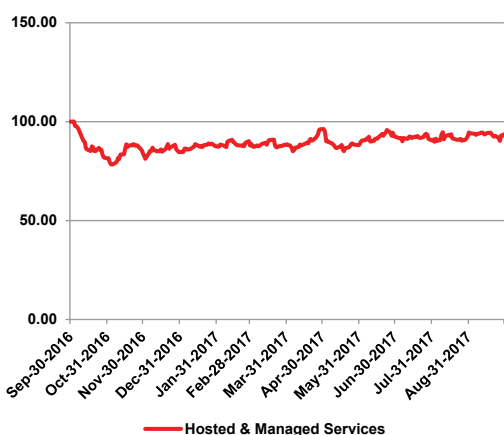
**Company EBITDA Multiples**

	9/30/2017	9/30/2016
Alternative Telecom Index	10.0x	9.4x
Boingo	22.2x	16.7x
Cogent Communications	18.4x	15.8x
GTT	15.6x	12.3x
Level 3	10.5x	9.8x
Uniti	9.1x	9.9x
Windstream	6.0x	5.7x
Zayo Group	13.9x	13.3x

Source: Capital IQ

## Sub Sector Analysis: Hosted and Managed Services

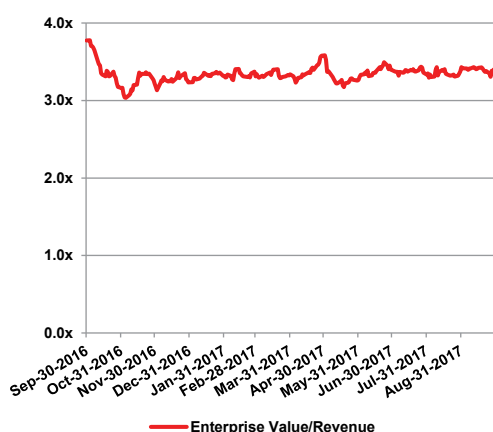
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Hosted & Managed Services Index	-6.5%	1.3%
8x8	-12.5%	-7.2%
Glowpoint	-10.6%	-11.2%
j2 Global	10.9%	-13.2%
RingCentral	76.5%	14.2%
Twilio	-53.6%	2.5%
Vonage	23.1%	24.5%
West Corporation	6.3%	0.6%

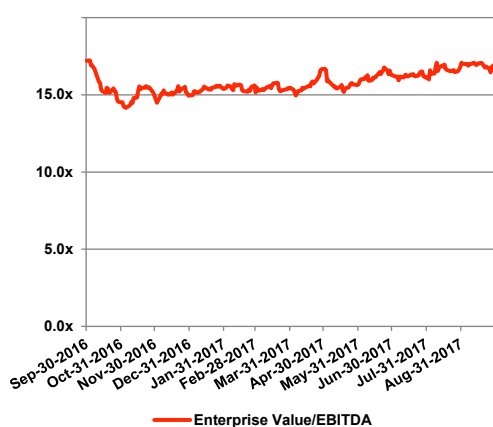
**Revenue Multiple Trends**



**Company Revenue Multiples**

	9/30/2017	9/30/2016
Hosted & Managed Services Index	3.4x	3.8x
8x8	4.0x	5.2x
Glowpoint	1.1x	0.9x
j2 Global	4.5x	4.1x
RingCentral	7.0x	4.5x
Twilio	7.3x	21.0x
Vonage	2.2x	1.9x
West Corporation	2.1x	2.2x

**EBITDA Multiple Trends**



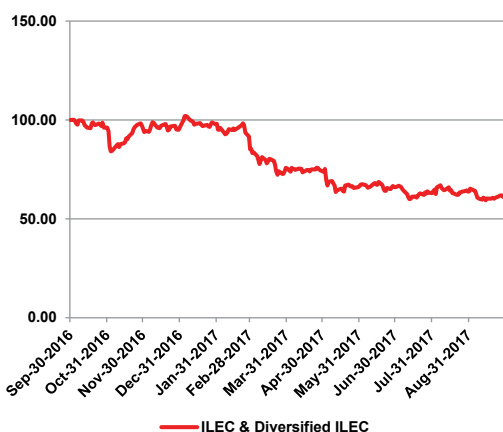
**Company EBITDA Multiples**

	9/30/2017	9/30/2016
Hosted & Managed Services Index	16.9x	17.2x
8x8	NM	276.5x
Glowpoint	158.9x	344.4x
j2 Global	11.7x	9.9x
RingCentral	NM	NM
Twilio	NM	NM
Vonage	22.5x	16.3x
West Corporation	7.7x	7.5x

Source: Capital IQ

## Sub Sector Analysis: ILEC and Diversified ILEC

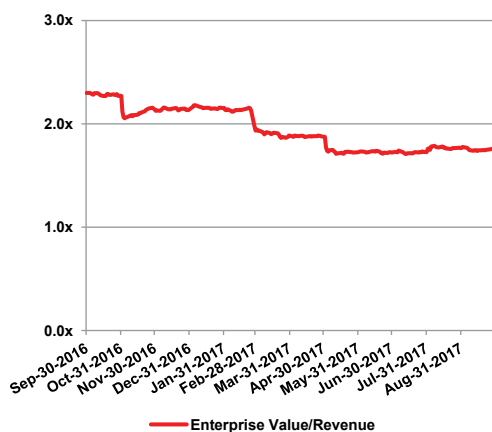
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
ILEC & Diversified ILEC Index	-39.1%	-7.6%
Alaska Communications Systems	32.0%	3.2%
Consolidated Communications	-24.4%	-11.1%
Cincinnati Bell	-2.7%	1.5%
Frontier	-81.1%	-32.2%
Lumos Networks	28.0%	0.3%
Otelco	120.8%	26.0%
Telephone & Data Systems	2.6%	0.5%

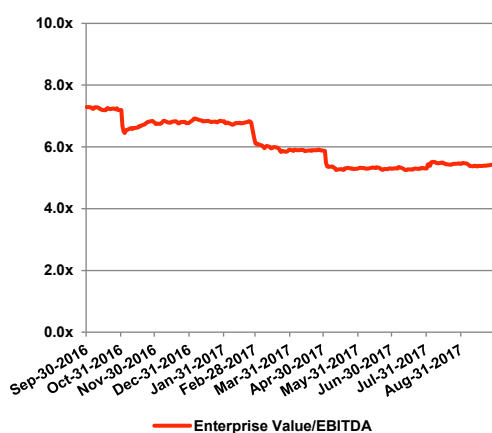
### Revenue Multiple Trends



### Company Revenue Multiples

	9/30/2017	9/30/2016
ILEC & Diversified ILEC Index	1.7x	2.3x
Alaska Communications Systems	1.3x	1.1x
Consolidated Communications	3.9x	3.5x
Cincinnati Bell	1.7x	1.8x
Frontier	1.9x	2.8x
Lumos Networks	4.0x	3.5x
Otelco	1.6x	1.4x
Telephone & Data Systems	1.1x	1.0x

### EBITDA Multiple Trends



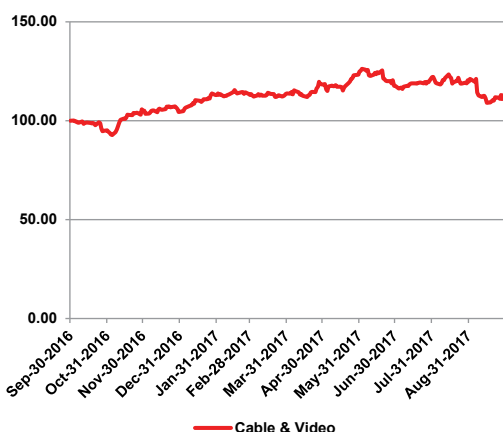
### Company EBITDA Multiples

	9/30/2017	9/30/2016
ILEC & Diversified ILEC Index	5.4x	7.3x
Alaska Communications Systems	5.2x	4.7x
Consolidated Communications	10.8x	9.8x
Cincinnati Bell	7.2x	7.5x
Frontier	4.9x	7.2x
Lumos Networks	10.0x	8.5x
Otelco	4.1x	3.6x
Telephone & Data Systems	5.7x	5.3x

Source: Capital IQ

## Sub Sector Analysis: Cable and Video

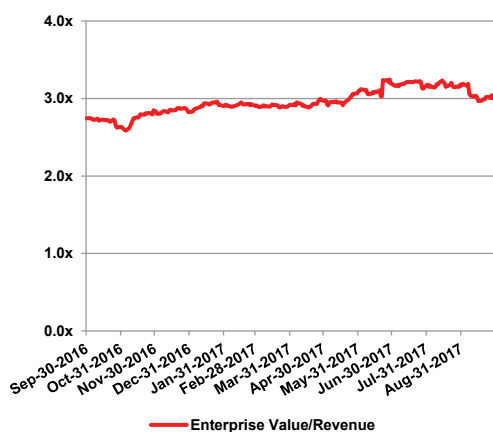
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Cable & Video Index	12.9%	-4.1%
Altice	NA	-15.8%
Charter Communications	34.6%	9.3%
Comcast	16.0%	-1.1%
Dish Network	-1.0%	-13.6%
General Communication	196.7%	11.3%
WOW	NA	-13.3%

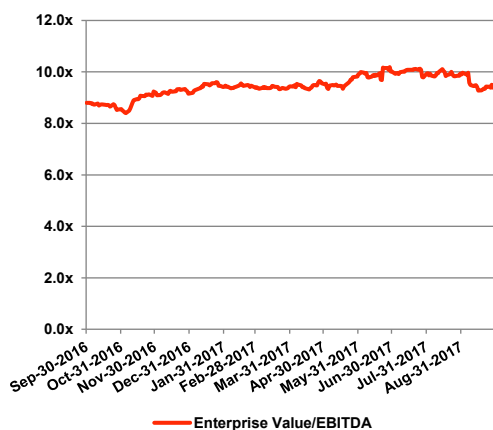
### Revenue Multiple Trends



### Company Revenue Multiples

	9/30/2017	9/30/2016
Cable & Video Index	3.0x	2.7x
Altice	4.6x	NA
Charter Communications	4.1x	6.9x
Comcast	2.9x	2.7x
Dish Network	2.7x	2.4x
General Communication	3.2x	2.1x
WOW	3.0x	NA

### EBITDA Multiple Trends



### Company EBITDA Multiples

	9/30/2017	9/30/2016
Cable & Video Index	9.5x	8.8x
Altice	11.6x	NA
Charter Communications	11.4x	18.0x
Comcast	8.8x	8.3x
Dish Network	13.3x	11.5x
General Communication	11.1x	6.8x
WOW	8.3x	NA

Source: Capital IQ

## FOCUS Telecom Technology and Services Team

### Richard H. Pierce



*Managing Director and Telecom Technology and Services Team Leader, Washington, DC*

[rich.pierce@focusbankers.com](mailto:rich.pierce@focusbankers.com)  
202-470-1983

Rich Pierce has more than ten years of investment banking experience advising middle market clients on a variety of mergers and acquisitions and capital raising transactions. Dur-

ing that time, Mr. Pierce's primary emphasis has been on serving clients in the telecommunications industry including providers of network related hardware and software products, wireless, and wireline telecommunications service providers and network engineering and construction companies.

### John T. Bradshaw



*Partner, Bend, Oregon*  
[john.bradshaw@focusbankers.com](mailto:john.bradshaw@focusbankers.com)  
541-306-6451

John Bradshaw has over 30 years experience in sales, marketing, manufacturing, finance, and systems engineering with corporations specializing in technology-driven business products and services. Mr. Bradshaw has been a successful

senior executive and manager in both large and small organizations, and has spent the last 15 years working with entrepreneurial companies. Mr. Bradshaw has particular expertise in enterprise communications and contact center related technology.

### David Freeland



*Principal, San Francisco, California*  
[david.freeland@focusbankers.com](mailto:david.freeland@focusbankers.com)  
978-505-1837

David Freeland, a FOCUS Principal, has more than fifteen years of experience providing investment banking and management consulting services to a variety of corporate clients, ranging from the Fortune 500 to start-up businesses. He has been an

investment banker since 2003, advising clients on mergers and acquisitions and capital raising transactions. Mr. Freeland has broad experience in the telecom and technology industry and has significant experience with data center companies.

### Eric M. Oganessoff



*Managing Director, Washington, DC*  
[eric.oganessoff@focusbankers.com](mailto:eric.oganessoff@focusbankers.com)  
202-470-1969

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

FOCUS Investment Banking LLC provides a range of middle market investment banking services with an emphasis on mergers, acquisitions, divestitures and corporate finance. FOCUS is a national firm serving clients from offices in major cities across the United States. FOCUS specializes in business units with transactions or revenues in the \$5-300 million range, serving entrepreneurs, corporate owners and various types of investors across a broad range of industries, throughout the U.S. and worldwide. FOCUS bankers are seasoned operating and financial executives with extensive transaction experience. Securities transactions conducted by FOCUS Securities LLC, an affiliated company, registered Broker/Dealer and member FINRA/SIPC. For more information on FOCUS, visit [www.focusbankers.com](http://www.focusbankers.com).

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# FOCUS

## Investment Banking

### MID-ATLANTIC REGION

FOCUS Investment Banking LLC  
Headquarters  
1133 20th Street, NW  
Suite 200  
Washington, DC 20036  
202.785.9404  
202.785.9413 (fax)

### SOUTHEAST REGION

FOCUS Investment Banking LLC  
Atlanta Office  
3353 Peachtree Road, NE  
Suite 1160  
Atlanta, GA 30326  
404.504.8620  
404.814.9141 (fax)

### WESTERN REGION

FOCUS Investment Banking LLC  
Los Angeles Office  
355 South Grand Avenue  
Suite 2450  
Los Angeles, CA 90071  
213.943.1395  
213.943.1397 (fax)

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