Section 1: 10-Q (10-Q)

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-35155

BOINGO WIRELESS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**95-4856877** (I.R.S. Employer Identification No.)
10960 Wilshire Blvd., 23rd Floor **Los Angeles, California** (Address of principal executive offices)	**90024** (Zip Code)

(310) 586-5180
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☒
Non-accelerated filer ☐	Smaller Reporting Company ☐
	Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 26, 2018, there were 42,510,830 shares of the registrant's common stock outstanding.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

Boingo Wireless, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands, except per share amounts)

	September 30, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 12,627	$ 26,685
Restricted cash	549	—
Accounts receivable, net	30,659	26,148
Prepaid expenses and other current assets	9,013	6,369
Total current assets	52,848	59,202
Property and equipment, net	297,930	262,359
Goodwill	59,566	42,403
Intangible assets, net	20,358	10,263
Other assets	7,999	10,082
Total assets	$ 438,701	$ 384,309
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 28,764	$ 11,589
Accrued expenses and other liabilities	54,710	42,405
Deferred revenue	78,825	61,708
Current portion of long-term debt	15,219	875
Current portion of capital leases and notes payable	6,969	5,771
Total current liabilities	184,487	122,348
Deferred revenue, net of current portion	127,911	149,168
Long-term portion of capital leases and notes payable	6,361	6,747
Deferred tax liabilities	1,006	1,004
Other liabilities	7,183	6,012
Total liabilities	326,948	285,279
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 5,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.0001 par value; 100,000 shares authorized; 42,478 and 40,995 shares issued and outstanding at September 30, 2018 and December 31, 2017, respectively	4	4
Additional paid-in capital	241,369	230,679
Accumulated deficit	(130,346)	(131,967)
Accumulated other comprehensive loss	(1,455)	(898)
Total common stockholders' equity	109,572	97,818
Non-controlling interests	2,181	1,212
Total stockholders' equity	111,753	99,030
Total liabilities and stockholders' equity	$ 438,701	$ 384,309

The accompanying notes are an integral part of these condensed consolidated financial statements.

Boingo Wireless, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)
(In thousands, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenue	$ 65,253	$ 53,655	$ 183,013	$ 147,021
Costs and operating expenses:				
Network access	29,273	24,143	79,926	64,655
Network operations	13,260	11,625	38,829	34,556
Development and technology	7,995	6,817	22,883	19,814
Selling and marketing	5,674	5,201	16,490	15,188
General and administrative	7,789	8,006	22,218	27,372
Amortization of intangible assets	1,112	852	2,507	2,673
Total costs and operating expenses	65,103	56,644	182,853	164,258
Income (loss) from operations	150	(2,989)	160	(17,237)
Interest and other expense, net	(22)	(84)	(151)	(126)
Income (loss) before income taxes	128	(3,073)	9	(17,363)
Income tax expense	54	167	198	507
Net income (loss)	74	(3,240)	(189)	(17,870)
Net income attributable to non-controlling interests	596	210	1,447	477
Net loss attributable to common stockholders	$ (522)	$ (3,450)	$ (1,636)	$ (18,347)
Net loss per share attributable to common stockholders:				
Basic	$ (0.01)	$ (0.09)	$ (0.04)	$ (0.46)
Diluted	$ (0.01)	$ (0.09)	$ (0.04)	$ (0.46)
Weighted average shares used in computing net loss per share attributable to common stockholders:				
Basic	42,377	40,336	41,890	39,468
Diluted	42,377	40,336	41,890	39,468

The accompanying notes are an integral part of these condensed consolidated financial statements.

Boingo Wireless, Inc.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(Unaudited)
(In thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income (loss)	$ 74	$ (3,240)	$ (189)	$ (17,870)
Other comprehensive (loss) income, net of tax				
Foreign currency translation adjustments	(219)	64	(490)	40
Comprehensive loss	(145)	(3,176)	(679)	(17,830)
Comprehensive income attributable to non-controlling interest	609	185	1,514	459
Comprehensive loss attributable to common stockholders	$ (754)	$ (3,361)	$ (2,193)	$ (18,289)

The accompanying notes are an integral part of these condensed consolidated financial statements.

Boingo Wireless, Inc.
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)
(In thousands)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total Stockholders' Equity
Balance at December 31, 2017	40,995	$ 4	$ 230,679	$ (131,967)	$ (898)	$ 1,212	$ 99,030
Issuance of common stock under stock incentive plans	758	—	4,228	—	—	—	4,228
Shares withheld for taxes	—	—	(6,340)	—	—	—	(6,340)
Stock-based compensation expense	—	—	3,312	—	—	—	3,312
Cumulative effect of a change in accounting principle	—	—	—	3,257	—	69	3,326
Net (loss) income	—	—	—	(3,229)	—	456	(2,773)
Other comprehensive loss	—	—	—	—	(1)	(3)	(4)
Balance at March 31, 2018	41,753	4	231,879	(131,939)	(899)	1,734	100,779
Issuance of common stock under stock incentive plans	500	—	4,227	—	—	—	4,227
Shares withheld for taxes	—	—	(1,246)	—	—	—	(1,246)
Stock-based compensation expense	—	—	3,152	—	—	—	3,152
Non-controlling interest distributions	—	—	—	—	—	(614)	(614)
Net income	—	—	—	2,115	—	395	2,510
Other comprehensive (loss) income	—	—	—	—	(324)	57	(267)
Balance at June 30, 2018	42,253	4	238,012	(129,824)	(1,223)	1,572	108,541
Issuance of common stock under stock incentive plans	225	—	1,309	—	—	—	1,309
Shares withheld for taxes	—	—	(1,315)	—	—	—	(1,315)
Stock-based compensation expense	—	—	3,363	—	—	—	3,363
Net (loss) income	—	—	—	(522)	—	596	74
Other comprehensive (loss) income	—	—	—	—	(232)	13	(219)
Balance at September 30, 2018	42,478	$ 4	$ 241,369	$ (130,346)	$ (1,455)	$ 2,181	$ 111,753

The accompanying notes are an integral part of these condensed consolidated financial statements.

Boingo Wireless, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Nine Months Ended September 30,	
	2018	**2017**
Cash flows from operating activities		
Net loss	$ (189)	$ (17,870)
Adjustments to reconcile net loss including non-controlling interests to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	56,769	49,244
Amortization of intangible assets	2,507	2,673
Impairment loss and loss on disposal of fixed assets, net	198	442
Stock-based compensation	9,227	11,016
Change in deferred income taxes	—	305
Bad debt expense	301	88
Other	—	51
Changes in operating assets and liabilities, net of effect of acquisition:		
Accounts receivable	(1,596)	3,804
Prepaid expenses and other assets	(209)	(1,816)
Accounts payable	2,041	(1,330)
Accrued expenses and other liabilities	3,557	6,920
Deferred revenue	(1,772)	13,897
Net cash provided by operating activities	70,834	67,424
Cash flows from investing activities		
Purchases of property and equipment	(72,531)	(54,691)
Payments for asset acquisitions	(22,052)	(1,150)
Net cash used in investing activities	(94,583)	(55,841)
Cash flows from financing activities		
Proceeds from credit facility	15,000	—
Principal payments on credit facility	(656)	(10,875)
Proceeds from exercise of stock options	9,764	7,993
Payments of capital leases and notes payable	(4,362)	(2,952)
Payments of withholding tax on net issuance of restricted stock units	(8,901)	(3,480)
Payments to non-controlling interests	(614)	(125)
Net cash provided by (used in) financing activities	10,231	(9,439)
Effect of exchange rates on cash	9	5
Net (decrease) increase in cash, cash equivalents, and restricted cash	(13,509)	2,149
Cash, cash equivalents, and restricted cash at beginning of period	26,685	19,485
Cash, cash equivalents, and restricted cash at end of period	$ 13,176	$ 21,634
Supplemental disclosure of non-cash investing and financing activities		
Property and equipment costs in accounts payable, accrued expenses and other liabilities	$ 35,458	$ 19,438
Purchase of equipment and prepaid maintenance services under capital financing arrangements	$ 5,068	$ 2,141
Capitalized stock-based compensation included in property and equipment costs	$ 600	$ 530

The accompanying notes are an integral part of these condensed consolidated financial statements.

Boingo Wireless, Inc.
Notes to the Condensed Consolidated Financial Statements
(Unaudited)
(In thousands, except shares and per share amounts)

1. The business

Boingo Wireless, Inc. and its subsidiaries (collectively "we, "us", "our" or "the Company") is a leading global provider of wireless connectivity solutions for smartphones, tablets, laptops, wearables and other wireless-enabled consumer devices. Boingo Wireless, Inc. was incorporated on April 16, 2001 in the State of Delaware. We have a diverse monetization model that enables us to generate revenues from wholesale partnerships, retail sales, and advertising across these wireless networks. Wholesale offerings include distributed antenna systems ("DAS") or small cells, which are cellular extension networks, multifamily, carrier offload, Wi-Fi roaming, value-added services, private label Wi-Fi, and location-based services. Retail products include Wi-Fi services for military servicemen and women living in the barracks of U.S. Army, Air Force and Marine bases around the world, and Wi-Fi subscriptions and day passes that provide access to over 1.2 million commercial hotspots worldwide. Advertising revenue is driven by Wi-Fi sponsorships at airports, hotels, cafes and restaurants, and public spaces. Our customers include some of the world's largest carriers, telecommunications service providers, global consumer brands, and property owners, as well as troops stationed at military bases and Internet savvy consumers on the go.

2. Summary of significant accounting policies

Basis of presentation

The accompanying interim condensed consolidated financial statements and related notes for the three and nine months ended September 30, 2018 and 2017 are unaudited. The unaudited interim condensed consolidated financial information has been prepared in accordance with the rules and regulations of the SEC for interim financial information. Accordingly, they do not include all information and footnotes required by generally accepted accounting principles ("GAAP") in the United States of America ("U.S.") for complete financial statements. These financial statements should be read in conjunction with the audited consolidated financial statements and the accompanying notes for the year ended December 31, 2017 contained in our annual report on Form 10-K filed with the SEC on March 12, 2018. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, necessary for a fair statement of our results of operations for the three and nine months ended September 30, 2018 and 2017, our cash flows for the nine months ended September 30, 2018 and 2017, and our financial position as of September 30, 2018. The year-end balance sheet data was derived from audited consolidated financial statements but does not include all disclosures required by GAAP. Interim results are not necessarily indicative of the results to be expected for an entire year or any other future year or interim period.

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers*, which replaced the accounting standards for revenue recognition under FASB Accounting Standards Codification ("ASC") 605, *Revenue Recognition*, with a single comprehensive five-step model, eliminating industry-specific accounting rules. The core principle is to recognize revenue upon the transfer of control of goods or services to a customer at an amount that reflects the consideration expected to be received. The FASB amended several aspects of the guidance after the issuance of ASU 2014-09, and the new revenue recognition accounting standard, as amended, was codified within ASC 606, *Revenue from Contracts with Customers*. On January 1, 2018, we adopted ASC 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning on January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with ASC 605.

Adoption of ASC 606 using the modified retrospective method required us to record a cumulative effect adjustment, net of tax, to accumulated deficit and non-controlling interests of $3,257 and $69, respectively, on January 1, 2018. In addition, adoption of the standard resulted in the following changes to the condensed consolidated balance sheet as of January 1, 2018:

	January 1, 2018 (Per ASC 605)	Adjustment for Adoption	January 1, 2018 (Per ASC 606)
Accounts receivable, net	$ 26,148	$ (1,069)	$ 25,079
Prepaid expenses and other current assets	$ 6,369	$ 170	$ 6,539
Other assets	$ 10,082	$ (2,179)	$ 7,903
Deferred revenue, current	$ 61,708	$ 14,176	$ 75,884
Deferred revenue, net of current portion	$ 149,168	$ (20,580)	$ 128,588

The below table summarizes the changes to our condensed consolidated balance sheet as of September 30, 2018 as a result of the adoption of ASC 606:

	September 30, 2018 (Per ASC 605)	Adjustment for Adoption	September 30, 2018 (Per ASC 606)
Accounts receivable, net	$ 31,367	$ (708)	$ 30,659
Prepaid expenses and other current assets	$ 8,522	$ 491	$ 9,013
Other assets	$ 10,213	$ (2,214)	$ 7,999
Deferred revenue, current	$ 79,738	$ (913)	$ 78,825
Deferred revenue, net of current portion	$ 140,040	$ (12,129)	$ 127,911
Non-controlling interests	$ 228	$ 1,953	$ 2,181

The below table summarizes the changes to our condensed consolidated statement of operations for the three months ended September 30, 2018 as a result of the adoption of ASC 606:

	Three Months Ended September 30, 2018 (Per ASC 605)	Adjustment for Adoption	Three Months Ended September 30, 2018 (Per ASC 606)
Revenue	$ 63,884	$ 1,369	$ 65,253
Income tax expense	$ 258	$ (204)	$ 54
Non-controlling interests	$ 270	$ 326	$ 596

The below table summarizes the changes to our condensed consolidated statement of operations for the nine months ended September 30, 2018 as a result of the adoption of ASC 606:

	Nine Months Ended September 30, 2018 (Per ASC 605)	Adjustment for Adoption	Nine Months Ended September 30, 2018 (Per ASC 606)
Revenue	$ 176,168	$ 6,845	$ 183,013
Income tax expense	$ 638	$ (440)	$ 198
Non-controlling interests	$ (437)	$ 1,884	$ 1,447

The changes to the condensed consolidated balance sheets as of January 1, 2018 and September 30, 2018 and the condensed consolidated statement of operations for the three and nine months ended September 30, 2018 were primarily due to the following factors: (i) reclassification of unbilled receivables (contract assets) to a contra-liability account under ASC 606; and (ii) recognition of revenue related to our single performance obligation for our DAS contracts monthly over the contract term once the customer has the ability to access the DAS network and we commence maintenance on the DAS network under ASC 606 as compared to recognition of build-out fees for our DAS contracts monthly over the term of the estimated customer relationship period once the build-out is complete and minimum monthly access fees for our DAS contracts monthly over the term of the telecom operator agreement under ASC 605. The changes to the condensed consolidated balance sheet as of January 1, 2018 are reflected as non-cash changes within cash provided by operating activities in our condensed consolidated statement of cash flows for the nine months ended September 30, 2018.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*, which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. We adopted ASU 2016-18 on January 1, 2018 under the retrospective transition method for each period presented in our condensed consolidated statements of cash flows.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, which provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity applies modification accounting under ASC 718. According to the new standard, an entity would not apply modification accounting if the fair value, vesting conditions and classification of the modified award is the same as the original award immediately before the original award is modified. The standard will be applied prospectively to modifications that occur on or after the adoption date. We adopted ASU 2017-09 on January 1, 2018 and the adoption of this standard did not have a material impact on our condensed consolidated financial statements.

Principles of consolidation

The unaudited condensed consolidated financial statements include our accounts and the accounts of our majority owned subsidiaries. We consolidate our 70% ownership of Chicago Concourse Development Group, LLC and our 75% ownership of Boingo Holding Participacoes Ltda. in accordance with ASC 810, *Consolidation*. Other parties' interests in consolidated entities are reported as non-controlling interests. All intercompany balances and transactions have been eliminated in consolidation.

Segment and geographical information

We operate as one reportable segment; a service provider of wireless connectivity solutions across our managed and operated network and aggregated network for mobile devices such as laptops, smartphones, tablets and other wireless-enabled consumer devices. This single segment is consistent with the internal organization structure and the manner in which operations are reviewed and managed by our Chief Executive Officer, the chief operating decision maker.

All significant long-lived tangible assets are held in the United States of America. We do not disclose sales by geographic area because to do so would be impracticable.

The following is a summary of our revenue disaggregated by product offerings:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017(1)	2018	2017(1)
Revenue:				
DAS	$ 24,410	$ 21,755	$ 69,940	$ 56,563
Military/multifamily	21,745	13,946	54,334	40,029
Wholesale—Wi-Fi	11,749	8,307	36,428	22,438
Retail	4,088	6,234	13,964	19,007
Advertising and other	3,261	3,413	8,347	8,984
Total revenue	$ 65,253	$ 53,655	$ 183,013	$ 147,021

(1) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

Restricted cash

Restricted cash consists of collateralized money market accounts securing our standby letters of credit issued to our venue partners. At September 30, 2018, we had $549 classified as short-term restricted cash as the letters of credit expire within the next five months.

Revenue recognition

We generate revenue from several sources including: (i) DAS customers that are telecom operators under long-term contracts for access to our DAS at our managed and operated locations, (ii) military and retail customers under subscription plans for month-to-month network access that automatically renew, and military and retail single-use access from sales of hourly, daily or other single-use access plans, (iii) arrangements with property owners for multifamily properties that provide for network installation and monthly Wi-Fi services and support to the residents and employees, (iv) arrangements with wholesale Wi-Fi customers that provide software licensing, network access, and/or professional services fees, and (v) display advertisements and sponsorships on our walled garden sign-in pages. Software licensed by our wholesale platform services customers can only be used during the term of the service arrangements and has no utility to them upon termination of the service arrangement.

Post-ASC 606 adoption

Revenues are recognized when a contract with a customer exists and control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services and the identified performance obligation has been satisfied. Contracts entered into at or near the same time with the same customer are combined and accounted for as a single contract if the contracts have a single commercial objective, the amount of consideration is dependent on the price or performance of the other contract, or the services promised in the contracts are a single performance obligation. Contract amendments are routine in the performance of our DAS, wholesale Wi-Fi, and advertising contracts. Contracts are often amended to account for changes in contract specifications or requirements or expand network access services. In most instances, our DAS and wholesale Wi-Fi contract amendments are for additional goods or services that are distinct, and the contract price increases by an amount that reflects the standalone selling price of the additional goods or services; therefore, such contract amendments are accounted for as separate contracts. Contract amendments for our advertising contracts are also generally for additional goods or services that are distinct; however, the contract price does not increase by an amount that reflects the standalone selling price of the additional goods or services. Advertising contract amendments are therefore generally accounted for as contract modifications under the prospective method. Contract amendments to transaction prices with no change in remaining services are accounted for as contract modifications under the cumulative catch-up method.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account in ASC 606. A contract's transaction price is allocated to each distinct performance obligation and is recognized as revenue when, or as, the performance obligation is satisfied, which typically occurs when the services are rendered. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Our contracts with customers may include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers. Judgment may be used to determine the standalone selling prices for items that are not sold separately, including services provided at no additional charge. Most of our performance obligations are satisfied over time as services are provided. We generally recognize revenue on a gross basis as we are primarily responsible for fulfilling the promises to provide the specified goods or services, we are responsible for paying all costs related to the goods or services before they have been transferred to the customer, and we have discretion in establishing prices for the specified goods or services. Revenue is presented net of any sales and value added taxes.

Payment terms vary on a contract-by-contract basis, although terms generally include a requirement of payment within 30 to 60 days for non-recurring payments, the first day of the monthly or quarterly billing cycle for recurring payments for DAS and wholesale Wi-Fi contracts, and the first day of the month prior to the month that services are provided for multifamily contracts. We apply a practical expedient for purposes of determining whether a significant financing component may exist for our contracts if, at contract inception, we expect that the period between when we transfer the promised good or service to the customer and when the customer pays for that good or service will be one year or less. In instances where the customer pays for a good or service one year or more in advance of the period when we transfer the promised good or service to the customer, we have determined our contracts generally do not include a significant financing component. The primary purpose of our invoicing terms is not to receive financing from our customers or to provide customers with financing but rather to maximize our profitability on the customer contract. Specifically, inclusion of non-refundable upfront fees in our long-term customer contracts increases the likelihood that the customer will be committed through the end of the contractual term and ensures recoverability of the capital outlay that we incur in expectation of the customer fulfilling its contractual obligations. We may also provide service credits to our customers if we fail to meet contractual monthly system uptime requirements and we account for the variable consideration related to these service credits using the most likely amount method.

For contracts that include variable consideration, we estimate the amount of consideration at contract inception under the expected value method or the most likely amount method and include the amount of variable consideration that is not considered to be constrained. Significant judgment is used in constraining estimates of variable consideration. We update our estimates at the end of each reporting period as additional information becomes available.

Timing of revenue recognition may differ from the timing of invoicing to customers. We record unbilled receivables (contract assets) when revenue is recognized prior to invoicing, deferred revenue (contract liabilities) when revenue is recognized after invoicing, and receivables when we have an unconditional right to consideration to invoice and receive payment in the future. We present our DAS, multifamily, and wholesale Wi-Fi contracts in our consolidated balance sheet as either a contract asset or a contract liability with any unconditional rights to consideration presented separately as a receivable. Our other customer contracts generally do not have any significant contract asset or contract liability balances. Generally, a significant portion of the billing for our DAS contracts occurs prior to revenue recognition, resulting in our DAS contracts being presented as contract liabilities. In contrast, our wholesale Wi-Fi contracts that contain recurring fees with annual escalations are generally presented as contract assets as revenue is recognized prior to invoicing. Our multifamily contracts can be presented as either contract liabilities or contract assets primarily as a result of timing of invoicing for the network installations.

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were immaterial during the three and nine months ended September 30, 2018 and are included in prepaid expenses and other current assets and non-current other assets on our condensed consolidated balance sheets. We apply a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less, the most significant of which relates to sales commissions related to obtaining our advertising customer contracts. Contract costs are evaluated for impairment in accordance with ASC 310, *Receivables*.

DAS

We enter into long-term contracts with telecom operators at our managed and operated locations. The initial term of our contracts with telecom operators generally range from five to twenty years and the agreements generally contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our DAS customer contracts generally contain a single performance obligation—provide non-exclusive access to our DAS or small cell networks to provide telecom operators' customers with access to the licensed wireless spectrum, together with providing telecom operators with construction, installation, optimization/engineering, maintenance services and agreed-upon storage space for the telecom operators' transmission equipment, each related to providing such licensed wireless spectrum to the telecom operators. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contract fee structure generally includes a non-refundable upfront fee and we evaluated whether customer options to renew services give rise to a material right that should be accounted for as a separate performance obligation because of those non-refundable upfront fees. We believe that a material right generally does not exist for our DAS customer contracts that contain renewal options considering the telecom operators' decision to renew is highly dependent upon our ability to maintain our exclusivity as the DAS service provider at the venue location and our limited operating history with venue and customer renewals. The telecom operators will make the decision to incur the capital improvement costs at the venue location irrespective of our remaining exclusivity period with the venue as the telecom operators expect that the assets will continue to be serviced regardless of whether we will remain the exclusive DAS service provider at the venue. Our contracts also provide our DAS customers with the option to purchase additional future services such as upgrades or enhancements. This option is not considered to provide the customer with a material right that should be accounted for as a separate performance obligation as the cost of the additional future services will depend entirely on the market rate of such services at the time such services are requested and we are not automatically obligated to stand ready to deliver these additional goods or services as the customer may reject our proposal. Periodically, we install and sell DAS networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer.

Our contract fee structure may include varying components of an upfront build-out fee and recurring access, maintenance, and other fees. The upfront build-out fee is generally structured as a firm-fixed price or cost-plus arrangement and becomes payable as certain contract and/or construction milestones are achieved. Our DAS and small-cell networks are neutral-host networks that can accommodate multiple telecom operators. Some of our DAS customer contracts provide for credits that may be issued to existing telecom operators for additional telecom operators subsequently joining the DAS network. The credits are generally based upon a fixed dollar amount per additional telecom operator, a fixed percentage amount of the original build-out fee paid by the telecom operator per additional telecom operator, or a proportionate share considering the actual costs incurred by all telecom operators to construct the DAS network split among the relevant number of telecom operators. In most cases, there is significant uncertainty on whether additional telecom operator contracts will be executed at inception of the contract with the existing telecom operator. We believe that the upfront build-out fee is fixed consideration once the build-out is complete and any subsequent credits that may be issued would be accounted for in a manner similar to a contract modification under the prospective method because (i) the execution of customer contracts with additional telecom carriers is at our sole election and (ii) we would not execute agreements with additional telecom carriers if it would not increase our revenues and gross profits at the venue level. Further, the credits issued to the existing telecom operator changes the transaction price on a go-forward basis, which corresponds with the decline in service levels for the existing telecom operator once the neutral-host DAS network can be accessed by the additional telecom operator. The recurring access, maintenance, and other fees generally escalate on an annual basis. The recurring fees are variable consideration until the contract term and annual escalation dates are fixed. We estimate the variable consideration for our recurring fees using the most likely amount method based on the expected commencement date for the services. We evaluate our estimates of variable consideration each period and record a cumulative catch-up adjustment in the period in which changes occur for the amount allocated to satisfied performance obligations.

We generally recognize revenue related to our single performance obligation for our DAS customer contract monthly over the contract term once the customer has the ability to access the DAS network and we commence maintenance on the DAS network.

Military and retail

Military and retail customers must review and agree to abide by our standard "Customer Agreement (With Acceptable Use Policy) and End User License Agreement" before they are able to sign-up for our subscription or single-use Wi-Fi network access services. Our military and retail customer contracts generally contain a single performance obligation—provide non-exclusive access to Wi-Fi services, together with performance of standard maintenance, customer support, and the Wi-Finder app to facilitate seamless connection to the Company's Wi-Fi network. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contracts also provide our military and retail subscription customers with the option to renew the agreement when the subscription term is over. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation because the customer would not receive a discount if they decided to renew and the option to renew is cancellable within 5 days' notice prior to the end of the then current term by either party.

The contract transaction price is determined based on the subscription or single-use plan selected by the customer. Our military and retail service plans are for fixed price services with the price for each plan stated on our website. From time to time, we offer promotional discounts that result in an immediate reduction in the price paid by the customer. Subscription fees from military and retail customers are paid monthly in advance. We provide refunds for our military and retail services on a case-by-case basis. Refunds and credit card chargeback amounts are not significant and are recorded as contra-revenue in the period the refunds are made, or chargebacks are received.

Subscription fee revenue is recognized ratably over the subscription period. Revenue generated from military and retail single-use access is recognized when access is provided, and the performance obligation is satisfied.

Multifamily

We enter into long-term contracts with property owners. The initial term of our contracts with property owners generally range from three to five years and the contracts may contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our customer contracts generally contain two performance obligations: (i) install the network required to provide Wi-Fi services; and (ii) provide Wi-Fi services and technical support to the residents and employees. Our contracts may also provide our property owners with the option to renew the agreement. This option is not considered to provide the property owner with a material right that should be accounted for as a separate performance obligation because the property owner would not receive a discount if they decided to renew and the option to renew is generally cancellable by either party subject to the notice of non-renewal requirements specified in the contract. Our contracts may also provide our customers with the option to purchase additional future services. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation since the cost of the additional future services are generally at market rates for such services and we are not automatically obligated to stand ready to deliver these additional goods or services because the customer may reject our proposal.

Our contract fee structure includes a network installation fee and recurring Wi-Fi service and support fees. The network installation fee is generally structured as a firm-fixed price arrangement and becomes payable as certain contract and/or installation milestones are achieved. We generally estimate variable consideration for unpriced change orders using the most likely amount method based on the expected price for those services. If network installations are not completed by specified dates, we may be subject to network installation penalties. We estimate the variable consideration for our network installation fees using the most likely amount method based on the amount of network installation penalties we expect to incur. Title to the network generally transfers to the property owner once installation is completed and the network has been accepted. We generally recognize revenue related to our network installation performance obligation using a cost-to-cost method over the network installation period. We may provide latent defect warranties for materials and installation labor services related to our network installation services. Our warranty obligations are generally not accounted for as separate performance obligations as warranties cannot be separately purchased and warranties do not provide a service in addition to the assurance that the network will function as expected.

The recurring fees commence once the network is launched with recurring fees generally based upon a fixed or variable occupancy rate. The recurring Wi-Fi service fees may be adjusted prospectively for changes in circuit and/or video content costs, and Wi-Fi support fees may escalate on an annual basis. We estimate the variable consideration for our recurring fees using the expected value method with the exception of the variable consideration related to actual occupancy rates, which we record when we have the contractual right to bill. We evaluate our estimates of variable consideration each period and record a cumulative catch-up adjustment in the period in which changes occur for the amount allocated to satisfied performance obligations. We recognize revenue related to the recurring fees on a monthly basis over the contract term as the Wi-Fi services and support is rendered, and the performance obligation is satisfied.

Wholesale Wi-Fi

We enter into long-term contracts with enterprise customers such as telecom operators, cable companies, technology companies, and enterprise software/services companies, that pay us usage-based Wi-Fi network access and software licensing fees to allow their customers' access to our footprint worldwide. We also enter into long-term contracts with financial institutions and other enterprise customers who provide access to our Wi-Fi footprint as a value-added service for their customers. The initial term of our contracts with wholesale Wi-Fi customers generally range from one to three years and the agreements generally contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our wholesale Wi-Fi customer contracts generally contain a single performance obligation—provide non-exclusive rights to access our Wi-Fi networks to provide wholesale Wi-Fi customers' end customers with access to the high-speed broadband network that may be bundled together with integration services, support services, and/or performance of standard maintenance. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method or usage-based output method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contracts may also provide our enterprise customers with the option to renew the agreement. This option is not considered to provide the customer with a material right that should be accounted for as a separate performance obligation because the customer would not receive a discount if they decided to renew and the option to renew is generally cancellable by either party subject to the notice of non-renewal requirements specified in the contract. Our contracts may also provide our wholesale Wi-Fi customers with the option to purchase additional future services. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation since the cost of the additional future services are generally at market rates for such services and we are not automatically obligated to stand ready to deliver these additional goods or services because the customer may reject our proposal. Periodically, we install and sell Wi-Fi networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer.

Our contract fee structure may include varying components of a minimum fee and usage-based fees. Minimum fees represent fixed price consideration while usage-based fees represent variable consideration. With respect to variable consideration, our commitment to our wholesale Wi-Fi customers consists of providing continuous access to the network. It is therefore a single performance obligation to stand ready to perform and we will allocate the variable fees charged for usage when we have the contractual right to bill. The variable component of revenue will be recognized based on the actual usage during the period.

Wholesale Wi-Fi revenue is recognized as they are earned over the relevant contract term with variable consideration recognized when we have the contractual right to bill.

Advertising

We generally enter into short-term cancellable insertion orders with our advertising customers for advertising campaigns that are served at our managed and operated locations and other locations where we solely provide authorized access to a partner's Wi-Fi network through sponsored and promotional programs. Our sponsorship advertising arrangements are generally priced under a cost per engagement structure, which is a set price per click or engagement, or a cost per install structure for third party application downloads. Our display advertising arrangements are priced based on cost per thousand impressions. Insertion orders may also include bonus items. Our advertising customer contracts may contain multiple performance obligations with each distinct service. These distinct services may include an advertisement video or banner impressions in the contract bundled with the requirement to provide network, space on the website, and integration of customer advertisement onto the website, and each is generally considered to be its own performance obligation. The performance obligations are considered a series of distinct services as the performance obligations are satisfied over time and the same action-based output method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer.

The contract transaction price is comprised of variable consideration based on the stated rates applied against the number of units delivered inclusive of the bonus units subject to the maximums provided for in the insertion order. It is customary for us to provide additional units over and above the amounts contractually required; however, there are a number of factors that can also negatively impact our ability to deliver the units required by the customer such as service outages at the venue resulting from power or circuit failures and customer cancellation of the remaining undelivered units under the insertion order due to campaign performance or budgetary constraints. Typically, the advertising campaign periods are short in duration. We will therefore use the contractual rates per the insertion orders and actual units delivered to determine the transaction price each period end. The transaction price will be allocated to each performance obligation based on the standalone selling price of each performance obligation.

Advertising revenue is recognized ratably over the service period based on actual units delivered subject to the maximums provided for in the insertion order.

Pre-ASC 606 adoption

We recognize revenue when an arrangement exists, services have been rendered, fees are fixed or determinable, no significant obligations remain related to the earned fees and collection of the related receivable is reasonably assured. Revenue is presented net of any sales and value added taxes.

Revenue generated from access to our DAS networks consists of build-out fees and recurring access fees under certain long-term contracts with telecom operators. Build-out fees paid upfront are generally deferred and recognized ratably over the term of the estimated customer relationship period, once the build-out is complete. Periodically, we install and sell Wi-Fi and DAS networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer. Minimum monthly access fees for usage of the DAS networks are non-cancellable and generally escalate on an annual basis. These minimum monthly access fees are recognized ratably over the term of the telecom operator agreement. The initial term of our contracts with telecom operators generally range from five to twenty years and the agreements generally contain renewal clauses. Revenue from DAS network access fees in excess of the monthly minimums is recognized when earned.

Subscription fees from military and retail customers are paid monthly in advance and revenue is deferred for the portions of monthly recurring subscription fees collected in advance. We provide refunds for our military and retail services on a case-by-case basis. These amounts are not significant and are recorded as contra-revenue in the period the refunds are made. Subscription fee revenue is recognized ratably over the subscription period. Revenue generated from military and retail single-use access is recognized when access is provided.

Services provided to wholesale Wi-Fi partners generally contain several elements including: (i) a term license to use our software to access our Wi-Fi network, (ii) access fees for Wi-Fi network usage, and/or (iii) professional services for software integration and customization and to maintain the Wi-Fi service. The term license, monthly minimum network access fees and professional services are billed monthly based upon predetermined fixed rates. Once the term license for integration and customization are delivered, the fees from the arrangement are recognized ratably over the remaining term of the service arrangement. The initial term of the license agreements is generally between one to three years and the agreements generally contain renewal clauses. Revenue for Wi-Fi network access fees in excess of the monthly minimum amounts is recognized when earned. All elements within existing service arrangements are generally delivered and earned concurrently throughout the term of the respective service arrangement.

In instances where the minimum monthly Wi-Fi and DAS network access fees escalate over the term of the wholesale service arrangement, an unbilled receivable is recognized when performance is within our control and when we have reasonable assurance that the unbilled receivable balance will be collected.

We adopted the provisions of ASU 2009-13, *Revenue Recognition (Topic 605)—Multiple-Deliverable Revenue Arrangements*, on a prospective basis on January 1, 2011. For multiple-deliverable arrangements entered into prior to January 1, 2011 that are accounted for under ASC 605-25, *Revenue Recognition—Multiple-Deliverable Revenue Arrangements*, we defer recognition of revenue for the full arrangement and recognize all revenue ratably over the term of the estimated customer relationship period for DAS arrangements and the wholesale service period for Wi-Fi platform service arrangements, as we do not have evidence of fair value for the undelivered elements in the arrangement. For multiple-deliverable arrangements entered into or materially modified after January 1, 2011 that are accounted for under ASC 605-25, we evaluate whether separate units of accounting exist and then allocate the arrangement consideration to all units of accounting based on the relative selling price method using estimated selling prices if vendor specific objective evidence and third-party evidence is not available. We recognize the revenue associated with the separate units of accounting upon completion of such services or ratably over the term of the estimated customer relationship period for DAS arrangements and the wholesale service period for Wi-Fi platform service arrangements.

Advertising revenue is generated from advertisements on our managed and operated or partner networks. In determining whether an arrangement exists, we ensure that a binding arrangement is in place, such as a standard insertion order or a fully executed customer-specific agreement. Obligations pursuant to our advertising revenue arrangements typically include a minimum number of units or the satisfaction of certain performance criteria. Advertising and other revenue is recognized when the services are performed.

Income taxes

We calculate our interim income tax provision in accordance with ASC 270, *Interim Reporting*, and ASC 740, *Accounting for Income Taxes*. At the end of each interim period, we estimate the annual effective tax rate and apply that rate to our ordinary quarterly earnings. The tax expense or benefit related to significant, unusual, or extraordinary items is recognized in the interim period in which those items occur. In addition, the effect of changes in enacted tax laws, rates, or tax status is recognized in the interim period in which the change occurs. Excess windfall tax benefits and tax deficiencies related to our stock option exercises and restricted stock unit (“RSU”) vesting are recognized as an income tax benefit or expense in our condensed consolidated statements of operations in the period they are deducted on the income tax return. Excess windfall tax benefits and tax deficiencies are therefore not anticipated when determining the annual effective tax rate and are instead recognized in the interim period in which those items occur.

The computation of the annual estimated effective tax rate at each interim period requires certain estimates and significant judgment, including the expected operating income (loss) for the year, projections of the proportion of income (loss) earned and taxed in various states, permanent and temporary differences as a result of differences between amounts measured and recognized in accordance with tax laws and financial accounting standards, and the likelihood of recovering deferred tax assets generated in the current year. The accounting estimates used to compute the provision for income taxes may change as new events occur, additional information is obtained, or as the tax environment changes.

Foreign currency translation

Our Brazilian subsidiary uses the Brazilian Real as its functional currency. Assets and liabilities of our Brazilian subsidiary are translated to U.S. dollars at period-end rates of exchange, and revenues and expenses are translated at average exchange rates prevailing for each month. The resulting translation adjustments are made directly to a separate component of other comprehensive loss, which is reflected in stockholders' equity in our condensed consolidated balance sheets. As of September 30, 2018 and December 31, 2017, the Company had $(1,455) and $(898), respectively, of cumulative foreign currency translation adjustments, net of tax, which was $0 as of September 30, 2018 and December 31, 2017 due to the full valuation allowance established against our deferred tax assets, in accumulated other comprehensive loss.

Some of our subsidiaries also enter into transactions and have monetary assets and liabilities that are denominated in a currency other than the entities' respective functional currencies. Gains and losses from the revaluation of foreign currency transactions and monetary assets and liabilities are included in the condensed consolidated statements of operations.

Use of estimates

The preparation of accompanying condensed consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the accompanying condensed consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates. Assets and liabilities which are subject to significant judgment and the use of estimates include the allowance for doubtful accounts, recoverability of goodwill and long-lived assets, valuation allowances with respect to deferred tax assets, uncertain tax positions, useful lives associated with property and equipment, valuation and useful lives of intangible assets, contact assets and contract liabilities including estimates of variable consideration, and the valuation and assumptions underlying stock-based compensation and other equity instruments. On an ongoing basis, we evaluate our estimates compared to historical experience and trends, which form the basis for making judgments about the carrying value of assets and liabilities.

Fair value of financial instruments

Fair value is defined as the price that would be received from selling an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, we consider the principal or most advantageous market in which it would transact, and we consider assumptions that market participants would use when pricing the asset or liability.

The accounting guidance for fair value measurement also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

- Level 1—Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

- Level 2—Quoted prices for identical assets and liabilities in markets that are not active, quoted prices for similar assets and liabilities in active markets or financial instruments for which significant inputs are observable, either directly or indirectly.

- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying amount reflected in the accompanying condensed consolidated balance sheets for cash and cash equivalents, restricted cash, accounts receivable, prepaid expenses and other current assets, other assets, accounts payable, accrued expenses and other liabilities, and deferred revenue approximates fair value due to the short-term nature of these financial instruments. As of September 30, 2018 and December 31, 2017, the carrying amount reflected in the accompanying condensed consolidated balance sheets for current portion of capital leases and notes payable and long-term portion of capital leases and notes payable approximate fair value (Level 2) based on the variable nature of the interest rates and lack of significant change in our credit risk.

Recent accounting pronouncements

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which requires customers to apply the same criteria for capitalizing implementation costs incurred in a cloud computing arrangement that is hosted by the vendor as they would for an arrangement that has a software license. The standard is effective for interim and annual periods beginning after December 15, 2019 and early adoption is permitted. The standard can be adopted prospectively or retrospectively. We are currently evaluating the expected impact of this new standard.

In June 2018, the FASB issued ASU 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting*, which eliminates the separate accounting model for nonemployee share-based payment awards and generally requires companies to account for share-based payment transactions with nonemployees in the same way as share-based payment transactions with employees. The accounting remains different for attribution, which represents how the equity-based payment cost is recognized over the vesting period, and a contractual term election for valuing nonemployee equity share options. The standard is effective for interim and annual periods beginning after December 15, 2018. Early adoption is permitted for all entities on a modified retrospective basis. We currently do not expect that this standard will have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which requires lessees to recognize assets and liabilities for all leases with lease terms of more than 12 months on the balance sheet. Under the new guidance, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee will depend on its classification as a finance or operating lease. The standard is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. We have selected January 1, 2019 as our effective date. ASU 2016-02 provided for the adoption of the new leases standard using a modified retrospective transition method. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which provided an additional (and optional) transition method to adopt the new leases standard whereby an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We have not yet selected a transition method. We are completing the assessment stage of our evaluation of the impact of the new standard on our accounting policies, processes, and system requirements. We have assigned internal resources and engaged a third-party service provider to assist in the evaluation and implementation. While we continue to assess all impacts under the new standard, there may be a significant impact on our consolidated balance sheet from the adoption of this new standard related to lease assets and liabilities for our operating leases.

3. Acquisitions

Elauwit Networks, LLC

On August 1, 2018, we acquired the assets of Elauwit Networks, LLC ("Elauwit") for $28,000 plus other contingent consideration. Elauwit provides data and video services to 220 multi-unit dwelling properties including student housing, condominiums, apartments, senior living, and hospitality industries throughout the U.S. In addition, Elauwit builds and maintains the network that supports these services for property owners and managers and provides support for residents and employees.

The acquisition has been accounted for under the acquisition method of accounting in accordance with FASB ASC 805, *Business Combinations*. As such, the assets acquired and liabilities assumed are recorded at their acquisition-date fair values. The total purchase price was $29,841, which includes contingent consideration fair valued at $1,265. At the closing date, we paid cash of $15,576. $13,000 of the purchase price was held back for the following: (i) $11,000 held back for third-party consents not obtained at closing for certain customer agreements, which will be released as Elauwit delivers third-party consents with respect to such customer agreements; and (ii) a $2,000 indemnification holdback that is being retained for a period of 12 months following the closing of the acquisition. As of September 30, 2018, we paid $6,476 of the amounts held back for third-party consents, and we paid an additional $2,572 for amounts held back for third-party consents in October 2018. We expect to pay the remainder of the amounts held back for third-party consents within the next one year period. The contingent consideration could require payments in the aggregate amount of up to $15,000 that would be due and payable subject to certain conditions and the successful achievement of annual revenue targets for the acquired business during the 2018, 2019, and 2020 fiscal years. The contingent consideration is subject to acceleration under certain corporate events.

The fair value of the contingent consideration is based on Level 3 inputs. Further changes in the fair value of the contingent consideration will be recorded through operating income (loss). The contingent consideration was valued at the date of acquisition using the Monte Carlo method reflecting the average expected monthly revenue, an annual risk-free rate of 2.78%, and an annual revenue volatility rate of 40%.

The identifiable intangible assets were primarily valued using the excess earnings, relief from royalty, and loss-of-revenue methods using discount rates ranging from 8.0% to 21.0% and a 1.0% royalty rate, where applicable. We allocated the excess of the purchase price over the fair value of assets acquired and liabilities assumed to goodwill, which is deductible for tax purposes. The goodwill arising from the Elauwit acquisition is attributable primarily to expected synergies and other benefits, including the acquired workforce, from combining Elauwit with us.

The amortizable intangible assets are being amortized straight-line over their estimated useful lives. The following summarizes the preliminary purchase price allocation:

	Estimated Fair Value	Weighted Average Estimated Useful Life (years)
Consideration:		
Cash paid	$ 15,576	
Holdback consideration	13,000	
Contingent consideration	1,265	
Total consideration	$ 29,841	
Recognized amounts of identifiable assets acquired and liabilities assumed:		
Accounts receivable	$ 4,494	
Prepaid expenses and other current assets	1,796	
Property and equipment	195	
Other non-current assets	177	
Accounts payable	(2,049)	
Accrued expenses and other liabilities	(232)	
Deferred revenue	(4,036)	
Other non-current liabilities	(307)	
Net tangible assets acquired	38	
Backlog	7,030	5.0
Customer relationships	2,490	10.0
Partner relationships	1,200	10.0
Transition services agreement	540	2.0
Non-compete agreement	1,380	3.0
Goodwill	17,163	
Total purchase price	$ 29,841	

The following table presents the unaudited results of Elauwit included in the Company's revenue and net income (loss).

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(Unaudited)			
Revenue	$ 5,082	$ —	$ 5,082	$ —
Net loss	(571)	—	(571)	—

Pro forma results (Unaudited)

The following table presents the unaudited pro forma results of the Company for the three and nine months ended September 30, 2018 and 2017 as if the acquisition of Elauwit had occurred on January 1, 2017 and therefore includes Elauwit's revenue and net income (loss), as adjusted, for those periods. These results are not intended to reflect the actual operations of the Company had the acquisition occurred on January 1, 2017. Acquisition transaction costs have been excluded from the pro forma net income (loss).

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017(2)	2018	2017(2)
	(Unaudited)			
Revenue	$ 67,917	$ 59,939	$ 200,885	$ 166,078
Net income (loss)	104	(3,691)	(1,221)	(19,116)
Net loss attributable to common stockholders	(492)	(3,901)	(2,668)	(19,593)
Net loss per share attributable to common stockholders				
Basic	$ (0.01)	$ (0.10)	$ (0.06)	$ (0.50)
Diluted	$ (0.01)	$ (0.10)	$ (0.06)	$ (0.50)

(2) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

4. Cash and cash equivalents

Cash and cash equivalents consisted of the following:

	September 30, 2018	December 31, 2017
Cash and cash equivalents:		
Cash	$ 10,345	$ 24,430
Money market accounts	2,282	2,255
Total cash and cash equivalents	$ 12,627	$ 26,685

Our money market account assets are measured at fair value on a recurring basis utilizing Level 1 inputs.

5. Property and equipment

The following is a summary of property and equipment, at cost less accumulated depreciation and amortization:

	September 30, 2018	December 31, 2017
Leasehold improvements	$ 433,130	$ 418,023
Software	49,675	42,281
Construction in progress	46,649	27,291
Computer equipment	13,666	13,245
Furniture, fixtures and office equipment	1,866	1,806
Total property and equipment	544,986	502,646
Less: accumulated depreciation and amortization	(247,056)	(240,287)
Total property and equipment, net	$ 297,930	$ 262,359

During the nine months ended September 30, 2018, we disposed of certain property and equipment as a result of significant upgrades made to our DAS and Wi-Fi networks.

Depreciation and amortization expense, which includes depreciation and amortization for property and equipment under capital leases, is allocated as follows in the accompanying condensed consolidated statements of operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Network access	$ 11,531	$ 11,625	$ 35,252	$ 29,354
Network operations	4,447	3,987	13,017	12,273
Development and technology	2,664	2,375	7,740	6,840
General and administrative	259	258	760	777
Total depreciation and amortization of property and equipment	$ 18,901	$ 18,245	$ 56,769	$ 49,244

6. Accrued expenses and other liabilities

Accrued expenses and other liabilities consisted of the following:

	September 30, 2018	December 31, 2017
Accrued construction in progress	$ 14,562	$ 12,661
Accrued customer liabilities	12,732	7,100
Holdback consideration	6,524	—
Revenue share	5,012	5,506
Salaries and wages	4,140	5,066
Accrued taxes	2,688	1,897
Accrued partner network	1,784	1,799
Accrued professional fees	1,295	1,979
Other	5,973	6,397
Total accrued expenses and other liabilities	$ 54,710	$ 42,405

7. Contract assets and contract liabilities

The opening and closing balances of our contract asset, net, contract liability, net, and receivables balances from contracts with customers for the nine months ended September 30, 2018 are as follows:

	Contract assets, net	Contract liabilities, net
Balance at January 1, 2018	$ 798	$ 204,472
Balance at September 30, 2018	911	206,736
Change	$ 113	$ 2,264

The current and non-current portions of our contract assets, net are included within prepaid expenses and other current assets and other assets, respectively, and current and non-current portions of our contract liabilities, net are included within deferred revenue and deferred revenue, net of current portion, respectively, in our condensed consolidated balance sheets. Contract assets, net are generated from our multifamily and wholesale Wi-Fi contracts and the change in the contract assets, net balance includes activity related to amounts acquired from the Elauwit acquisition and amounts invoiced offset by revenue recognized from performance obligations satisfied in the current reporting period.

Contract liabilities are recorded when fees are collected or we have an unconditional right to consideration (a receivable) in advance of delivery of goods or services. The change in contract liabilities, net balance is related to amounts acquired from the Elauwit acquisition and customer activity associated with each of our product offerings including the receipt of cash payments and the satisfaction of our performance obligations. Revenues for the three and nine months ended September 30, 2018 include the following:

	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
Amounts included in the beginning of period contract liability balance	$ 16,572	$ 66,864
Amounts associated with performance obligations satisfied in previous periods	67	257

As of September 30, 2018, the aggregate amount of the transaction price allocated to remaining service performance obligations for our DAS contracts was $191,458. We expect to recognize this revenue as service is provided over the remaining contract term. As of September 30, 2018, our DAS contracts have a remaining duration of less than one year to sixteen years.

Certain of our wholesale Wi-Fi contracts include variable consideration based on usage. This variable consideration has been excluded from the disclosure of remaining performance obligations. As of September 30, 2018, the aggregate amount of the transaction price allocated to remaining service performance obligations for certain of our wholesale Wi-Fi contracts with guaranteed minimum consideration was $9,439. We expect to recognize this revenue as service is provided over the remaining contract term. As of September 30, 2018, our wholesale Wi-Fi contracts have a remaining duration of less than one year to sixteen years.

Information about remaining performance obligations that are part of a contract that has an original expected duration of one year or less have been excluded from the above, which primarily consists of network installations for our multifamily customers and monthly service contracts.

8. Income taxes

Income tax expense of $54 and $167 reflects an effective tax rate of 42.2% and 5.4% for the three months ended September 30, 2018 and 2017, respectively. Income tax expense of $198 and $507 reflects an effective tax rate of 2,200.0% and 2.9% for the nine months ended September 30, 2018 and 2017, respectively. Our effective tax rate differs from the statutory rate primarily due to our valuation allowance for the three and nine months ended September 30, 2018 and 2017 as well as minimum state taxes and foreign tax expense for the three and nine months ended September 30, 2018.

We operate within federal, state and international taxing jurisdictions and are subject to audit in these jurisdictions. These audits can involve complex issues which may require an extended period to resolve. We are subject to taxation in the United States and in various states. Our tax years 2015 and forward are subject to examination by the IRS and our tax years 2013 and forward are subject to examination by material state jurisdictions. However, due to prior year loss carryovers, the IRS and state tax authorities may examine any tax years for which the carryovers are used to offset future taxable income. We are currently subject to examination by the IRS for our 2015 tax year. Although the ultimate outcome is unknown, we believe that any adjustments that may result from examination is not likely to have a material adverse effect on our condensed consolidated results of operations, financial position or cash flows.

9. Credit Facility

We have entered into a Credit Agreement (the “Credit Agreement”) and related agreements, as amended, with Bank of America, N.A. acting as agent for lenders named therein, including Bank of America, N.A., Silicon Valley Bank, and Citizens Bank, N.A. (the “Lenders”), for a secured credit facility in the form of a revolving line of credit of up to $69,750 with an option to increase the available amount to $86,500 upon the satisfaction of certain conditions (the “Revolving Line of Credit”) and a term loan of $3,500 (the “Term Loan” and together with the Revolving Line of Credit, the “Credit Facility”). We may use borrowings under the Credit Facility for general working capital and corporate purposes. In general, amounts borrowed under the Credit Facility are secured by a lien against all our assets, with certain exclusions. The Revolving Line of Credit matures on November 21, 2018 but may be prepaid in whole or part at any time. Amounts borrowed under the Revolving Line of Credit and Term Loan will bear, at our election, a variable interest at LIBOR plus 2.5% - 3.5% or Lender’s Prime Rate plus 1.5% - 2.5% per year and we will pay a fee of 0.375% - 0.5% per year on any unused portion of the Revolving Line of Credit.

As of September 30, 2018 and December 31, 2017, $15,000 and $0, respectively, was outstanding under the Revolving Line of Credit. In October 2018, the Company repaid the $15,000 outstanding balance under the Revolving Line of Credit. As of September 30, 2018 and December 31, 2017, $219 and $875, respectively, was outstanding under the Term Loan. The Term Loan requires quarterly payments of interest and principal, amortizing fully over the Credit Agreement term such that it is repaid in full on the maturity date of November 21, 2018. We are currently working with various financial institutions on executing a new credit agreement.

On August 1, 2018, the Company entered into a commitment letter (the Commitment Letter”) with Bank of America, pursuant to which Bank of America has committed to provide senior secured credit facilities (the “Senior Credit Facility”) to us in an aggregate amount of $28,000 on terms substantially similar to the existing Credit Agreement, subject to various conditions. In connection with the Elauwit acquisition, we also entered into an amendment to the Credit Agreement (the “Credit Agreement Amendment”) in order to make certain amendments to allow for the consummation of the Elauwit acquisition and the related transactions.

Repayment of amounts borrowed under the Credit Facility may be accelerated in the event that we are in violation of the representations, warranties and covenants made in the Credit Agreement, including certain financial covenants set forth therein, and under other specified default events including, but not limited to, non-payment or inability to pay debt, breach of cross default provisions, insolvency provisions, and change of control. We are subject to customary financial and non-financial covenants, including a minimum quarterly consolidated leverage ratio, a maximum quarterly consolidated fixed charge coverage ratio, and monthly liquidity minimums. We were in compliance with all financial covenants as of September 30, 2018.

Debt issuance costs are amortized on a straight-line basis over the term of the Credit Facility. Amortization expense related to debt issuance costs are included in interest and other expense, net in the accompanying condensed consolidated statements of operations for the three and nine months ended September 30, 2018 and 2017. Amortization and interest expense capitalized during the three and nine months ended September 30, 2018 amounted to $274 and $575, respectively. Amortization and interest expense capitalized during the three and nine months ended September 30, 2017 amounted to $159 and $585, respectively. Amortization and interest expense expensed during the three and nine months ended September 30, 2018 amounted to $8 and $58, respectively. Amortization and interest expense expensed during the three and nine months ended September 30, 2017 amounted to $36 and $144, respectively. The interest rate for our Credit Facility for the nine months ended September 30, 2018 ranged from 4.2% to 4.8%.

10. Commitments and contingencies

Letters of credit

We have entered into Letter of Credit Authorization agreements (collectively, “Letters of Credit”), which are issued under our Credit Agreement. The Letters of Credit are irrevocable and serve as performance guarantees that will allow our customers to draw upon the available funds if we are in default. As of September 30, 2018, we have Letters of Credit totaling $8,257 that are scheduled to expire or renew over the next ten months. There have been no drafts drawn under these Letters of Credit as of September 30, 2018.

Legal proceedings

From time to time, we may be subject to claims, suits, investigations and proceedings arising out of the normal course of business. We are not currently a party to any litigation that we believe could have a material adverse effect on our business, financial position, results of operations or cash flows. Legal costs are expensed as incurred.

Other matters

We have received a claim from one of our venue partners with respect to contractual terms on our revenue share payments. The claim asserts that we have underpaid revenue share payments and related interest by approximately $4,600. We are currently in final settlement discussions with our venue partner. As of September 30, 2018, we have accrued for the probable and estimable losses that have been incurred. We are not currently a party to any other claims that we believe could have a material adverse effect on our business, financial position, results of operations or cash flows.

11. Stock incentive plans

In March 2011, our board of directors approved the 2011 Equity Incentive Plan ("2011 Plan"). The 2011 Plan provides for the grant of incentive and non-statutory stock options, stock appreciation rights, restricted shares of our common stock, stock units, and performance cash awards. As of January 1st of each year, the number of shares of common stock reserved for issuance under the 2011 Plan shall automatically be increased by a number equal to the lesser of (a) 4.5% of the total number of shares of common stock then outstanding, (b) 3,000,000 shares of common stock or (c) as determined by our board of directors. The automatic "evergreen" share reserve increase feature terminated after January 2018, so no additional automatic annual share increases will occur. As of September 30, 2018, options to purchase approximately 302,000 shares of common stock and RSUs covering approximately 3,265,000 shares of common stock were outstanding under the 2011 Plan.

No further awards will be made under our Amended and Restated 2001 Stock Incentive Plan ("2001 Plan"), and it will be terminated. Options outstanding under the 2001 Plan will continue to be governed by their existing terms.

Stock-based compensation expense is allocated as follows on the accompanying condensed consolidated statements of operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Network operations	$ 549	$ 552	$ 1,602	$ 1,660
Development and technology	323	275	915	825
Selling and marketing	511	524	1,377	1,589
General and administrative	1,772	2,333	5,333	6,942
Total stock-based compensation	$ 3,155	$ 3,684	$ 9,227	$ 11,016

During the three and nine months ended September 30, 2018, we capitalized $208 and $600, respectively, of stock-based compensation expense. During the three and nine months ended September 30, 2017, we capitalized $163 and $530, respectively, of stock-based compensation expense.

Stock option awards

We grant stock option awards to both employees and non-employee directors. The grant date for these awards is the same as the measurement date. The stock option awards generally vest over a four-year service period with 25% vesting when the individual completes 12 months of continuous service and the remaining 75% vesting monthly thereafter. These awards are valued as of the measurement date and the stock-based compensation expense, net of forfeitures, is recognized on a straight-line basis over the requisite service period.

A summary of the stock option activity is as follows:

	Number of Options (000's)	Weighted Average Exercise Price	Weighted-Average Remaining Contract Life (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2017	1,283	$ 9.58	3.8	$ 16,573
Exercised	(871)	$ 11.21		
Canceled/forfeited	(7)	$ 5.99		
Outstanding and exercisable at September 30, 2018	405	$ 6.14	3.4	$ 11,660

Restricted stock unit awards

We grant time-based RSUs to executive and non-executive personnel and non-employee directors. The time-based RSUs granted to executive and non-executive personnel generally vest over a three-year period subject to continuous service on each vesting date. The time-based RSUs for our non-employee directors generally vest over a one-year period for existing members and 25% per year over a four-year period for new members subject to continuous service on each vesting date.

We grant performance-based RSUs to executive personnel. These awards vest subject to certain performance objectives based on the Company's revenue growth and/or Adjusted EBITDA growth achieved during the specified performance period and certain long-term service conditions. The maximum number of RSUs that may vest is determined based on actual Company achievement and performance-based RSUs generally vest over a three-year period subject to continuous service on each vesting date. We recognize stock-based compensation expense for performance-based RSUs when we believe that it is probable that the performance objectives will be met.

A summary of the RSU activity is as follows:

	Number of Shares (000's)	Weighted Average Grant-Date Fair Value
Non-vested at December 31, 2017	3,324	$ 7.35
Granted(2)	968	$ 13.56
Vested	(969)	$ 8.67
Canceled/forfeited	(58)	$ 14.32
Non-vested at September 30, 2018	3,265	$ 8.68

(2) The RSUs granted to all of our named executive officers in 2016 were subject to satisfaction of specified service-based and performance-based conditions. The performance objectives were subject to under- or over- achievement on a sliding scale, with a threshold of 50% of the target number of RSUs and a maximum of 150% of the target RSUs. In February 2018, our Compensation Committee determined actual achievement of the 2016 performance-based RSUs resulting in additional RSUs granted of approximately 520,000 at a grant-date fair value of $6.13 per share during the nine months ended September 30, 2018.

During the nine months ended September 30, 2018, approximately 969,000 shares of RSUs vested. The Company issued approximately 612,000 shares and the remaining shares were withheld to pay minimum statutory federal, state, and local employment payroll taxes on those vested awards.

12. Net loss per share attributable to common stockholders

The following table sets forth the computation of basic and diluted net loss per share attributable to common stockholders:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Numerator:				
Net loss attributable to common stockholders, basic and diluted	$ (522)	$ (3,450)	$ (1,636)	$ (18,347)
Denominator:				
Weighted average common stock, basic and diluted	42,377	40,336	41,890	39,468
Net loss per share attributable to common stockholders:				
Basic and diluted	$ (0.01)	$ (0.09)	$ (0.04)	$ (0.46)

(3) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

For the three and nine months ended September 30, 2018 and 2017, we excluded all assumed exercises of stock options and the assumed issuance of common stock under RSUs from the computation of diluted net loss per share as the effect would be anti-dilutive due to the net loss for the period.

On April 1, 2013, the Company approved a stock repurchase program to repurchase up to $10,000 of the Company's common stock in the open market, exclusive of any commissions, markups or expenses. The stock repurchased will be retired and will resume the status of authorized but unissued shares of common stock. The Company did not repurchase any of our common stock during the three and nine months ended September 30, 2018. As of September 30, 2018, the remaining approved amount for repurchases was approximately $5,180.

13. Subsequent events

In October 2018, the Company sold, through the initial purchasers, convertible senior notes ("Convertible Notes") to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended, for gross proceeds of $201,250. The Convertible Notes are senior, unsecured obligations with interest payable semi-annually in cash at a rate of 1.00% per annum on April 1st and October 1st of each year, beginning on April 1, 2019. The Convertible Notes will mature on October 1, 2023 unless they are redeemed, repurchased or converted prior to such date. Prior to April 1, 2023, the Convertible Notes are convertible at the option of holders only during certain periods and upon satisfaction of certain conditions. Thereafter, the Convertible Notes will be convertible at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the Convertible Notes may be settled in shares of the Company's common stock, cash or a combination of cash and shares of the Company's common stock, at the Company's election.

The Convertible Notes have an initial conversion rate of 23.6323 shares of common stock per $1,000 principal amount of the Convertible Notes, which will be subject to customary anti-dilution adjustments in certain circumstances. This represents an initial effective conversion price of approximately $42.31 per share, which represents a premium of approximately 30% to the $32.55 per share closing price of the Company's common stock on October 2, 2018, the date the Company priced the offering.

The Company may redeem all or any portion of the Convertible Notes, at its option, on or after October 5, 2021, at a redemption price equal to 100% of the principal amount of the Convertible Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date, if the last reported sale price of the Company's stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides written notice of redemption.

Holders of Convertible Notes may require the Company to repurchase their Convertible Notes upon the occurrence of certain events that constitute a fundamental change under the indenture governing the Convertible Notes at a fundamental change repurchase price equal to 100% of the principal amount thereof, plus accrued and unpaid interest to, but excluding, the date of repurchase. In connection with certain corporate events or if the Company issues a notice of redemption prior to the maturity date, it will, under certain circumstances, increase the conversion rate for holders who elect to convert their Convertible Notes in connection with such corporate event or notice of redemption.

In connection with the pricing of the Convertible Notes, the Company entered into privately negotiated capped call transactions with a financial institution. The capped call transactions initially cover, subject to customary anti-dilution adjustments, the number of shares of the Company's common stock that initially underlie the Convertible Notes. The cap price of the capped call transactions is initially $65.10 per share of the Company's common stock, representing a premium of 100% above the closing price of $32.55 per share of the Company's common stock on October 2, 2018, and is subject to certain adjustments under the terms of the capped call transactions. The capped call transactions are expected generally to reduce potential dilution to the Company's common stock upon conversion of the Convertible Notes and/or offset the potential cash payments that the Company could be required to make in excess of the principal amount of any converted Convertible Notes upon conversion thereof, with such reduction and/or offset subject to a cap based on the cap price. The Company paid $23,967 for the capped call transactions using a portion of the gross proceeds from the sale of the Convertible Notes.

In connection with the offering of the Convertible Notes, the Company entered into an amendment to the existing Credit Agreement that amended certain provisions of the Credit Agreement to provide for the consummation of the offering and issuance of the Convertible Notes and the incurrence of the debt, and the execution of the capped call transactions.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and notes thereto included in "Item 1. Financial Statements" of this Quarterly Report on Form 10-Q and the audited consolidated financial statements and notes thereto and the section titled "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the Securities Exchange Commission on March 12, 2018.

Forward-Looking Statements

This Quarterly Report on Form 10-Q and the documents incorporated herein by reference contain forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, as amended, based on our current expectations, estimates and projections about our operations, industry, financial condition, performance, results of operations, and liquidity. Statements containing words such as "may," "believe," "anticipate," "expect," "intend," "plan," "project," "projections," "business outlook," "estimate," or similar expressions constitute forward-looking statements. These forward-looking statements include, but are not limited to, statements about future financial performance; revenues; metrics; operating expenses; market trends, including those in the markets in which we compete; operating and marketing efficiencies; liquidity; cash flows and uses of cash; dividends; capital expenditures; depreciation and amortization; tax payments; foreign currency exchange rates; hedging arrangements; our ability to repay indebtedness, pay dividends and invest in initiatives; our products and services; pricing; competition; strategies; and new business initiatives, products, services, and features. Potential factors that could affect the matters about which the forward-looking statements are made include, among others, the factors disclosed in the section entitled "Risk Factors" in this Quarterly Report on Form 10-Q and additional factors that accompany the related forward-looking statements in this Quarterly Report on Form 10-Q and our other filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2017. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as the date hereof. Any such forward-looking statements are not guarantees of future performance or results and involve risks and uncertainties that may cause actual performance and results to differ materially from those predicted. Reported results should not be considered an indication of future performance. Except as required by law, we undertake no obligation to publicly release the results of any revision to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

Overview

Boingo helps the world stay connected to the people and things they love.

We acquire long-term wireless rights at large venues like airports, transportation hubs, stadiums, arenas, military bases, multi-unit dwelling properties, universities, convention centers, and office campuses; build high-quality wireless networks such as distributed antenna systems ("DAS"), Wi-Fi, and small cells at those venues; and monetize the wireless networks through several products and services.

Over the past 16 years, we've built a global network of wireless networks that we estimate reaches more than a billion consumers annually. We operate 54 DAS networks containing approximately 27,400 DAS nodes, and believe we are the largest operator of indoor DAS networks in the world. Our Wi-Fi network, which includes locations we manage and operate ourselves (our "managed and operated locations") as well as networks managed and operated by third-parties with whom we contract for access (our "roaming" networks), includes over 1.2 million commercial Wi-Fi hotspots in more than 100 countries around the world. We also operate Wi-Fi networks at U.S. Army, Air Force, and Marine bases around the world and multi-unit dwelling properties including student housing, condominiums, apartments, senior living, and hospitality industries throughout the U.S.

We generate revenue from our wireless networks in several ways, including our DAS, small cells, multifamily and wholesale Wi-Fi offerings, which are targeted towards businesses, and our military, retail, and advertising offerings, which are targeted towards consumers.

We generate wholesale revenue from telecom operators that pay us build-out fees and recurring access fees so that their cellular customers may use our DAS or small cell networks at locations where we manage and operate the wireless network. For the three months ended September 30, 2018, DAS revenue accounted for approximately 38% of our revenue.

Military revenue, which is driven by military personnel who purchase Wi-Fi services on military bases, and multifamily revenue, which is driven by property owners who purchase network installation services and recurring monthly Wi-Fi services and support, accounted for approximately 33% of our total revenue for the three months ended September 30, 2018. As of September 30, 2018, we have grown our military subscriber base to approximately 142,000, an increase of 6.8% over the prior year comparative period. Retail revenue, which is driven by consumers who purchase a recurring monthly subscription plan or one-time Wi-Fi access, accounted for approximately 6% of our total revenue for the three months ended September 30, 2018. As of September 30, 2018, our retail subscriber base was approximately 141,000, a decrease of 27.3% over the prior year comparative period.

Our enterprise customers such as telecom operators, cable companies, technology companies, and enterprise software/services companies, pay us usage-based Wi-Fi network access and software licensing fees to allow their customers' access to our footprint worldwide. Wholesale Wi-Fi revenue also includes financial institutions and other enterprise customers who provide Boingo as a value-added service for their customers. For the three months ended September 30, 2018, wholesale Wi-Fi revenue accounted for approximately 18% of our revenue.

We also generate revenue from advertisers that seek to reach consumers via sponsored Wi-Fi access. For the three months ended September 30, 2018, advertising and other revenue accounted for approximately 5% of our revenue.

Our customer agreements for certain DAS networks include both a fixed and variable fee structure with the highest percentage of revenues typically occurring in the fourth quarter of each year and the lowest percentage of revenues occurring in the first quarter of each year. Our multifamily network installation services have historically been performed for the student housing market with the highest percentage of revenues typically occurring in the second and third quarter of each year. We expect these trends to continue. Our other products have not experienced any significant seasonal impact.

In support of our overall business strategy, we are focused on the following objectives:

- expand our footprint of managed and operated and aggregated networks;
- leverage our neutral-host business model to grow DAS, small cell, and wholesale roaming partnerships;
- expand our carrier offload relationships;
- maximize our military business through recurring subscriber fees and shorter-term transaction plans, as well as strategic build-outs; and
- increase our brand awareness.

Key Business Metrics

In addition to monitoring traditional financial measures, we also monitor our operating performance using key performance indicators. Our key performance indicators follow:

DAS nodes. This metric represents the number of active DAS nodes as of the end of the period. A DAS node is a single communications endpoint, typically an antenna, which transmits or receives radio frequency signals wirelessly. This measure is an indicator of the reach of our DAS network.

Subscribers—military and *Subscribers—retail.* These metrics represent the number of paying customers who are on a month-to-month subscription plan at a given period end.

Connects. This metric shows how often individuals connect to our global Wi-Fi network in a given period. The connects include wholesale and retail customers in both customer pay locations and customer free locations where we are a paid service provider or receive sponsorship or promotion fees. We count each connect as a single connect regardless of how many times that individual accesses the network at a given venue during their 24-hour period. This measure is an indicator of paid activity throughout our network.

Revenue

Our revenue consists of DAS revenue, military/multifamily revenue, retail revenue, wholesale Wi-Fi revenue, and advertising and other revenue.

DAS. We generate revenue from telecom operator partners that pay us network build-out fees, inclusive of network upgrades, and access fees for our DAS and small cell networks.

Military/multifamily and retail. We generate revenue from sales to military and retail individuals of month-to-month network access subscriptions that automatically renew and hourly, daily or other single-use access, primarily through charge card transactions. We also generate multifamily revenue from property owners who pay us a recurring monthly fee for Wi-Fi services including building and maintaining the network that supports these services and providing support for residents and employees of the properties.

Wholesale—Wi-Fi. We generate revenue from wholesale Wi-Fi partners that license our software and pay usage-based monthly network access fees to allow their customers to access our global Wi-Fi network. Usage-based network access fees may be measured in minutes, connects, megabytes or gigabytes, and in most cases are subject to minimum volume commitments. Other wholesale Wi-Fi partners pay us monthly fees to provide a Wi-Fi infrastructure that we install, manage and operate at their venues for their customers under a service provider arrangement.

Advertising and other. We generate revenue from advertisers that seek to reach visitors to our landing pages at our managed and operated network locations with online advertising, promotional and sponsored programs and at locations where we solely provide authorized access to a partner's Wi-Fi network through sponsored access and promotional programs. In addition, we receive revenue from partners in certain venues where we manage and operate the Wi-Fi network.

Results of Operations

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers*, which replaced the accounting standards for revenue recognition under FASB Accounting Standards Codification ("ASC") 605, *Revenue Recognition*, with a single comprehensive five-step model, eliminating industry-specific accounting rules. The core principle is to recognize revenue upon the transfer of control of goods or services to a customer at an amount that reflects the consideration expected to be received. The FASB amended several aspects of the guidance after the issuance of ASU 2014-09, and the new revenue recognition accounting standard, as amended, was codified within ASC 606. On January 1, 2018, we adopted ASC 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning on January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with ASC 605.

Adoption of ASC 606 using the modified retrospective method required us to record a cumulative effect adjustment, net of tax, to accumulated deficit and non-controlling interests of $3,257 and $69, respectively, on January 1, 2018. In addition, adoption of the standard resulted in the following changes to the condensed consolidated balance sheet as of January 1, 2018:

	January 1, 2018 (Per ASC 605)	Adjustment for Adoption	January 1, 2018 (Per ASC 606)
Accounts receivable, net	$ 26,148	$ (1,069)	$ 25,079
Prepaid expenses and other current assets	$ 6,369	$ 170	$ 6,539
Other assets	$ 10,082	$ (2,179)	$ 7,903
Deferred revenue, current	$ 61,708	$ 14,176	$ 75,884
Deferred revenue, net of current portion	$ 149,168	$ (20,580)	$ 128,588

The below table summarizes the changes to our condensed consolidated balance sheet as of September 30, 2018 as a result of the adoption of ASC 606:

	September 30, 2018 (Per ASC 605)	Adjustment for Adoption	September 30, 2018 (Per ASC 606)
Accounts receivable, net	$ 31,367	$ (708)	$ 30,659
Prepaid expenses and other current assets	$ 8,522	$ 491	$ 9,013
Other assets	$ 10,213	$ (2,214)	$ 7,999
Deferred revenue, current	$ 79,738	$ (913)	$ 78,825
Deferred revenue, net of current portion	$ 140,040	$ (12,129)	$ 127,911
Non-controlling interests	$ 228	$ 1,953	$ 2,181

The below table summarizes the changes to our condensed consolidated statement of operations for the three months ended September 30, 2018 as a result of the adoption of ASC 606:

	Three Months Ended September 30, 2018 (Per ASC 605)	Adjustment for Adoption	Three Months Ended September 30, 2018 (Per ASC 606)
Revenue	$ 63,884	$ 1,369	$ 65,253
Income tax expense	$ 258	$ (204)	$ 54
Non-controlling interests	$ 270	$ 326	$ 596

The below table summarizes the changes to our condensed consolidated statement of operations for the nine months ended September 30, 2018 as a result of the adoption of ASC 606:

	Nine Months Ended September 30, 2018 (Per ASC 605)	Adjustment for Adoption	Nine Months Ended September 30, 2018 (Per ASC 606)
Revenue	$ 176,168	$ 6,845	$ 183,013
Income tax expense	$ 638	$ (440)	$ 198
Non-controlling interests	$ (437)	$ 1,884	$ 1,447

The changes to the condensed consolidated balance sheets as of January 1, 2018 and September 30, 2018 and the condensed consolidated statement of operations for the three and nine months ended September 30, 2018 were primarily due to the following factors: (i) reclassification of unbilled receivables (contract assets) to a contra-liability account under ASC 606; and (ii) recognition of revenue related to our single performance obligation for our DAS contracts monthly over the contract term once the customer has the ability to access the DAS network and we commence maintenance on the DAS network under ASC 606 as compared to recognition of build-out fees for our DAS contracts monthly over the term of the estimated customer relationship period once the build-out is complete and minimum monthly access fees for our DAS contracts monthly over the term of the telecom operator agreement under ASC 605. The changes to the condensed consolidated balance sheet as of January 1, 2018 are reflected as non-cash changes within cash provided by operating activities in our condensed consolidated statement of cash flows for the nine months ended September 30, 2018.

On August 1, 2018, we acquired the assets of Elauwit Networks, LLC (“Elauwit”) for a purchase price of $29.8 million, which is inclusive of contingent consideration. Elauwit provides data and video services to 220 multi-unit dwelling properties including student housing, condominiums, apartments, senior living, and hospitality industries throughout the U.S. In addition, Elauwit builds and maintains the network that supports these services for property owners and managers and provides support for residents and employees.

The following tables set forth our results of operations for the specified periods:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017(1)	2018	2017(1)
	(unaudited) (in thousands)			
Consolidated Statement of Operations Data:				
Revenue	$ 65,253	$ 53,655	$ 183,013	$ 147,021
Costs and operating expenses:				
Network access	29,273	24,143	79,926	64,655
Network operations	13,260	11,625	38,829	34,556
Development and technology	7,995	6,817	22,883	19,814
Selling and marketing	5,674	5,201	16,490	15,188
General and administrative	7,789	8,006	22,218	27,372
Amortization of intangible assets	1,112	852	2,507	2,673
Total costs and operating expenses	65,103	56,644	182,853	164,258
Income (loss) from operations	150	(2,989)	160	(17,237)
Interest and other expense, net	(22)	(84)	(151)	(126)
Income (loss) before income taxes	128	(3,073)	9	(17,363)
Income tax expense	54	167	198	507
Net income (loss)	74	(3,240)	(189)	(17,870)
Net income attributable to non-controlling interests	596	210	1,447	477
Net loss attributable to common stockholders	$ (522)	$ (3,450)	$ (1,636)	$ (18,347)

(1) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

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Depreciation and amortization expense included in costs and operating expenses:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(unaudited) (in thousands)			
Network access	$ 11,531	$ 11,625	$ 35,252	$ 29,354
Network operations	4,447	3,987	13,017	12,273
Development and technology	2,664	2,375	7,740	6,840
General and administrative	259	258	760	777
Total(2)	$ 18,901	$ 18,245	$ 56,769	$ 49,244

(2) The $0.7 million and $7.5 million increase in depreciation and amortization of property and equipment for the three and nine months ended September 30, 2018, as compared to the three and nine months ended September 30, 2017, respectively, is primarily a result of our increased fixed assets from our DAS build-out projects, Wi-Fi networks, and software development in 2017 and 2018.

Stock-based compensation expense included in costs and operating expenses:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(unaudited) (in thousands)			
Network operations	$ 549	$ 552	$ 1,602	$ 1,660
Development and technology	323	275	915	825
Selling and marketing	511	524	1,377	1,589
General and administrative	1,772	2,333	5,333	6,942
Total(3)	$ 3,155	$ 3,684	$ 9,227	$ 11,016

(3) Stock-based compensation expense decreased by $0.5 million and $1.8 million for the three and nine months ended September 30, 2018, as compared to the three and nine months ended September 30, 2017, respectively. The decrease is primarily attributable to higher stock-based compensation expense recognized during the three months ended September 30, 2017 related to our performance-based restricted stock units ("RSU"). We recognize stock-based compensation expense for performance-based RSUs when we believe that it is probable that the performance objectives will be met and based upon the expected achievement levels. We capitalized $0.2 million and $0.6 million of stock-based compensation expense for the three and nine months ended September 30, 2018, respectively. We capitalized $0.2 million and $0.5 million of stock-based compensation expense for the three and nine months ended September 30, 2017, respectively.

The following table sets forth our results of operations for the specified periods as a percentage of our revenue for those periods:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017(4)	2018	2017(4)
	(unaudited) (as a percentage of revenue)			
Consolidated Statement of Operations Data:				
Revenue	100.0%	100.0%	100.0%	100.0%
Costs and operating expenses:				
Network access	44.9	45.0	43.7	44.0
Network operations	20.3	21.7	21.2	23.5
Development and technology	12.3	12.7	12.5	13.5
Selling and marketing	8.7	9.7	9.0	10.3
General and administrative	11.9	14.9	12.1	18.6
Amortization of intangible assets	1.7	1.6	1.4	1.8
Total costs and operating expenses	99.8	105.6	99.9	111.7
Income (loss) from operations	0.2	(5.6)	0.1	(11.7)
Interest and other expense, net	0.0	(0.2)	(0.1)	(0.1)
Income (loss) before income taxes	0.2	(5.7)	0.0	(11.8)
Income tax expense	0.1	0.3	0.1	0.3
Net income (loss)	0.1	(6.0)	(0.1)	(12.2)
Net income attributable to non-controlling interests	0.9	0.4	0.8	0.3
Net loss attributable to common stockholders	(0.8)%	(6.4)%	(0.9)%	(12.5)%

(4) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

Three Months ended September 30, 2018 and 2017

Revenue

	Three Months Ended September 30, 2018	2017(5)	Change	% Change
	(unaudited) (in thousands, except percentages)			
Revenue:				
DAS	$ 24,410	$ 21,755	$ 2,655	12.2
Military/multifamily	21,745	13,946	7,799	55.9
Wholesale—Wi-Fi	11,749	8,307	3,442	41.4
Retail	4,088	6,234	(2,146)	(34.4)
Advertising and other	3,261	3,413	(152)	(4.5)
Total revenue	$ 65,253	$ 53,655	$ 11,598	21.6
Key business metrics:				
DAS nodes	27.4	22.2	5.2	23.4
Subscribers—military	142	133	9	6.8
Subscribers—retail	141	194	(53)	(27.3)
Connects	75,424	64,875	10,549	16.3

(5) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

DAS. DAS revenue increased $2.7 million, or 12.2%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, due to a $2.2 million increase from new build-out projects in our managed and operated locations, which is inclusive of a $1.4 million increase resulting from the adoption of ASC 606 as of January 1, 2018, and a $0.5 million increase in access fees, net of certain credits granted, from our telecom operators.

Military/multifamily. Military/multifamily revenue increased $7.8 million, or 55.9%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, primarily due to a $5.1 million increase in multifamily revenues resulting from our Elauwit acquisition in August 2018, and a $2.6 million increase in military subscriber revenue, which was driven primarily by the increase in military subscribers and a 10.8% increase in the average monthly revenue per military subscriber in 2018 compared to 2017.

Wholesale—Wi-Fi. Wholesale Wi-Fi revenue increased $3.4 million, or 41.4% for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, due to a $2.6 million increase in partner usage based fees and a $0.8 million increase in fees primarily earned from our venue partners who pay us to provide a Wi-Fi infrastructure that we install, manage and operate at their venues.

Retail. Retail revenue decreased $2.1 million, or 34.4%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, due to a $1.3 million decrease in retail subscriber revenue and a $0.8 million decrease in retail single-use revenue.

Advertising and other. Advertising and other revenue decreased $0.2 million or 4.5% for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, due to a $0.2 million decrease in advertising sales at our managed and operated locations resulting from a decline in the number of premium ad units sold.

Costs and Operating Expenses

	Three Months Ended September 30,			
	2018	2017	Change	% Change
	(unaudited) (in thousands, except percentages)			
Costs and operating expenses:				
Network access	$ 29,273	$ 24,143	$ 5,130	21.2
Network operations	13,260	11,625	1,635	14.1
Development and technology	7,995	6,817	1,178	17.3
Selling and marketing	5,674	5,201	473	9.1
General and administrative	7,789	8,006	(217)	(2.7)
Amortization of intangible assets	1,112	852	260	30.5
Total costs and operating expenses	$ 65,103	$ 56,644	$ 8,459	14.9

Network access. Network access costs increased $5.1 million, or 21.2%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017. The increase is primarily due to a $4.2 million increase in other direct cost of sales and other costs of revenue resulting from our Elauwit acquisition in August 2018, and a $1.1 million increase in revenue share paid to venues in our managed and operated locations. The increases were partially offset by a $0.3 million decrease from customer usage at partner venues.

Network operations. Network operations expenses increased $1.6 million, or 14.1%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, primarily due to a $0.9 million increase in personnel related expenses, a $0.5 million increase in depreciation expenses, and a $0.4 million increase in hardware and software maintenance expenses. Network operations includes $0.4 million of expenses resulting from our Elauwit acquisition in August 2018.

Development and technology. Development and technology expenses increased $1.2 million, or 17.3%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, primarily due to a $0.3 million increase in depreciation expense related to our increased fixed assets, a $0.2 million increase in consulting expenses, a $0.2 million increase in hardware and software maintenance expenses, and a $0.2 million increase in personnel related expenses. Development and technology includes $0.1 million of expenses resulting from our Elauwit acquisition in August 2018.

Selling and marketing. Selling and marketing expenses increased $0.5 million, or 9.1%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, primarily due to a $0.3 million increase in personnel related expenses. Selling and marketing includes $0.2 million of expenses resulting from our Elauwit acquisition in August 2018.

General and administrative. General and administrative expenses decreased $0.2 million, or 2.7%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017 primarily due to a $0.6 million decrease in personnel related expenses, which was primarily due to the decrease in stock-based compensation expense. General and administrative includes $0.3 million of expenses resulting from our Elauwit acquisition.

Amortization of intangible assets. Amortization of intangible assets expense increased $0.3 million, or 30.5%, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017, primarily due to a $0.4 million increase resulting from our Elauwit acquisition in August 2018. The increase was partially offset by decreases related to certain intangible assets that became fully amortized during 2017 and 2018.

Interest and Other Expense, Net

There were no significant changes in interest and other expense, net, for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017. During the three months ended September 30, 2018 and 2017, we capitalized $0.3 million and $0.2 million, respectively, of interest expense.

Income Tax Expense

There were no significant changes in income tax expense for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017. Our effective tax rate increased from 5.4% for the three months ended September 30, 2017 to 42.2% for the three months ended September 30, 2018. Our effective tax rate differs from the statutory rate primarily due to our valuation allowance for the three months ended September 30, 2018 and 2017 as well as minimum state taxes and foreign tax expense for the three months ended September 30, 2018. Income tax expense for the three months ended September 30, 2018 includes a decrease of $0.2 million resulting from the adoption of ASC 606 as of January 1, 2018.

Non-controlling Interests

Non-controlling interests increased $0.4 million, or 183.8% for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017. Non-controlling interests for the three months ended September 30, 2018 includes an increase of $0.3 million resulting from the adoption of ASC 606 as of January 1, 2018.

Net Loss Attributable to Common Stockholders

Our net loss attributable to common stockholders for the three months ended September 30, 2018 decreased $2.9 million from the three months ended September 30, 2017, due to the $11.6 million increase in revenues, which were partially offset by the $8.5 million increase in costs and operating expenses and the $0.4 million increase in non-controlling interests. Our diluted net loss per share decreased primarily as a result of the decrease in our net loss.

Nine Months ended September 30, 2018 and 2017

Revenue

	Nine Months Ended September 30,			
	2018	2017(6)	Change	% Change
	(unaudited) (in thousands, except percentages)			
Revenue:				
DAS	$ 69,940	$ 56,563	$ 13,377	23.6
Military/multifamily	54,334	40,029	14,305	35.7
Wholesale—Wi-Fi	36,428	22,438	13,990	62.3
Retail	13,964	19,007	(5,043)	(26.5)
Advertising and other	8,347	8,984	(637)	(7.1)
Total revenue	$ 183,013	$ 147,021	$ 35,992	24.5
Key business metrics:				
DAS nodes	27.4	22.2	5.2	23.4
Subscribers—military	142	133	9	6.8
Subscribers—retail	141	194	(53)	(27.3)
Connects	210,626	160,082	50,544	31.6

(6) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

DAS. DAS revenue increased $13.4 million, or 23.6%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, due to a $12.4 million increase from new build-out projects in our managed and operated locations, which is inclusive of a $6.9 million increase resulting from the adoption of ASC 606 as of January 1, 2018, and a $1.0 million increase in access fees, net of certain credits granted, from our telecom operators.

Military/multifamily. Military/multifamily revenue increased $14.3 million, or 35.7%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $5.1 million increase in multifamily revenues resulting from our Elauwit acquisition in August 2018, and a $9.3 million increase in military subscriber revenue, which was driven primarily by the increase in military subscribers and a 12.6% increase in the average monthly revenue per military subscriber in 2018 compared to 2017.

Wholesale—Wi-Fi. Wholesale Wi-Fi revenue increased $14.0 million, or 62.3% for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, due to a $9.5 million increase in partner usage based fees and a $4.5 million increase in fees primarily earned from our venue partners who pay us to provide a Wi-Fi infrastructure that we install, manage and operate at their venues.

Retail. Retail revenue decreased $5.0 million, or 26.5%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, due to a $2.6 million decrease in retail subscriber revenue and a $2.4 million decrease in retail single-use revenue.

Advertising and other. Advertising and other revenue decreased $0.6 million, or 7.1% for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $0.8 million decrease in advertising sales at our managed and operated locations resulting from a decline in the number of premium ad units sold.

Costs and Operating Expenses

	Nine Months Ended September 30,			
	2018	2017	Change	% Change
	(unaudited) (in thousands, except percentages)			
Costs and operating expenses:				
Network access	$ 79,926	$ 64,655	$ 15,271	23.6
Network operations	38,829	34,556	4,273	12.4
Development and technology	22,883	19,814	3,069	15.5
Selling and marketing	16,490	15,188	1,302	8.6
General and administrative	22,218	27,372	(5,154)	(18.8)
Amortization of intangible assets	2,507	2,673	(166)	(6.2)
Total costs and operating expenses	$ 182,853	$ 164,258	$ 18,595	11.3

Network access. Network access costs increased $15.3 million, or 23.6%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017. The increase is primarily due to a $5.9 million increase in depreciation expense related to our increased fixed assets from our DAS build-out projects, a $4.6 million increase in other direct cost of sales, a $4.1 million increase in revenue share paid to venues in our managed and operated locations, and a $0.6 million increase in other cost of revenue. Network access includes $4.2 million of expenses resulting from our Elauwit acquisition in August 2018.

Network operations. Network operations expenses increased $4.3 million, or 12.4%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $2.7 million increase in personnel related expenses, a $1.2 million increase in hardware and software maintenance expenses, a $0.7 million increase in depreciation expenses, and a $0.5 million increase in network maintenance expenses. The increases were partially offset by a $0.5 million decrease in consulting expenses and a $0.3 million decrease in our third-party call center costs. Network operations includes $0.4 million of expenses resulting from our Elauwit acquisition in August 2018.

Development and technology. Development and technology expenses increased $3.1 million, or 15.5%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $0.9 million increase in depreciation expense related to our increased fixed assets, a $0.7 million increase in personnel related expenses, a $0.4 million increase in hardware and software maintenance expenses, a $0.3 million increase in consulting expenses, and a $0.2 million increase in cloud computing expenses. Development and technology includes $0.1 million of expenses resulting from our Elauwit acquisition in August 2018.

Selling and marketing. Selling and marketing expenses increased $1.3 million, or 8.6%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $0.7 million increase in personnel related expenses and a $0.4 million increase in professional fees and consulting expenses. Selling and marketing includes $0.2 million of expenses resulting from our Elauwit acquisition in August 2018.

General and administrative. General and administrative expenses decreased $5.2 million, or 18.8%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to a $2.8 million settlement expense accrual recorded during the nine months ended September 30, 2017 that did not reoccur in 2018, a $1.5 million decrease in professional fees and consulting expenses, and a $1.1 million decrease in personnel related expenses, which was primarily due to the decrease in stock-based compensation expense. The decreases were partially offset by a $0.2 million increase in bad debt expenses and a $0.2 million increase in cloud computing expenses. General and administrative includes $0.3 million of expenses resulting from our Elauwit acquisition.

Amortization of intangible assets. Amortization of intangible assets expense decreased $0.2 million, or 6.2%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017, primarily due to certain intangible assets that became fully amortized during 2017 and 2018, which were partially offset by the $0.4 million increase resulting from our Elauwit acquisition in August 2018.

Interest and Other Expense, Net

There were no significant changes in interest and other expense, net, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017. During each the nine months ended September 30, 2018 and 2017, we capitalized $0.6 million of interest expense.

Income Tax Expense

Income tax expense decreased $0.3 million, or 60.9%, for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017. Our effective tax rate increased from 2.9% for the nine months ended September 30, 2017 to 2,200.0% for the nine months ended September 30, 2018. Our effective tax rate differs from the statutory rate primarily due to our valuation allowance for the nine months ended September 30, 2018 and 2017 as well as minimum state taxes and foreign tax expense for the nine months ended September 30, 2018. Income tax expense for the nine months ended September 30, 2018 includes a decrease of $0.4 million resulting from the adoption of ASC 606 as of January 1, 2018.

Non-controlling Interests

Non-controlling interests increased $1.0 million, or 203.4% for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017. Non-controlling interests for the nine months ended September 30, 2018 includes an increase of $1.9 million resulting from the adoption of ASC 606 as of January 1, 2018, which was partially offset by increased depreciation expense related to our increased fixed assets for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017.

Net Loss Attributable to Common Stockholders

Our net loss attributable to common stockholders for the nine months ended September 30, 2018 decreased $16.7 million as compared to the nine months ended September 30, 2017, primarily due to the $36.0 million increase in revenues, which was partially offset by the $18.6 million increase in costs and operating expenses and the $1.0 million increase in non-controlling interests. Our diluted net loss per share decreased primarily as a result of the decrease in our net loss.

Reconciliation of Non-GAAP Financial Measures

We define Adjusted EBITDA as net loss attributable to common stockholders plus depreciation and amortization of property and equipment, stock-based compensation expense, amortization of intangible assets, income tax expense, interest and other expense, net, non-controlling interests, and excludes charges or gains that are non-recurring, infrequent, or unusual.

We believe that Adjusted EBITDA is useful to investors and other users of our financial statements in evaluating our operating performance because it provides them with an additional tool to compare business performance across companies and across periods. We believe that:

- Adjusted EBITDA provides investors and other users of our financial information consistency and comparability with our past financial performance, facilitates period-to-period comparisons of operations and facilitates comparisons with other companies, many of which use similar non-generally accepted accounting principles in the United States (“GAAP”) financial measures to supplement their GAAP results; and

- it is useful to exclude (i) non-cash charges, such as depreciation and amortization of property and equipment, amortization of intangible assets and stock-based compensation, from Adjusted EBITDA because the amount of such expenses in any specific period may not directly correlate to the underlying performance of our business operations, and these expenses can vary significantly between periods as a result of full amortization of previously acquired tangible and intangible assets or the timing of new stock-based awards and (ii) settlement expense related to our claim from one of our venue partners because it represents non-recurring charges and is not indicative of the underlying performance of our business operations.

We use Adjusted EBITDA in conjunction with traditional GAAP measures as part of our overall assessment of our performance, for planning purposes, including the preparation of our annual operating budget and quarterly forecasts, to evaluate the effectiveness of our business strategies and to communicate with our board of directors concerning our financial performance.

We do not place undue reliance on Adjusted EBITDA as our only measure of operating performance. Adjusted EBITDA should not be considered as a substitute for other measures of financial performance reported in accordance with GAAP. There are limitations to using non-GAAP financial measures, including that other companies may calculate these measures differently than we do.

We compensate for the inherent limitations associated with using Adjusted EBITDA through disclosure of these limitations, presentation of our financial statements in accordance with GAAP and reconciliation of Adjusted EBITDA to the most directly comparable GAAP measure, net income (loss) attributable to common stockholders.

The following provides a reconciliation of net loss attributable to common stockholders to Adjusted EBITDA:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017(7)	2018	2017(7)
	(unaudited) (in thousands)			
Net loss attributable to common stockholders	$ (522)	$ (3,450)	$ (1,636)	$ (18,347)
Depreciation and amortization of property and equipment	18,901	18,245	56,769	49,244
Stock-based compensation expense	3,155	3,684	9,227	11,016
Amortization of intangible assets	1,112	852	2,507	2,673
Income tax expense	54	167	198	507
Interest and other expense, net	22	84	151	126
Non-controlling interests	596	210	1,447	477
Settlement expense	—	—	—	2,807
Adjusted EBITDA	$ 23,318	$ 19,792	$ 68,663	$ 48,503

(7) As noted above, prior period amounts have not been adjusted upon adoption of ASC 606 under the modified retrospective method.

Adjusted EBITDA was $23.3 million for the three months ended September 30, 2018, an increase of 17.8% from $19.8 million recorded in the three months ended September 30, 2017. As a percent of revenue, Adjusted EBITDA was 35.7% for the three months ended September 30, 2018, down from 36.9% of revenue for the three months ended September 30, 2017. The Adjusted EBITDA increase was due primarily to the $2.9 million decrease in our net loss attributable to common stockholders, the $0.9 million increase in depreciation and amortization expense, and the $0.4 million increase in non-controlling interests for the three months ended September 30, 2018 compared to the three months ended September 30, 2017. The changes were partially offset by the $0.5 million decrease in stock-based compensation expense.

Adjusted EBITDA was $68.7 million for the nine months ended September 30, 2018, an increase of 41.6% from $48.5 million recorded in the nine months ended September 30, 2017. As a percent of revenue, Adjusted EBITDA was 37.5% for the nine months ended September 30, 2018, up from 33.0% of revenue for the nine months ended September 30, 2017. The Adjusted EBITDA increase was due primarily to the $16.7 million decrease in our net loss attributable to common stockholders, the $7.4 million increase in depreciation and amortization expense and the $1.0 million increase in non-controlling interests for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017. The changes were partially offset by the $2.8 million decrease in settlement expense accrual recorded during the nine months ended September 30, 2017 that did not reoccur in 2018, the $1.8 million decrease in stock-based compensation expense, and the $0.3 million decrease in income tax expense.

Liquidity and Capital Resources

We have financed our operations primarily through cash provided by operating activities and borrowings under our credit facility. Our primary sources of liquidity as of September 30, 2018 consisted of $12.6 million of cash and cash equivalents and $54.8 million available for borrowing under our credit facility, $8.3 million of which is reserved for our outstanding Letter of Credit Authorization agreements.

Our principal uses of liquidity have been to fund our operations, working capital requirements, capital expenditures and acquisitions. We expect that these requirements will be our principal needs for liquidity over the near term. Our capital expenditures in the nine months ended September 30, 2018 were $72.5 million, of which $53.2 million are related to DAS build-out projects which are primarily reimbursed through revenue from our telecom operators.

We have entered into a Credit Agreement (the "Credit Agreement") and related agreements, as amended with Bank of America, N.A. acting as agent for lenders named therein, including Bank of America, N.A., Silicon Valley Bank, and Citizens Bank, N.A. (the "Lenders"), for a secured credit facility in the form of a revolving line of credit up to $69.8 million with an option to increase the available amount to $86.5 million upon the satisfaction of certain conditions (the "Revolving Line of Credit") and a term loan of $3.5 million (the "Term Loan" and together with the Revolving Line of Credit, the "Credit Facility"). Both the Term Loan and Revolving Line of Credit mature on November 21, 2018 and the Term Loan requires quarterly payments of interest and principal. Amounts borrowed under the Revolving Line of Credit and Term Loan will bear, at our election, a variable interest at LIBOR plus 2.5% - 3.5% or Lender's Prime Rate plus 1.5% - 2.5% per year and we will pay a fee of 0.375% - 0.5% per year on any unused portion of the Revolving Line of Credit.

As of September 30, 2018, $0.2 million was outstanding under the Term Loan and there was $15.0 million outstanding under the Revolving Line of Credit. The interest rate for our Credit Facility for the nine months ended September 30, 2018 ranged from 4.2% to 4.8%. Repayment of amounts borrowed under the Credit Facility may be accelerated in the event that we are in violation of the representation, warranties and covenants made in the Credit Agreement, including certain financial covenants set forth therein, and under other specific default events including, but not limited to, non-payment or inability to pay debt, breach of cross default provisions, insolvency provisions, and change in control. The Credit Agreement expires in November 2018 and we are currently working with various financial institutions on executing a new credit agreement. Market conditions in the U.S. credit markets may negatively impact our ability to execute the new credit agreement on favorable terms upon expiration of the Credit Agreement.

We funded $15.0 million of the closing purchase price for the Elauwit acquisition from the Company's existing Credit Agreement. On August 1, 2018, the Company entered into a commitment letter (the "Commitment Letter") with Bank of America, pursuant to which Bank of America has committed to provide senior secured credit facilities to us in an aggregate amount of $28.0 million on terms substantially similar to the existing Credit Agreement, subject to various conditions. In connection with the acquisition, we also entered into an amendment to the Credit Agreement (the "Credit Agreement Amendment") in order to make certain amendments to allow for the consummation of the Elauwit acquisition and the related transactions.

We are subject to customary covenants, including a minimum quarterly consolidated leverage ratio, a maximum quarterly consolidated fixed charge coverage ratio, and monthly liquidity minimums. We were in compliance with all such financial covenants as of September 30, 2018 and through the date of this report. We are subject to certain non-financial covenants, and we were also in compliance with all such non-financial covenants as of September 30, 2018 and through the date of this report. The Credit Facility provides us with significant additional flexibility and liquidity for our strategic objectives involving capital expenditures and acquisitions that we may pursue from time to time.

In October 2018, we sold, through the initial purchasers, convertible senior notes ("Convertible Notes") to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended, for gross proceeds of $201.25 million. The Convertible Notes are senior, unsecured obligations with interest payable semi-annually in cash at a rate of 1.00% per annum on April 1st and October 1st of each year, beginning on April 1, 2019. The Convertible Notes will mature on October 1, 2023 unless they are redeemed, repurchased or converted prior to such date. Prior to April 1, 2023, the Convertible Notes are convertible at the option of holders only during certain periods and upon satisfaction of certain conditions. Thereafter, the Convertible Notes will be convertible at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the Convertible Notes may be settled in shares of our common stock, cash or a combination of cash and shares of our common stock, at our election.

The Convertible Notes have an initial conversion rate of 23.6323 shares of common stock per $1,000 principal amount of the Convertible Notes, which will be subject to customary anti-dilution adjustments in certain circumstances. This represents an initial effective conversion price of approximately $42.31 per share, which represents a premium of approximately 30% to the $32.55 per share closing price of our common stock on October 2, 2018, the day we priced the offering.

We may redeem all or any portion of the Convertible Notes, at our option, on or after October 5, 2021, at a redemption price equal to 100% of the principal amount of the Convertible Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date, if the last reported sale price of our stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide written notice of redemption.

Holders of Convertible Notes may require us to repurchase their Convertible Notes upon the occurrence of certain events that constitute a fundamental change under the indenture governing the Convertible Notes at a fundamental change repurchase price equal to 100% of the principal amount thereof, plus accrued and unpaid interest to, but excluding, the date of repurchase. In connection with certain corporate events or if we issue a notice of redemption prior to the maturity date, it will, under certain circumstances, increase the conversion rate for holders who elect to convert their Convertible Notes in connection with such corporate event or notice of redemption.

In connection with the pricing of the Convertible Notes, we entered into privately negotiated capped call transactions with a financial institution. The capped call transactions initially cover, subject to customary anti-dilution adjustments, the number of shares of our common stock that initially underlie the Convertible Notes. The cap price of the capped call transactions is initially $65.10 per share of our common stock, representing a premium of 100% above the closing price of $32.55 per share of our common stock on October 2, 2018, and is subject to certain adjustments under the terms of the capped call transactions. The capped call transactions are expected generally to reduce potential dilution to our common stock upon conversion of the Convertible Notes and/or offset the potential cash payments that we could be required to make in excess of the principal amount of any converted Convertible Notes upon conversion thereof, with such reduction and/or offset subject to a cap based on the cap price. We paid approximately $24.0 million for the capped call transactions using a portion of the gross proceeds from the sale of the Convertible Notes.

In connection with the offering of the Convertible Notes, we entered into an amendment to the existing Credit Agreement that amended certain provisions of the Credit Agreement to provide for the consummation of the offering and issuance of the Convertible Notes and the incurrence of the debt, and the execution of the capped call transactions

We believe that our existing cash and cash equivalents, cash flow from operations and availability under the Credit Facility will be sufficient to fund our operations and planned capital expenditures for at least the next 12 months from the date of issuance of our financial statements. There can be no assurance, however, that future industry-specific or other developments, general economic trends, or other matters will not adversely affect our operations or our ability to meet our future cash requirements. Our future capital requirements will depend on many factors, including our rate of revenue growth and corresponding timing of cash collections, the timing and size of our managed and operated location expansion efforts, the timing and extent of spending to support product development efforts, the timing of introductions of new solutions and enhancements to existing solutions and the continuing market acceptance of our solutions. We expect our capital expenditures for 2018 will range from $25.0 million to $35.0 million, excluding capital expenditures for DAS build-out projects which are reimbursed through revenue from our telecom operator customers. The majority of our 2018 capital expenditures have been used to build out and upgrade Wi-Fi and DAS networks at our managed and operated venues and we expect the majority of any further 2018 capital expenditures will be used for such purposes. We used $15.0 million of the net proceeds from the offering of the Convertible Notes to repay the outstanding balance under the Revolving Line of Credit and we expect to use the remainder of the net proceeds from the offering of the Convertible Notes for general corporate purposes, potential acquisitions and strategic transactions, although we have no agreements or understandings with respect to any acquisitions or strategic transactions at this time and may not enter into any or consummate any transaction. We may also use a portion of the net proceeds for ongoing repurchases of common stock to satisfy withholding obligations related to vesting and settlement of RSUs.

We have contracts with the U.S. government. The U.S. government may modify, curtail or terminate its contracts with us, either at its convenience or for default based on performance. Any such modification, curtailment, or termination of one or more of our government contracts could have a material adverse effect on our earnings, cash flow and/or financial position. We may also enter into other acquisitions of complementary businesses, applications or technologies, which could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us, or at all.

The following table sets forth cash flow data for the nine months ended September 30:

	2018	2017
	(unaudited) (in thousands)	
Net cash provided by operating activities	$ 70,834	$ 67,424
Net cash used in investing activities	(94,583)	(55,841)
Net cash provided by (used in) financing activities	10,231	(9,439)

Net Cash Provided by Operating Activities

For the nine months ended September 30, 2018, we generated $70.8 million of net cash from operating activities, an increase of $3.4 million from the prior year comparative period. The increase is primarily due to a $19.5 million change in our operating assets and liabilities, which is primarily driven by a lower rate of cash collections and invoicing for our DAS build-out projects, a $1.8 million decrease in stock-based compensation expenses, and a $0.2 million decrease in impairment loss and loss on disposal of fixed assets, net during the nine months ended September 30, 2018. The changes were partially offset by a $17.7 million decrease in our net loss and a $7.4 million increase in depreciation and amortization expenses primarily related to our recent increased fixed assets from our DAS build-out projects, Wi-Fi networks, and software development.

Net Cash Used in Investing Activities

For the nine months ended September 30, 2018, we used $94.6 million in investing activities, an increase of $38.7 million from the prior year comparative period. The increase is due to a $20.9 million increase in cash paid for asset acquisitions and a $17.8 million increase in purchases of property and equipment.

Net Cash Provided by (Used in) Financing Activities

For the nine months ended September 30, 2018, we received $10.2 million of cash provided by financing activities, an increase of $19.7 million from the prior year comparative period. This increase is due to a $15.0 million increase in proceeds from our Credit Facility, a $10.2 million decrease in payments on our Credit Facility and a $1.8 million increase in proceeds from exercise of stock options. The changes were partially offset by a $5.4 million increase in cash used to pay federal, state, and local employment payroll taxes related to our RSUs that vested during the period, a $1.4 million increase in cash paid for our capital leases and notes payable, and a $0.5 million increase in cash payments to our non-controlling interests.

Contractual Obligations and Commitments

The following table sets forth our contractual obligations and commitments as of September 30, 2018:

	Payments Due by Period				
	Total	Less than 1 Year	2 - 3 Years	4 - 5 Years	More than 5 Years
			(in thousands)		
Venue revenue share minimums(1)	$ 45,247	$ 9,145	$ 15,995	$ 10,544	$ 9,563
Operating leases for office space(2)	27,066	3,642	6,826	6,879	9,719
Open purchase commitments(3)	21,032	20,733	299	—	—
Credit Facility(4)	15,219	15,219	—	—	—
Capital leases and notes payable for equipment and software (5)	13,330	6,969	6,361	—	—
Total	$ 121,894	$ 55,708	$ 29,481	$ 17,423	$ 19,282

(1) Payments under exclusive long-term, non-cancellable contracts to provide wireless communications network access to venues such as airports. Expense is recorded on a straight-line basis over the term of the contract.

(2) Office space under non-cancellable operating leases.

(3) Open purchase commitments are for the purchase of property and equipment, supplies and services. They are not recorded as liabilities on our condensed consolidated balance sheet as of September 30, 2018 as we have not received the related goods or services.

(4) Debt associated with our Credit Agreement with Bank of America N.A. Payments are based on contractual terms and intended timing of repayments.

(5) Payments under non-cancellable capital leases and loans payable related to equipment, primarily for data communication and database software, and prepaid maintenance service purchases.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet financing arrangements and we do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which have been established for facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and Estimates

Revenue Recognition

We generate revenue from several sources including: (i) DAS customers that are telecom operators under long-term contracts for access to our DAS at our managed and operated locations, (ii) military and retail customers under subscription plans for month-to-month network access that automatically renew, and military and retail single-use access from sales of hourly, daily or other single-use access plans, (iii) arrangements with property owners for multifamily properties that provide for network installation and monthly Wi-Fi services and support to the residents and employees, (iv) arrangements with wholesale Wi-Fi customers that provide software licensing, network access, and/or professional services fees, and (v) display advertisements and sponsorships on our walled garden sign-in pages. Software licensed by our wholesale platform services customers can only be used during the term of the service arrangements and has no utility to them upon termination of the service arrangement.

Post-ASC 606 adoption

Revenues are recognized when a contract with a customer exists and control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services and the identified performance obligation has been satisfied. Contracts entered into at or near the same time with the same customer are combined and accounted for as a single contract if the contracts have a single commercial objective, the amount of consideration is dependent on the price or performance of the other contract, or the services promised in the contracts are a single performance obligation. Contract amendments are routine in the performance of our DAS, wholesale Wi-Fi, and advertising contracts. Contracts are often amended to account for changes in contract specifications or requirements or expand network access services. In most instances, our DAS and wholesale Wi-Fi contract amendments are for additional goods or services that are distinct, and the contract price increases by an amount that reflects the standalone selling price of the additional goods or services; therefore, such contract amendments are accounted for as separate contracts. Contract amendments for our advertising contracts are also generally for additional goods or services that are distinct; however, the contract price does not increase by an amount that reflects the standalone selling price of the additional goods or services. Advertising contract amendments are therefore generally accounted for as contract modifications under the prospective method. Contract amendments to transaction prices with no change in remaining services are accounted for as contract modifications under the cumulative catch-up method.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account in ASC 606. A contract's transaction price is allocated to each distinct performance obligation and is recognized as revenue when, or as, the performance obligation is satisfied, which typically occurs when the services are rendered. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Our contracts with customers may include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers. Judgment may be used to determine the standalone selling prices for items that are not sold separately, including services provided at no additional charge. Most of our performance obligations are satisfied over time as services are provided. We generally recognize revenue on a gross basis as we are primarily responsible for fulfilling the promises to provide the specified goods or services, we are responsible for paying all costs related to the goods or services before they have been transferred to the customer, and we have discretion in establishing prices for the specified goods or services. Revenue is presented net of any sales and value added taxes.

Payment terms vary on a contract-by-contract basis, although terms generally include a requirement of payment within 30 to 60 days for non-recurring payments, the first day of the monthly or quarterly billing cycle for recurring payments for DAS and wholesale Wi-Fi contracts, and the first day of the month prior to the month that services are provided for multifamily contracts. We apply a practical expedient for purposes of determining whether a significant financing component may exist for our contracts if, at contract inception, we expect that the period between when we transfer the promised good or service to the customer and when the customer pays for that good or service will be one year or less. In instances where the customer pays for a good or service one year or more in advance of the period when we transfer the promised good or service to the customer, we have determined our contracts generally do not include a significant financing component. The primary purpose of our invoicing terms is not to receive financing from our customers or to provide customers with financing but rather to maximize our profitability on the customer contract. Specifically, inclusion of non-refundable upfront fees in our long-term customer contracts increases the likelihood that the customer will be committed through the end of the contractual term and ensures recoverability of the capital outlay that we incur in expectation of the customer fulfilling its contractual obligations. We may also provide service credits to our customers if we fail to meet contractual monthly system uptime requirements and we account for the variable consideration related to these service credits using the most likely amount method.

For contracts that include variable consideration, we estimate the amount of consideration at contract inception under the expected value method or the most likely amount method and include the amount of variable consideration that is not considered to be constrained. Significant judgment is used in constraining estimates of variable consideration. We update our estimates at the end of each reporting period as additional information becomes available.

Timing of revenue recognition may differ from the timing of invoicing to customers. We record unbilled receivables (contract assets) when revenue is recognized prior to invoicing, deferred revenue (contract liabilities) when revenue is recognized after invoicing, and receivables when we have an unconditional right to consideration to invoice and receive payment in the future. We present our DAS, multifamily, and wholesale Wi-Fi contracts in our consolidated balance sheet as either a contract asset or a contract liability with any unconditional rights to consideration presented separately as a receivable. Our other customer contracts generally do not have any significant contract asset or contract liability balances. Generally, a significant portion of the billing for our DAS contracts occurs prior to revenue recognition, resulting in our DAS contracts being presented as contract liabilities. In contrast, our wholesale Wi-Fi contracts that contain recurring fees with annual escalations are generally presented as contract assets as revenue is recognized prior to invoicing. Our multifamily contracts can be presented as either contract liabilities or contract assets primarily as a result of timing of invoicing for the network installations.

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. We have determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were immaterial during the three and nine months ended September 30, 2018 and are included in prepaid expenses and other current assets and non-current other assets on our condensed consolidated balance sheets. We apply a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less, the most significant of which relates to sales commissions related to obtaining our advertising customer contracts. Contract costs are evaluated for impairment in accordance with ASC 310, *Receivables*.

DAS

We enter into long-term contracts with telecom operators at our managed and operated locations. The initial term of our contracts with telecom operators generally range from five to twenty years and the agreements generally contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our DAS customer contracts generally contain a single performance obligation—provide non-exclusive access to our DAS or small cell networks to provide telecom operators' customers with access to the licensed wireless spectrum, together with providing telecom operators with construction, installation, optimization/engineering, maintenance services and agreed-upon storage space for the telecom operators' transmission equipment, each related to providing such licensed wireless spectrum to the telecom operators. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contract fee structure generally includes a non-refundable upfront fee and we evaluated whether customer options to renew services give rise to a material right that should be accounted for as a separate performance obligation because of those non-refundable upfront fees. We believe that a material right generally does not exist for our DAS customer contracts that contain renewal options considering the telecom operators' decision to renew is highly dependent upon our ability to maintain our exclusivity as the DAS service provider at the venue location and our limited operating history with venue and customer renewals. The telecom operators will make the decision to incur the capital improvement costs at the venue location irrespective of our remaining exclusivity period with the venue as the telecom operators expect that the assets will continue to be serviced regardless of whether we will remain the exclusive DAS service provider at the venue. Our contracts also provide our DAS customers with the option to purchase additional future services such as upgrades or enhancements. This option is not considered to provide the customer with a material right that should be accounted for as a separate performance obligation as the cost of the additional future services will depend entirely on the market rate of such services at the time such services are requested and we are not automatically obligated to stand ready to deliver these additional goods or services as the customer may reject our proposal. Periodically, we install and sell DAS networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer.

Our contract fee structure may include varying components of an upfront build-out fee and recurring access, maintenance, and other fees. The upfront build-out fee is generally structured as a firm-fixed price or cost-plus arrangement and becomes payable as certain contract and/or construction milestones are achieved. Our DAS and small-cell networks are neutral-host networks that can accommodate multiple telecom operators. Some of our DAS customer contracts provide for credits that may be issued to existing telecom operators for additional telecom operators subsequently joining the DAS network. The credits are generally based upon a fixed dollar amount per additional telecom operator, a fixed percentage amount of the original build-out fee paid by the telecom operator per additional telecom operator, or a proportionate share considering the actual costs incurred by all telecom operators to construct the DAS network split among the relevant number of telecom operators. In most cases, there is significant uncertainty on whether additional telecom operator contracts will be executed at inception of the contract with the existing telecom operator. We believe that the upfront build-out fee is fixed consideration once the build-out is complete and any subsequent credits that may be issued would be accounted for in a manner similar to a contract modification under the prospective method because (i) the execution of customer contracts with additional telecom carriers is at our sole election and (ii) we would not execute agreements with additional telecom carriers if it would not increase our revenues and gross profits at the venue level. Further, the credits issued to the existing telecom operator changes the transaction price on a go-forward basis, which corresponds with the decline in service levels for the existing telecom operator once the neutral-host DAS network can be accessed by the additional telecom operator. The recurring access, maintenance, and other fees generally escalate on an annual basis. The recurring fees are variable consideration until the contract term and annual escalation dates are fixed. We estimate the variable consideration for our recurring fees using the most likely amount method based on the expected commencement date for the services. We evaluate our estimates of variable consideration each period and record a cumulative catch-up adjustment in the period in which changes occur for the amount allocated to satisfied performance obligations.

We generally recognize revenue related to our single performance obligation for our DAS customer contract monthly over the contract term once the customer has the ability to access the DAS network and we commence maintenance on the DAS network.

Military and retail

Military and retail customers must review and agree to abide by our standard "Customer Agreement (With Acceptable Use Policy) and End User License Agreement" before they are able to sign-up for our subscription or single-use Wi-Fi network access services. Our military and retail customer contracts generally contain a single performance obligation—provide non-exclusive access to Wi-Fi services, together with performance of standard maintenance, customer support, and the Wi-Finder app to facilitate seamless connection to the Company's Wi-Fi network. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contracts also provide our military and retail subscription customers with the option to renew the agreement when the subscription term is over. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation because the customer would not receive a discount if they decided to renew and the option to renew is cancellable within 5 days' notice prior to the end of the then current term by either party.

The contract transaction price is determined based on the subscription or single-use plan selected by the customer. Our military and retail service plans are for fixed price services with the price for each plan stated on our website. From time to time, we offer promotional discounts that result in an immediate reduction in the price paid by the customer. Subscription fees from military and retail customers are paid monthly in advance. We provide refunds for our military and retail services on a case-by-case basis. Refunds and credit card chargeback amounts are not significant and are recorded as contra-revenue in the period the refunds are made, or chargebacks are received.

Subscription fee revenue is recognized ratably over the subscription period. Revenue generated from military and retail single-use access is recognized when access is provided, and the performance obligation is satisfied.

Multifamily

We enter into long-term contracts with property owners. The initial term of our contracts with property owners generally range from three to five years and the contracts may contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our customer contracts generally contain two performance obligations: (i) install the network required to provide Wi-Fi services; and (ii) provide Wi-Fi services and technical support to the residents and employees. Our contracts may also provide our property owners with the option to renew the agreement. This option is not considered to provide the property owner with a material right that should be accounted for as a separate performance obligation because the property owner would not receive a discount if they decided to renew and the option to renew is generally cancellable by either party subject to the notice of non-renewal requirements specified in the contract. Our contracts may also provide our customers with the option to purchase additional future services. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation since the cost of the additional future services are generally at market rates for such services and we are not automatically obligated to stand ready to deliver these additional goods or services because the customer may reject our proposal.

Our contract fee structure includes a network installation fee and recurring Wi-Fi service and support fees. The network installation fee is generally structured as a firm-fixed price arrangement and becomes payable as certain contract and/or installation milestones are achieved. We generally estimate variable consideration for unpriced change orders using the most likely amount method based on the expected price for those services. If network installations are not completed by specified dates, we may be subject to network installation penalties. We estimate the variable consideration for our network installation fees using the most likely amount method based on the amount of network installation penalties we expect to incur. Title to the network generally transfers to the property owner once installation is completed and the network has been accepted. We generally recognize revenue related to our network installation performance obligation using a cost-to-cost method over the network installation period. We may provide latent defect warranties for materials and installation labor services related to our network installation services. Our warranty obligations are generally not accounted for as separate performance obligations as warranties cannot be separately purchased and warranties do not provide a service in addition to the assurance that the network will function as expected.

The recurring fees commence once the network is launched with recurring fees generally based upon a fixed or variable occupancy rate. The recurring Wi-Fi service fees may be adjusted prospectively for changes in circuit and/or video content costs, and Wi-Fi support fees may escalate on an annual basis. We estimate the variable consideration for our recurring fees using the expected value method with the exception of the variable consideration related to actual occupancy rates, which we record when we have the contractual right to bill. We evaluate our estimates of variable consideration each period and record a cumulative catch-up adjustment in the period in which changes occur for the amount allocated to satisfied performance obligations. We recognize revenue related to the recurring fees on a monthly basis over the contract term as the Wi-Fi services and support is rendered, and the performance obligation is satisfied.

Wholesale Wi-Fi

We enter into long-term contracts with enterprise customers such as telecom operators, cable companies, technology companies, and enterprise software/services companies, that pay us usage-based Wi-Fi network access and software licensing fees to allow their customers' access to our footprint worldwide. We also enter into long-term contracts with financial institutions and other enterprise customers who provide access to our Wi-Fi footprint as a value-added service for their customers. The initial term of our contracts with wholesale Wi-Fi customers generally range from one to three years and the agreements generally contain renewal options. Some of our contracts provide termination for convenience clauses that may or may not include substantive termination penalties. We apply judgment in determining the contract term, the period during which we have present and enforceable rights and obligations. Our wholesale Wi-Fi customer contracts generally contain a single performance obligation—provide non-exclusive rights to access our Wi-Fi networks to provide wholesale Wi-Fi customers' end customers with access to the high-speed broadband network that may be bundled together with integration services, support services, and/or performance of standard maintenance. The performance obligation is considered a series of distinct services as the performance obligation is satisfied over time and the same time-based input method or usage-based output method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer. Our contracts may also provide our enterprise customers with the option to renew the agreement. This option is not considered to provide the customer with a material right that should be accounted for as a separate performance obligation because the customer would not receive a discount if they decided to renew and the option to renew is generally cancellable by either party subject to the notice of non-renewal requirements specified in the contract. Our contracts may also provide our wholesale Wi-Fi customers with the option to purchase additional future services. We do not consider this option to provide the customer with a material right that should be accounted for as a separate performance obligation since the cost of the additional future services are generally at market rates for such services and we are not automatically obligated to stand ready to deliver these additional goods or services because the customer may reject our proposal. Periodically, we install and sell Wi-Fi networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer.

Our contract fee structure may include varying components of a minimum fee and usage-based fees. Minimum fees represent fixed price consideration while usage-based fees represent variable consideration. With respect to variable consideration, our commitment to our wholesale Wi-Fi customers consists of providing continuous access to the network. It is therefore a single performance obligation to stand ready to perform and we will allocate the variable fees charged for usage when we have the contractual right to bill. The variable component of revenue will be recognized based on the actual usage during the period.

Wholesale Wi-Fi revenue is recognized as they are earned over the relevant contract term with variable consideration recognized when we have the contractual right to bill.

Advertising

We generally enter into short-term cancellable insertion orders with our advertising customers for advertising campaigns that are served at our managed and operated locations and other locations where we solely provide authorized access to a partner's Wi-Fi network through sponsored and promotional programs. Our sponsorship advertising arrangements are generally priced under a cost per engagement structure, which is a set price per click or engagement, or a cost per install structure for third party application downloads. Our display advertising arrangements are priced based on cost per thousand impressions. Insertion orders may also include bonus items. Our advertising customer contracts may contain multiple performance obligations with each distinct service. These distinct services may include an advertisement video or banner impressions in the contract bundled with the requirement to provide network, space on the website, and integration of customer advertisement onto the website, and each is generally considered to be its own performance obligation. The performance obligations are considered a series of distinct services as the performance obligations are satisfied over time and the same action-based output method would be used to measure our progress toward complete satisfaction of the performance obligation to transfer each distinct service in the series to the customer.

The contract transaction price is comprised of variable consideration based on the stated rates applied against the number of units delivered inclusive of the bonus units subject to the maximums provided for in the insertion order. It is customary for us to provide additional units over and above the amounts contractually required; however, there are a number of factors that can also negatively impact our ability to deliver the units required by the customer such as service outages at the venue resulting from power or circuit failures and customer cancellation of the remaining undelivered units under the insertion order due to campaign performance or budgetary constraints. Typically, the advertising campaign periods are short in duration. We will therefore use the contractual rates per the insertion orders and actual units delivered to determine the transaction price each period end. The transaction price will be allocated to each performance obligation based on the standalone selling price of each performance obligation.

Advertising revenue is recognized ratably over the service period based on actual units delivered subject to the maximums provided for in the insertion order.

Pre-ASC 606 adoption

We recognize revenue when an arrangement exists, services have been rendered, fees are fixed or determinable, no significant obligations remain related to the earned fees and collection of the related receivable is reasonably assured. Revenue is presented net of any sales and value added taxes.

Revenue generated from access to our DAS networks consists of build-out fees and recurring access fees under certain long-term contracts with telecom operators. Build-out fees paid upfront are generally deferred and recognized ratably over the term of the estimated customer relationship period, once the build-out is complete. Periodically, we install and sell Wi-Fi and DAS networks to customers where we do not have service contracts or remaining obligations beyond the installation of those networks and we recognize build-out fees for such projects as revenue when the installation work is completed, and the network has been accepted by the customer. Minimum monthly access fees for usage of the DAS networks are non-cancellable and generally escalate on an annual basis. These minimum monthly access fees are recognized ratably over the term of the telecom operator agreement. The initial term of our contracts with telecom operators generally range from five to twenty years and the agreements generally contain renewal clauses. Revenue from DAS network access fees in excess of the monthly minimums is recognized when earned.

Subscription fees from military and retail customers are paid monthly in advance and revenue is deferred for the portions of monthly recurring subscription fees collected in advance. We provide refunds for our military and retail services on a case-by-case basis. These amounts are not significant and are recorded as contra-revenue in the period the refunds are made. Subscription fee revenue is recognized ratably over the subscription period. Revenue generated from military and retail single-use access is recognized when access is provided.

Services provided to wholesale Wi-Fi partners generally contain several elements including: (i) a term license to use our software to access our Wi-Fi network, (ii) access fees for Wi-Fi network usage, and/or (iii) professional services for software integration and customization and to maintain the Wi-Fi service. The term license, monthly minimum network access fees and professional services are billed monthly based upon predetermined fixed rates. Once the term license for integration and customization are delivered, the fees from the arrangement are recognized ratably over the remaining term of the service arrangement. The initial term of the license agreements is generally between one to three years and the agreements generally contain renewal clauses. Revenue for Wi-Fi network access fees in excess of the monthly minimum amounts is recognized when earned. All elements within existing service arrangements are generally delivered and earned concurrently throughout the term of the respective service arrangement.

In instances where the minimum monthly Wi-Fi and DAS network access fees escalate over the term of the wholesale service arrangement, an unbilled receivable is recognized when performance is within our control and when we have reasonable assurance that the unbilled receivable balance will be collected.

We adopted the provisions of ASU 2009-13, *Revenue Recognition (Topic 605)—Multiple-Deliverable Revenue Arrangements*, on a prospective basis on January 1, 2011. For multiple-deliverable arrangements entered into prior to January 1, 2011 that are accounted for under ASC 605-25, *Revenue Recognition—Multiple-Deliverable Revenue Arrangements*, we defer recognition of revenue for the full arrangement and recognize all revenue ratably over the term of the estimated customer relationship period for DAS arrangements and the wholesale service period for Wi-Fi platform service arrangements, as we do not have evidence of fair value for the undelivered elements in the arrangement. For multiple-deliverable arrangements entered into or materially modified after January 1, 2011 that are accounted for under ASC 605-25, we evaluate whether separate units of accounting exist and then allocate the arrangement consideration to all units of accounting based on the relative selling price method using estimated selling prices if vendor specific objective evidence and third-party evidence is not available. We recognize the revenue associated with the separate units of accounting upon completion of such services or ratably over the term of the estimated customer relationship period for DAS arrangements and the wholesale service period for Wi-Fi platform service arrangements.

Advertising revenue is generated from advertisements on our managed and operated or partner networks. In determining whether an arrangement exists, we ensure that a binding arrangement is in place, such as a standard insertion order or a fully executed customer-specific agreement. Obligations pursuant to our advertising revenue arrangements typically include a minimum number of units or the satisfaction of certain performance criteria. Advertising and other revenue is recognized when the services are performed.

Other Critical Accounting Policies and Estimates

There have been no material changes to our other critical accounting policies and estimates from the information provided for the year ended December 31, 2017 in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included in our annual report on Form 10-K filed by us with the SEC on March 12, 2018.

Recently Issued Accounting Standards

Information regarding recent accounting pronouncements is contained in Note 2 “Summary of Significant Accounting Policies” to the accompanying condensed consolidated financial statements included in Part I, Item 1, of this Quarterly Report on Form 10-Q and under “Critical Accounting Policies and Estimates” in Part I, Item II, of this Quarterly Report on Form 10-Q, the information of which is incorporated herein by this reference.

Item 3. Quantitative and Qualitative Disclosure about Market Risk

We are exposed to various market risks including: (i) interest rate risk and (ii) foreign currency exchange rate risk. The risk of loss is assessed based on the likelihood of adverse changes in fair values, cash flows or future earnings.

Interest rate risk. Our Revolving Line of Credit and Term Loan bears, at our election, interest at a variable interest rate of LIBOR plus 2.5% - 3.5% or Lender’s Prime Rate plus 1.5% - 2.5% per year. The interest rate on the Term Loan resets at the end of each three-month period. Our use of variable rate debt exposes us to interest rate risk. A 100-basis point increase in the LIBOR or Lender’s Prime Rate as of September 30, 2018 would not have a material impact on net income (loss) and cash flow.

Foreign currency exchange rate risk. We are exposed to foreign currency exchange rate risk inherent in conducting business globally in numerous currencies, of which the most significant to our operations for the nine months ended September 30, 2018 was the Brazilian Real. We are primarily exposed to foreign currency fluctuations related to the operations of our subsidiary in Brazil whose financial statements are not denominated in the U.S. dollar. Our foreign operations are not material to our operations. As such, we currently do not enter into currency forward exchange or option contracts to hedge foreign currency exposures.

Item 4. Controls and Procedures

Disclosure Controls and Procedures. We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness, as of September 30, 2018, of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting. During the three months ended September 30, 2018, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth in Note 9 "Commitments and Contingencies," to the unaudited condensed consolidated financial statements included in Part I, Item 1, of this Quarterly Report on Form 10-Q, is incorporated herein by this reference.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this report on Form 10-Q, including our accompanying consolidated financial statements and the related notes, before deciding whether to purchase shares of our common stock. If any of the following risks actually occur, our business, financial condition, results of operations and prospects could be materially and adversely affected. The price of our common stock and the trading price of our Convertible Notes could decline and you could lose part or all of your investment.

Risks Related to Our Business

A significant portion of our revenue is dependent on our relationships with our venue and network partners, and if these relationships are impaired or terminated, or if our partners do not perform as expected, our business and results of operations could be materially and adversely affected.

We depend on our relationships with venue partners, particularly key venue partners and military bases, in order to manage and operate DAS, small cell, and Wi-Fi networks. These relationships generate a significant portion of our revenue and allow us to generate wholesale revenues and new military, multifamily and retail customers. Our agreements with our venue partners, telecom operators, and wholesale customers are for defined periods and of varying durations. In order to maintain our relationships with venue partners, we may need to upgrade our networks or make other changes to our products and services we provide such venue partners, which would, in most cases, require significantly higher initial capital expenditures than we have historically incurred, and if we are unsuccessful, our relationships could be impaired. If our venue partners terminate or fail to renew these agreements, our ability to generate and retain wholesale, military, multifamily and retail customers would be diminished, which might result in a significant disruption of our business and adversely affect our operating results. Further, any delays in our ability to complete the upgrade of our networks or build-out new networks can adversely affect our operating results.

We depend on our relationships with network partners to allow users to roam across networks that we do not manage or operate. A significant portion of our revenue depends on maintaining these relationships with network partners. Some network partners may compete with us for retail customers and may decide to terminate our partnerships and instead develop competing retail products and services. Our network partner agreements are for defined periods and of varying durations. If our network partners terminate these agreements, or fail to renew these agreements, our ability to retain retail customers could be diminished and our network reach could be reduced, which could result in a significant disruption of our business and adversely affect our operating results.

Our operating results may fluctuate unexpectedly, which makes them difficult to predict and may cause us to fail to meet the expectations of investors, adversely affecting our stock price.

We operate in a highly dynamic industry and our future quarterly operating results may fluctuate significantly. Our revenue and operating results may vary from quarter-to-quarter due to many factors, many of which are not within our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Further, it is difficult to accurately forecast our revenue, margin and operating results, and if we fail to match our expected results or the results expected by financial analysts, the trading price of our common stock and Convertible Notes and the price at which our convertible noteholders could sell the common stock received upon conversion of the Convertible Notes may be adversely affected.

Factors that contribute to fluctuations in our operating results from quarter-to-quarter include those described in this risk factor section including:

- our gain or loss of a key venue partner, military partner, or wholesale partner;
- the rate at which individuals adopt and continue to use our solutions;

- the timing and success of new technology introductions by us or our competitors;
- the number of air travel passengers;
- the growing prevalence of free Wi-Fi models and our ability to adapt and compete with free Wi-Fi;
- intellectual property disputes; and
- general economic conditions in our domestic and foreign markets.

Due to these and other factors, quarter-to-quarter comparisons of our historical operating results should not be relied upon as accurate indicators of our future performance.

A substantial portion of our business depends on the demand for our DAS and small cell networks, which is driven primarily by demand from our telecom customers and demand for data, and we may be adversely affected by any slowdown in such demand. A reduction in the amount or change in the mix of network investment by our telecom customers may materially and adversely affect our business (including reducing demand for tenant additions or network services).

Customer demand for our DAS and small cell networks depends on the mix of network investment by our telecom customers and the demand for data from end users. The willingness of our customers to utilize our systems, including DAS and small cell networks, or renew or extend existing contracts on our systems, is affected by numerous factors, including:

- availability or capacity of our DAS and small cell networks;
- location of our DAS and small cell networks;
- financial condition of our customers, including their profitability and availability or cost of capital;
- willingness of our customers to maintain or increase their network investment or changes in their capital allocation strategy;
- consumers’ and organizations’ demand for data;
- need for integrated networks and organizations;
- availability and cost of spectrum for commercial use;
- increased use of network sharing, roaming, joint development, or resale agreements by our customers;
- mergers or consolidations by and among our customers;
- changes in, or success of, our customers’ business models;
- governmental regulations and initiatives, including local or state restrictions on the proliferation of communications infrastructure;
- cost of constructing our DAS and small cell networks;
- our market competition;
- technological changes, including those (1) affecting the number or type of communications infrastructure needed to provide data to a given geographic area or which may otherwise serve as substitute or alternative to our communications infrastructure or (2) resulting in the obsolescence or decommissioning of certain existing wireless networks; and
- our ability to efficiently satisfy our customers’ service requirements.

A slowdown in demand for our DAS and small cell networks or data generally may negatively impact our growth or otherwise have a material adverse effect on us. If our customers or potential customers are unable to raise adequate capital to fund their business plans, as a result of disruptions in the financial and credit markets or otherwise, they may reduce their spending, which could adversely affect our anticipated growth or the demand for our DAS and small cell networks.

The amount, timing, and mix of our customers' network investment is variable and can be significantly impacted by the various matters described in these risk factors. Changes in customer network investment typically impact the demand for our DAS and small cell networks. As a result, changes in customer plans such as delays in the implementation of new systems, new and emerging technologies, or plans to expand coverage or capacity may reduce demand for our DAS and small cell networks. Furthermore, the industries in which our customers operate (particularly those in the wireless industry) could experience a slowdown or slowing growth rates as a result of numerous factors, including a reduction in consumer demand (including demand for wireless connectivity) or general economic conditions. There can be no assurances that weakness or uncertainty in the economic environment will not adversely impact our customers or their industries, which may materially and adversely affect our business, including by reducing demand for DAS and small cell networks. Such an industry slowdown or a reduction in customer network investment may materially and adversely affect our business.

We may be unsuccessful in expanding into new venue types, which could harm the growth of our business, operating results and financial condition.

We are negotiating with existing and prospective partners to expand our managed and operated Wi-Fi network and small cell footprint in venue types where we historically have had only a limited presence. Expansion into these venue types, which may include shopping malls, stadiums, hospitals, retail stores and quick service restaurants, may require significantly higher initial capital expenditures than we have historically incurred. In contrast to Wi-Fi network build-outs at venues such as airports, where telecom operators typically pay the substantial expense of laying cable or fiber, we may be required to incur the initial capital expense of access points and related hardware and cabling at tens of thousands of quick serve restaurant locations and hundreds of shopping malls, hospitals, retail stores and stadium locations. Additionally, in August 2018 we closed the acquisition of substantially all of the assets of Elauwit Networks, LLC for our entrance into the multifamily venue type. We have minimal experience in servicing the multifamily venues and we may not be successful in growing and managing this business.

We may not be able to execute on our strategy or there may not be returns on these investments in the near future or at all. As a result, our business, financial condition and results of operations could be materially and adversely affected.

Our business depends upon demand for connected services that rely on wireless network infrastructure. Our ability to adapt to the speed of changes and anticipate market adoption of new technologies may adversely impact our business.

Our future success depends upon growing demand for wireless connected services. The demand for wireless connectivity may decrease or may grow more slowly than expected. Any such decrease in the demand or slowing rate of growth could have a material adverse effect on our business. The continued demand for wireless connectivity services depends on the continued proliferation of smartphones, tablets and other wireless connection enabled devices. Our revenue is derived from the demand from consumers for internet connectivity, including our military, multifamily and retail offerings, and from our telecom, venue and other wholesale partners attempting to provide consumers with greater connectivity. We may face challenges as we seek to increase the revenue generated from the usage on smartphones, tablets and other wireless connected devices.

A portion of our business depends on the continued integration of Wi-Fi as a standard feature in wireless connected devices. If Wi-Fi ceases to be a standard feature in wireless connected devices, or if the rate of integration of Wi-Fi on devices decreases or is slower than expected, the market for our services may be substantially diminished.

Competing technologies pose a risk to the continued use of Wi-Fi as a mobile wireless connectivity technology. The introduction and market acceptance of emerging wireless technologies such as 4G/LTE, 5G, LTE-U and Super Wi-Fi, could cause significant disruption to our Wi-Fi business, which may result in a loss of customers, users and revenue. If users find emerging wireless technologies to be sufficiently fast, convenient or cost effective, we may not be able to compete effectively, and our ability to attract or retain users will be impaired. Additionally, one or more of our partners may deploy emerging wireless technologies that could reduce the partner's need to work with us, and may result in significant loss of revenue and reduction of the Wi-Fi hotspots in our network.

We deliver value to our users by providing simple access to Wi-Fi hotspots, regardless of whether we manage and operate the hotspot, or the hotspot is operated by a partner. As a result, our business depends on our ability to anticipate and quickly adapt to changing technological standards and advances. If technological standards change and we fail to adapt accordingly, our business and revenue may be adversely affected. Furthermore, the proliferation of new mobile devices and operating platforms poses challenges for our research and development efforts. If we are unable to create simple solutions for a particular device or operating platform, we will be unable to effectively attract users of these devices or operating platforms and our business will be adversely affected.

We may not maintain recent rates of revenue growth.

Although our revenue has increased substantially over the last few years, we may not be able to maintain historical rates of revenue growth. We believe that our continued growth will depend, among other factors, on successfully implementing our business strategies, including our ability to:

- attract new users, convert users of our single-use services into subscribers and keep existing subscribers actively using our services;
- develop new sources of revenue from our users and partners;
- react to changes in the way individuals access and use the mobile Internet;
- identify and integrate the acquisition of new businesses;
- expand into new markets;
- increase the awareness of our brand;
- retain our existing partners and attract new partners; and
- provide our users with a superior experience, including customer support and payment experiences.

However, we cannot guarantee that we will successfully implement any of these business strategies.

The U.S. government may modify, curtail or terminate one or more of our contracts.

We have dedicated a significant amount of resources to building out Wi-Fi networks for troops stationed on military bases pursuant to our contracts with the U.S. government. Military revenue comprises a substantial part of our overall revenue and the U.S. government may modify, curtail or terminate its contracts with us, either at its convenience or for default based on performance. Any such modification, curtailment, or termination of one or more of our government contracts could have a material adverse effect on our earnings, cash flow and/or financial position.

Negotiations with prospective or existing partners and telecom operators and network operators can be lengthy and unpredictable, which may cause our operating results to vary.

Our negotiations with prospective or existing venue partners, including large venues like airports, transportation hubs, stadiums, arenas, military bases, universities, convention centers, office campuses and other partners, to acquire Wi-Fi locations to operate or to acquire roaming rights on partners' networks, or for new partners to implement our solutions or to extend or amend current arrangements, can be lengthy, and in some cases can last over 12 months. Because of the lengthy negotiation cycle, the time required to reach a final or amended agreement with a partner is unpredictable and may lead to variances in our operating results from quarter to quarter. Negotiations with prospective and existing partners also require substantial time, effort and resources. We may ultimately fail in our negotiations, resulting in costs to our business without any associated benefits.

Additionally, our negotiations with telecom operators and network operators who pay us build-out fees and recurring access fees can likewise be lengthy and, therefore, the time required to reach a final or amended agreement with a telecom or network operators is unpredictable and may lead to variances in our operating results from quarter to quarter.

We operate relatively new businesses in a rapidly evolving industry, so an investment in our company involves more risk than an investment in a more mature company in an established industry.

We derive nearly all of our revenue from mobile Internet services, which are new and highly dynamic businesses, which face significant challenges. You should consider our business and prospects in light of the risks, uncertainties and difficulties we will encounter as an emerging company in a new and rapidly evolving market. We may not be able to address these risks, uncertainties and difficulties successfully, which could materially harm our business and operating results.

Our industry is competitive and if we do not compete successfully, we could lose market share, experience reduced revenue or suffer losses.

The market for commercial wireless infrastructure solutions is competitive and impacted by technological change, and we expect competition with our current and potential competitors to intensify in the future. In particular, some of our competitors have taken steps or may decide to more aggressively compete against us, particularly in the market for venue build-outs of Wi-Fi, DAS, and small cell solutions.

Our competitors, many of whom are also our partners, include a variety of telecom operators and network operators, including Verizon, AT&T, T-Mobile, Sprint, Comcast, Charter, Altice and local operators. These and other competitors have developed or may develop technologies that compete directly with our solutions. Many of our competitors are substantially larger than we are and have substantially longer operating histories. We may not be able to fund or invest in certain areas of our business to the same degree as our competitors. Many have substantially greater product development and marketing budgets and other financial and personnel resources than we do. Some also have greater name and brand recognition and a larger base of subscribers or users than we have. In addition, our competitors may provide services that we generally do not, such as cellular, local exchange and long distance services, voicemail and digital subscriber line. Users that desire these services may choose to also obtain mobile wireless connectivity services from a competitor that provides these additional services rather than from us.

Furthermore, we rely on several of our competitors as partners in roaming agreements. The roaming agreements provide that our retail customers and our wholesale partners' customers may use the Wi-Fi networks of our partners. One or more of our partners may deploy competing technologies that could reduce the partner's need to work with us under a roaming agreement. If our partners decide to terminate our roaming agreements, our global network of wireless networks may be reduced, which may result in a significant disruption to our business.

Competition could increase our selling and marketing expenses and related customer acquisition costs. We may not have the financial resources, technical expertise or marketing and support capabilities to continue to compete successfully. A failure to respond to established and new competitors may adversely impact our business and operating results.

We process, store, transfer and use personally identifiable information, confidential information and other data, which subjects us to laws and regulations and other legal obligations, of which the actual or perceived failure to comply could adversely affect our business.

We process, store, transfer and use data from or about our certain of our customers, including certain personally identifiable information and confidential information. These activities subject, or may subject, us to various federal, state, local and international laws and regulations regarding data privacy, protection, and security. In addition, we are also subject to the terms of our privacy policies and other third party obligations regarding data privacy, protection and security. Although we strive to comply with applicable laws, regulations, policies and other legal obligations, the regulatory framework for data privacy, protection and security is complex and ambiguous, and thus our current rules and practices may not, or allegedly may not, be complaint. Such noncompliance or alleged noncompliance could increase our costs and require us to modify our services and products, possibly in a material manner, and could limit or prevent us from processing, storing, transferring or using certain customer data in our services and products.

In addition, data privacy, protection and security laws, regulations and industry standards are constantly evolving and being adopted in various jurisdictions. For example, the General Data Protection Regulation ("GDPR") became effective May 2018, superseding existing European Union data protection legislation. Additionally, the California Consumer Privacy Act ("CCPA") was passed in June 2018 and is set to be effective in 2020. The GDPR and CCPA both provide certain data subjects with new data privacy rights, compel new operational requirements for companies, and impose potentially significant penalties for noncompliance. The cost to comply with the GDPR, CCPA and other new laws, regulations and industry standards, including costs associated with any related governmental investigations, enforcement actions, or litigations or claims, may limit the use and adoption of our products and services and could have an adverse impact on our business.

Advances in computer capabilities, new discoveries in the field of cryptography or other cyber-security developments may result in a compromise or breach of the technology we use to protect user transaction data and cyber-security attacks are becoming more sophisticated. Cyber-security risks such as malicious software and attempts to gain unauthorized access to data are rapidly evolving and could lead to disruptions in our network, unauthorized release of personally identifiable, confidential or otherwise protected information or corruption of data. Any compromises of our security could damage our reputation and brand and expose us to possible liability such as litigation claims or fines, which would substantially harm our business and operating results. We have incurred costs and may need to expend significant additional resources to appropriately protect against security breaches, implement processes to adequately respond to security breaches (including as may be required by applicable law, such as the GDPR), or to address problems caused by breaches.

Many countries, such as European Union member countries as a result of the 2006 E.U. Data Retention Directive, are introducing, or have already introduced into local law some form of traffic and user data retention requirements, which are generally applicable to providers of electronic communications services. Retention periods and data types vary from country to country, and the various local data protection and other authorities may implement traffic and user retention requirements regarding certain data in different and potentially overlapping ways. Although the constitutionality of the 2006 E.U. Data Retention Directive has been questioned, we may be required to comply with data retention requirements in one or more jurisdictions, or we may be required to comply with these requirements in the future as a result of changes or modifications to the Boingo solution or changes or modifications to the technological infrastructure on which the Boingo solution is based. Failure to comply with these retention requirements may result in the imposition of costly penalties. Compliance with these retention requirements can be difficult and costly from a legal, operational and technical perspective and could harm our business and operational results.

Various events could disrupt our networks, information systems or properties and could impair our operating activities and negatively impact our reputation and financial results.

Network and information systems technologies are critical to our operating activities, both for our internal uses and supplying services to our customers. Network or information system shutdowns or other service failure disruptions, such as access point failure at one of our managed and operated wireless infrastructure networks or a backhaul disruption, caused by events such as computer hacking, dissemination of computer viruses, worms and other destructive or disruptive software, “cyber attacks,” process breakdowns, denial of service attacks and other malicious activity pose increasing risks. Both unsuccessful and successful “cyber attacks” on companies have continued to increase in frequency, scope and potential harm in recent years. While we develop and maintain systems seeking to prevent systems-related events and security breaches from occurring, the development and maintenance of these systems is costly and requires ongoing monitoring and updating as techniques used in such attacks become more sophisticated and change frequently. We, and the third parties on which we rely, may be unable to anticipate these techniques or implement adequate preventive measures. While from time to time attempts have been made to access our network, these attempts have not as yet resulted in any material release of information, degradation or disruption to our network and information systems.

Our network and information systems are also vulnerable to damage or interruption from power outages, telecommunications failures, accidents, natural disasters (including extreme weather arising from short-term or any long-term changes in weather patterns), terrorist attacks and similar events. Further, the impacts associated with extreme weather or long-term changes in weather patterns, such as increased and intensified storm activity, may cause increased business interruptions. Our system redundancy may be ineffective or inadequate, and our disaster recovery planning may not be sufficient for all eventualities.

Any of these events, if directed at, or experienced by, us or technologies upon which we depend, could have adverse consequences on our network, our customers and our business, including damage to our or our customers’ equipment and data and could result in lengthy interruptions in the availability of the Boingo solution. Large expenditures may be necessary to repair or replace damaged property, networks or information systems or to protect them from similar events in the future. Moreover, the amount and scope of insurance, if any, that we maintain against losses resulting from any such events or security breaches may not be sufficient to cover our losses or otherwise adequately compensate us for any disruptions to our business that may result. Any such significant service disruption could result in damage to our reputation and credibility, customer dissatisfaction and ultimately a loss of customers or revenue. Any significant loss of customers or revenue, or significant increase in costs of serving those customers, could adversely affect our growth, financial condition and results of operations.

We may be unsuccessful in expanding our international operations, which could harm the growth of our business, operating results and financial condition.

Our ability to expand internationally involves various risks, including the need to invest significant resources in unfamiliar markets, and the possibility that there may not be returns on these investments in the near future or at all. In addition, we have incurred and expect to continue to incur expenses before we generate any material revenue in these new markets. Our expansion plans will require significant management attention and resources. We have limited experience in selling our solutions in international markets or in conforming to local cultures, standards or policies. We may not be able to compete successfully in these international markets. Our ability to expand will also be limited by the demand for mobile Internet in international markets. Different privacy, censorship and liability standards and regulations and different intellectual property laws in foreign countries may cause our business and operating results to suffer.

Any future international operations may fail to succeed due to risks inherent in foreign operations, including:

- different technological solutions for mobile Internet than those used in North America;
- varied, unfamiliar and unclear legal and regulatory restrictions;
- unexpected changes in international regulatory requirements and tariffs;
- legal, political, social or systemic restrictions on the ability of U.S. companies to do business in foreign countries;
- currency fluctuations;
- Foreign Corrupt Practices Act compliance and related risks;
- difficulties in staffing and managing foreign operations;
- difficulties in enforcing contracts and collecting accounts receivable, and longer payment cycles, especially in emerging markets;
- reduced protection for intellectual property rights in some countries; and
- potential adverse tax consequences.

Some of our business partners also have international operations and are subject to the risks described above. Even if we are able to successfully manage the risks of international operations, our business may be adversely affected if our business partners are not able to successfully manage these risks.

As a result of these obstacles, we may find it difficult or prohibitively expensive to expand internationally or we may be unsuccessful in our attempt to do so, which could harm our business, operating results and financial condition.

Acquisitions could be difficult to identify, pose integration challenges, divert the attention of management, disrupt our business, dilute stockholder value, and adversely affect our operating results and financial condition.

We have in the past acquired and may in the future seek to acquire or invest in businesses, products or technologies that we believe could complement or expand our business or otherwise offer growth opportunities. For example, in August 2018, we acquired substantially all of the assets of Elauwit Networks, LLC, a provider of high-speed Wi-Fi and technology solutions to the student and multifamily housing market. Acquisitions may disrupt our business, divert our resources and require significant management attention that would otherwise be available for development of our existing business.

In addition, we may not be able to integrate the acquired personnel, operations and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs, accounting charges or other liabilities associated with the acquisition;
- incurrence of acquisition-related costs;
- difficulty integrating operations, personnel and accounting and other systems of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business, including due to language, geographical or cultural differences;
- difficulty converting the customers of the acquired business onto our contract terms, including disparities in the revenues, licensing, support or services model of the acquired company;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;

- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations. In addition, our exposure to risks associated with various claims, including the use of intellectual property, may be increased as a result of acquisitions of other companies. For example, we may have a lower level of visibility into the development process with respect to intellectual property or the care taken to safeguard against infringement risks with respect to the acquired company or technology. In addition, third parties may make infringement and similar or related claims after we have acquired technology that has not been asserted prior to our acquisition.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

We rely on our credit facility to fund a significant portion of our capital expenditures and other capital needs. If we are unable to achieve compliance with the credit facility covenants, or interest rates increase significantly, or we are unable to renew our credit facility on favorable terms, or at all, our business would be negatively impacted.

In November 2014, we entered into a Credit Agreement ("Credit Agreement") and related agreements with Bank of America, N.A. acting as agent for lenders named therein. The Credit Agreement places restrictions on our ability to take certain actions and sets standards for minimum financial performance. In addition to maintaining compliance with the covenants set forth in the Credit Agreement, our ability to increase the amount available for borrowing under our revolving line of credit depends on our ability to meet certain financial targets. If we fail to comply with the terms and conditions of this Credit Agreement, then the line of credit may be withdrawn, we may be required to immediately repay any outstanding obligation, and the additional funds will not be available to us to fund our capital needs.

Additionally, the Credit Agreement expires in November 2018. While we have entered into a commitment letter with Bank of America, N.A. pursuant to which Bank of America has committed to provide senior secured credit facilities to us in an aggregate amount of $28.0 million on terms substantially similar to the Credit Agreement, market conditions in the U.S. credit markets may negatively impact our ability to renew the Credit Agreement on favorable terms upon its expiration. If we are unable to renew the Credit Agreement on favorable terms, or at all, our ability to fund our operations may be impaired, which would have a material adverse effect on our results of operations.

The regulation of Internet communications, products and services is currently uncertain, which poses risks for our business from changes in laws, regulations, and interpretation or enforcement of existing laws or regulations.

The current regulatory environment for Internet communications, products and services is uncertain. Many laws and regulations were adopted prior to the advent of the Internet and related technologies and often do not contemplate or address the specific issues associated with the Internet and related technologies. The scope of laws and regulations applicable to the Internet remains uncertain and is subject to statutory or interpretive change. We cannot be certain that we, our partners or our users are currently in compliance with regulatory or other legal requirements in the numerous countries in which our service is used. Our failure or the failure of our partners, users and others with whom we transact business, or to whom we license the Boingo solution, to comply with existing or future regulatory or other legal requirements could materially adversely affect our business, financial condition and results of operations. Regulators may disagree with our interpretations of existing laws or regulations or the applicability of existing laws or regulations to our business, and existing laws, regulations and interpretations may change in unexpected ways.

We believe that the Boingo solution is on the forefront of wireless infrastructure connectivity, and therefore it may face greater regulatory scrutiny than other communications products and services. We cannot be certain what positions regulators may take regarding our compliance with, or lack of compliance with, current and future legal and regulatory requirements or what positions regulators may take regarding any past or future actions we have taken or may take in any jurisdiction. Regulators may determine that we are not in compliance with legal and regulatory requirements, and impose penalties, or we may need to make changes to the Boingo solution, which could be costly and difficult. Any of these events would adversely affect our operating results and business.

If we lose key personnel or are unable to attract and retain personnel on a cost effective basis, our business could be harmed.

Our performance is substantially dependent on the continued services and performance of our senior management and our highly qualified team of engineers, many of whom have numerous years of experience and specialized expertise in our business. If we are not successful in hiring and retaining highly qualified engineers, we may not be able to extend or maintain our engineering and technological expertise and our future product and service development efforts could be adversely affected. Additionally, the process of attracting and retaining suitable replacements for any executive officers or any of our highly qualified engineers we lose in the future would result in transition costs and would divert the attention of other members of our senior management from our existing operations. Additionally, such a loss could be negatively perceived in the capital markets. If we lose members of our senior management, this may significantly delay or prevent the achievement of our strategic objectives and adversely affect our operating results.

Our future success also depends on our ability to identify, attract, hire, train, retain and motivate highly skilled managerial, operations, business development and marketing personnel. We have in the past maintained a rigorous, highly selective and time-consuming hiring process. We believe that our approach to hiring has significantly contributed to our success to date. However, our highly selective hiring process has made it more difficult for us to hire a sufficient number of qualified employees, and, as we grow, our hiring process may prevent us from hiring the personnel we need in a timely manner. Moreover, the cost of living in the Los Angeles area, where our corporate headquarters is located, has been an impediment to attracting new employees in the past, and we expect that this will continue to impair our ability to attract and retain employees in the future. If we fail to attract, integrate and retain the necessary personnel, we may not be able to grow effectively and our business could suffer significantly.

Material defects or errors in our software could harm our reputation and brand, result in significant costs to us and impair our ability to sell the Boingo solution.

The software underlying the Boingo solution is inherently complex and may contain material defects or errors, particularly when the software is first introduced or when new versions or enhancements are released. We have from time to time found defects or errors in our software, and defects or errors in our existing software may be detected in the future. Any defects or errors that cause interruptions to the availability of our services could result in:

- a reduction in sales or delay in market acceptance of the Boingo solution;
- sales credits or refunds to our users and wholesale partners;
- loss of existing users and difficulty in attracting new users;
- diversion of development resources;
- harm to our reputation and brand image; and
- increased insurance costs.

The costs incurred in correcting any material defects or errors in our software may be substantial and could harm our operating results.

Our business depends on strong brands, and if we do not cost effectively develop, maintain and enhance our brand, our financial condition and operating results could be harmed.

We believe that the Boingo brand is a critical part of our business and that developing and maintaining awareness of our brand is important to achieving widespread acceptance of the Boingo solution, and is an important element in attracting and retaining customers and partners. We continue to seek new ways to promote our brand through our managed and operated hotspots. We intend to enhance our brand through low-cost co-marketing arrangements with our partners and through periodic promotional and sponsorship activities and by continuing to leverage the reach of social media to interact with our customers. In order to maintain strong relationships with our venue and network partners, we may have to reduce the visibility of the Boingo brand or make other decisions that do not promote and maintain the Boingo brand, such as our custom branding alternatives that we offer to wholesale clients. If we fail to promote and maintain the Boingo brand, or if we incur significant expenses to promote the brand and are still unsuccessful in maintaining a strong brand, our financial condition and operating results could be harmed.

Additionally, we believe that developing this brand in a cost effective manner is important in meeting our expected margins. Brand promotion activities may not result in increased revenue, and any increased revenue resulting from these promotion activities may not offset the expenses we incurred in building our brand. If we fail to cost effectively build and maintain our brand, we may fail to attract or retain customers or partners, and our financial condition and results of operations could be harmed.

Worldwide economic conditions, and their impact on travel and consumer spending, may adversely affect our business, operating results and financial condition.

Our business is impacted by travel and consumer spending, because users seek to access the mobile Internet while they are on-the-go, and because spending on Internet access is often a consumer discretionary spending decision. Factors that tend to negatively impact levels of travel include high unemployment, high energy prices, low business and consumer confidence, the fear of terrorist attacks, war and other macroeconomic factors. Economic conditions that tend to negatively impact levels of discretionary consumer spending include high unemployment, high consumer debt, reductions in net worth, depressed real estate markets, increased taxation, high energy prices, high interest rates, low consumer confidence and other macroeconomic factors. If the global economic recovery is slower than expected, or if it weakens, our military and retail customer base, new military and retail customer acquisition and usage-based revenue could be materially harmed, and our results of operations would be adversely affected.

The growth of free Wi-Fi networks may compete with our paid mobile Wi-Fi Internet solutions.

Many venues offer free mobile Wi-Fi as an incentive or value-added benefit to their customers. Free Wi-Fi may reduce retail customer demand for our services, and put downward pressure on the prices we charge our retail customers. In addition, telecom operators may offer free mobile Wi-Fi as part of a home broadband or other service contract, which also may force down the prices we charge our retail customers. If we are unable to effectively offset this downward pressure on our prices by being a Wi-Fi service provider or sufficiently grow our DAS and small cell business, or if we are unable to acquire and retain retail customers, we will have lower profit margins and our operating results and financial condition may be adversely impacted.

We rely on a third-party customer support service provider for the majority of our customer support calls. If this service provider experiences operational difficulties or disruptions, our business could be adversely affected.

We depend on a third-party customer support service provider to handle most of our routine military and retail customer support cases. While we maintain limited customer support operations in our Los Angeles headquarters, if our relationship with our customer support service provider terminates unexpectedly, or if our customer service provider experiences operational difficulties, we may not be able to respond to customer support calls in a timely manner and the quality of our customer service would be adversely affected. This could harm our reputation and brand image and make it difficult for us to attract and retain users. In addition, the loss of the customer support service provider would require us to identify and contract with alternative sources, which could prove time-consuming and expensive.

If we are not successful in developing our mobile application for new devices and platforms, or if those solutions are not widely adopted, our results of operations and business could be adversely affected.

As new mobile devices and platforms are developed, we may encounter problems in developing products for such new mobile devices and platforms, and we may need to devote significant resources to the creation, support, and maintenance of such products. In addition, if we experience difficulties integrating our mobile applications into mobile devices, or if we face increased costs to distribute our mobile applications, our future growth and our results of operations could suffer.

If we fail to maintain relationships with providers of mobile operating systems or mobile application download stores, our business could be adversely affected.

We rely on the integration of our software into mobile operating systems to allow mobile devices to connect to our global network of wireless networks. If problems arise with our relationships with providers of mobile operating systems or mobile application download stores, such as the Apple App Store and Google Play, or if our mobile application receives unfavorable treatment compared to the promotion and placement of competing applications, such as the order of our products in the mobile application download stores, we may fail to attract or retain customers or partners, and our business could be adversely affected.

Risks Related to Our Intellectual Property

Claims by others that we infringe their proprietary technology could harm our business.

In recent years there has been significant litigation involving intellectual property rights in many technology-based industries, including the wireless communications industry. While we have not been specifically targeted, companies similar to us have been subject to patent lawsuits. As we face increasing competition and gain an increasingly high profile, the possibility of intellectual property rights claims against us grows. We may be subject to third-party claims in the future. The costs of supporting these litigations and disputes are considerable, and there can be no assurance that a favorable outcome will be obtained. We may be required to settle these litigations and disputes on terms that are unfavorable to us, given the complex technical issues and inherent uncertainties in intellectual property litigation. Claims that the Boingo solution infringes third-party intellectual property rights, regardless of their merit or resolution, could also divert the efforts and attention of our management and technical personnel. The terms of any settlements or judgments may require us to:

- cease distribution and back-end operation of the Boingo solution;
- pay substantial damages for infringement;
- expend significant resources to develop non-infringing solutions;
- license technology from the third-party claiming infringement, which may not be available on commercially reasonable terms, or at all;
- cross-license our technology to a competitor to resolve an infringement claim, which could weaken our ability to compete with that competitor; or
- pay substantial damages to our partners to discontinue their use of or to replace infringing solutions sold to them with non-infringing solutions.

Any of these unfavorable outcomes could have a material adverse effect on our business, financial condition and results of operations.

If we are unable to protect our intellectual property rights, our competitive position could be harmed, or we could be required to incur significant expenses to enforce our rights.

Our business depends on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws and confidentiality agreements with employees and third parties, all of which offer only limited protection. We own nine patents and have applications for two additional patents pending in the United States. Despite our efforts, the steps we have taken to protect our proprietary rights may not be adequate to prevent the use or misappropriation of our proprietary information or infringement of our intellectual property rights. Our ability to police the use, misappropriation or infringement of our intellectual property is uncertain, particularly in countries other than the United States. Further, we do not know whether any of our pending patent applications will result in the issuance of patents or whether the examination process will require us to narrow our claims. Even if patents are issued, they may be contested, circumvented, or invalidated in the future. Moreover, the rights granted under any issued patents may not provide us with complete proprietary protection or any competitive advantages, and, as with any technology, competitors may be able to develop similar or superior technologies on their own now or in the future. Protecting against the unauthorized use of our solutions, trademarks, and other proprietary rights is expensive, difficult and, in some cases, impossible. Litigation may be necessary in the future to enforce or defend our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of the proprietary rights of others. Litigation could result in substantial costs and diversion of management resources, either of which could harm our business. Furthermore, many of our current and potential competitors have the ability to dedicate substantially greater resources to enforce their intellectual property rights than we do. Accordingly, despite our efforts, if the protection of our proprietary rights is inadequate to prevent use or misappropriation by third parties, the value of our brand and other intangible assets may be diminished and competitors may be able to more effectively mimic our service and methods of operations. Any of these events would have a material adverse effect on our business, financial condition and results of operations.

Our use of open source software could limit our ability to commercialize the Boingo solution.

We have incorporated open source software into the Boingo solution. Although we closely monitor our use of open source software, we are subject to the terms of open source licenses that have not been interpreted by U.S. or foreign courts, and there is a risk that in the future these licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to commercialize the Boingo solution. In that event, we could be required to seek licenses from third parties or to re-engineer our software in order to continue offering the Boingo solution, or to discontinue operations, any of which could materially adversely affect our business.

We utilize unlicensed spectrum in certain of our offerings, which is subject to intense competition, low barriers of entry and slowdowns due to multiple users.

We presently utilize unlicensed spectrum to provide our Wi-Fi Internet solutions. Unlicensed or "free" spectrum is available to multiple users and may suffer bandwidth limitations, interference and slowdowns if the number of users exceeds traffic capacity. The availability of unlicensed spectrum is not unlimited and others do not need to obtain permits or licenses to utilize the same unlicensed spectrum that we currently, or may in the future, utilize. The inherent limitations of unlicensed spectrum could potentially threaten our ability to reliably deliver our services. Moreover, the prevalence of unlicensed spectrum creates low barriers to entry in our industry.

We have incurred substantial indebtedness that may decrease our business flexibility, access to capital, and/or increase our borrowing costs, and we may still incur substantially more debt, which may adversely affect our operations and financial results.

In October 2018, we issued $201.25 million aggregate principal amount of 1.00% convertible senior notes due 2023 ("Convertible Notes"). Our indebtedness may:

- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;
- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general business purposes;
- require us to use a substantial portion of our cash flow from operations to make debt service payments;
- limit our flexibility to plan for, or react to, changes in our business and industry;
- place us at a competitive disadvantage compared to our less leveraged competitors; and
- increase our vulnerability to the impact of adverse economic and industry conditions.

Further, the indenture governing the Convertible Notes does not restrict our ability to incur additional indebtedness and we and our subsidiaries may incur substantial additional indebtedness in the future, subject to the restrictions contained in any future debt instruments existing at the time, some of which may be secured indebtedness. For example, our existing Credit Facility expires in November 2018 and we intend to enter into a new credit facility. If we enter into a new credit facility, we may draw down on such credit facility at a future time, which would increase the amount of our outstanding aggregate indebtedness.

Servicing our debt will require a significant amount of cash. We may not have sufficient cash flow from our business to pay our substantial debt, and we may not have the ability to raise the funds necessary to settle conversions of the Convertible Notes in cash or to repurchase the Convertible Notes upon a fundamental change, which could adversely affect our business and results of operations.

Our ability to make scheduled payments of the principal of, to pay interest on, or to refinance our indebtedness, including the amounts payable under the Convertible Notes, depends on our future performance, which is subject to economic, financial, competitive, and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our indebtedness and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt, or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

Further, holders of the Convertible Notes have the right to require us to repurchase all or a portion of their Convertible Notes upon the occurrence of a "fundamental change" (as defined in the indenture governing the Convertible Notes (the "indenture")) before the maturity date at a repurchase price equal to 100% of the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion of the Convertible Notes, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the Convertible Notes being converted. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Convertible Notes surrendered therefor or pay cash with respect to Convertible Notes being converted.

The conditional conversion feature of the Convertible Notes, when triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the Convertible Notes is triggered, holders of the Convertible Notes will be entitled to convert their Convertible Notes at any time during specified periods at their option. If one or more holders elect to convert their Convertible Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation in cash, which could adversely affect our liquidity.

In addition, even if holders of Convertible Notes do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the Convertible Notes, could have a material effect on our reported financial results.

Under Accounting Standards Codification 470-20, *Debt with Conversion and Other Options* ("ASC 470-20"), an entity must separately account for the liability and equity components of the convertible debt instruments (such as the Convertible Notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. The effect of ASC 470-20 on the accounting for the Convertible Notes is that the equity component is required to be included in the additional paid-in capital section of stockholders' equity on our consolidated balance sheet at the issuance date and the value of the equity component would be treated as debt discount for purposes of accounting for the debt component of the Convertible Notes. As a result, we will be required to record a greater amount of non-cash interest expense as a result of the amortization of the discounted carrying value of the Convertible Notes to their face amount over the term of the Convertible Notes. We will report larger net losses (or lower net income) in our financial results because ASC 470-20 will require interest to include both the amortization of the debt discount and the instrument's non-convertible coupon interest rate, which could adversely affect our reported or future financial results, the trading price of our common stock and the trading price of the Convertible Notes.

In addition, under certain circumstances, convertible debt instruments (such as the Convertible Notes) that may be settled entirely or partly in cash may be accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of such Convertible Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of such Convertible Notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable or otherwise elect not to use the treasury stock method in accounting for the shares issuable upon conversion of the Convertible Notes, then our diluted earnings per share could be adversely affected.

The capped call transactions may affect the value of the Convertible Notes and our common stock.

In connection with the pricing the Convertible Notes and exercise of the over-allotment option to purchase additional Convertible Notes, we entered into capped call transactions with a financial institution. The capped call transactions are expected generally to reduce potential dilution upon conversion of the Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted Convertible Notes, as the case may be, with such reduction and/or offset subject to a cap.

In connection with establishing its initial hedges of the capped call transactions, the financial institution or its affiliate likely purchased shares of our common stock and/or entered into various derivative transactions with respect to our common stock concurrently with or shortly after the pricing of the Convertible Notes. The financial institution or its affiliate may modify its hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions following the pricing of the Convertible Notes and prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of Convertible Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock or the Convertible Notes.

The potential effect, if any, of these transactions and activities on the price of our common stock or the Convertible Notes will depend in part on market conditions and cannot be ascertained at this time. Any of these activities could adversely affect the value of our common stock.

Conversion of the Convertible Notes will dilute the ownership interest of existing stockholders, including holders who had previously converted their Convertible Notes, or may otherwise depress the price of our common stock.

The conversion of some or all of the Convertible Notes will dilute the ownership interests of existing stockholders to the extent we deliver shares of our common stock upon conversion of any of the Convertible Notes. The Convertible Notes are currently convertible and may from time to time in the future be convertible at the option of their holders prior to their scheduled terms under certain circumstances. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the Convertible Notes may encourage short selling by market participants because the conversion of the Convertible Notes could be used to satisfy short positions, or anticipated conversion of the Convertible Notes into shares of our common stock could depress the price of our common stock.

Risks Related to Ownership of Our Common Stock

The market price of our common stock may be volatile, which could result in substantial losses for investors.

Fluctuations in market price and volume are particularly common among securities of technology companies. As a result, you may be unable to sell your shares of common stock at or above the price you paid. The market price of our common stock and trading price of our Convertible Notes may fluctuate significantly in response to the factors described in this risk factor section as well as the following factors, among others, many of which are beyond our control:

- general market conditions;
- domestic and international economic factors unrelated to our performance;
- actual or anticipated fluctuations in our quarterly operating results;
- changes in or failure to meet publicly disclosed expectations as to our future financial performance;
- changes in securities analysts’ estimates of our financial performance or lack of research and reports by industry analysts;
- changes in market valuations or earnings of similar companies;
- announcements by us or our competitors of significant products, contracts, acquisitions, or strategic partnerships;
- developments or disputes concerning patents or proprietary rights, including increases or decreases in litigation expenses associated with intellectual property lawsuits we may initiate, or in which we may be named as defendants;
- termination or potential termination of a relationship with a venue partner;
- failure to complete significant sales;
- any future sales of our common stock or other securities; and
- additions or departures of key personnel.

If securities or industry analysts publish misleading or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock and our Convertible Notes depends in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of these analysts downgrades our stock or publishes misleading or unfavorable research about our business, our stock price and the trading price of our Convertible Notes would likely decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price or the trading price of our Convertible Notes or trading volume to decline. Announcements by analysts that may have a significant impact on the market price of our common stock and the trading price of our Convertible Notes may relate to:

- our operating results or forecasts;
- new issuances of equity, debt or convertible debt by us;
- developments in our relationships with corporate customers;
- announcements by our customers or competitors;
- changes in regulatory policy or interpretation;
- governmental investigations;
- changes in the industries in which we operate;
- changes in the ratings of our stock by rating agencies or securities analysts;
- our acquisitions of complementary businesses; or
- our operational performance.

As a public company, we are subject to financial and other reporting and corporate governance requirements that may be difficult for us to satisfy, and may divert resources and management attention from operating our business.

We are required to file annual, quarterly and other reports with the SEC. We must prepare and timely file financial statements that comply with SEC reporting requirements. We are also subject to other reporting and corporate governance requirements, under the listing standards of the NASDAQ Stock Market, or NASDAQ, which imposes significant compliance obligations upon us. We are required, among other things, to:

- prepare and file periodic reports, and distribute other stockholder communications, in compliance with the federal securities laws and NASDAQ rules; and
- evaluate and maintain our system of internal control over financial reporting, and report on management's assessment thereof, in compliance with rules and regulations of the SEC and the Public Company Accounting Oversight Board. Further, we are required to obtain an opinion on the effectiveness of our internal control over financial reporting as of December 31st each year from our independent registered public accounting firm.

If we fail to comply with the rules of Section 404 of the Sarbanes-Oxley Act of 2002 related to accounting controls and procedures, or, if we discover material weaknesses and deficiencies in our internal control and accounting procedures, our financial results may be adversely effected and we may be subject to sanctions by regulatory authorities and our stock price and the trading price of our Convertible Notes could decline.

Section 404 of the Sarbanes-Oxley Act (the "Act") requires that we evaluate and determine the effectiveness of our internal control over financial reporting and requires an attestation and report by our external auditing firm on our internal control over financial reporting. We believe our system and process evaluation and testing comply with the management certification and auditor attestation requirements of Section 404. We cannot be certain, however, that we will be able to satisfy the requirements in Section 404 in all future periods, especially as we grow our business. If we are not able to continue to meet the requirements of Section 404 in a timely manner or with adequate compliance, we may be subject to sanctions or investigation by regulatory authorities, such as the SEC or the NASDAQ Stock Market. Any such action could adversely affect our financial results or investors' confidence in us and could cause our stock price and the trading price of our Convertible Notes to fall. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal controls that are deemed to be material weaknesses, we may be required to incur significant additional financial and management resources to achieve compliance.

If we need additional capital in the future, it may not be available on favorable terms, or at all.

We may require additional capital from equity or debt financing in the future to fund our operations, or respond to competitive pressures or strategic opportunities. We may not be able to secure timely additional financing on favorable terms, or at all. The terms of additional financing may place limits on our financial and operating flexibility. If we raise additional funds through further issuances of equity, convertible debt securities or other securities convertible into equity, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. Additionally, the Credit Agreement expires in November 2018 and if we are unable to renew the Credit Agreement on favorable terms, or at all, our ability to fund our operations may be impaired, which would have a material adverse effect on our results of operations. If we are unable to obtain adequate financing or financing on terms satisfactory to us, if and when we require it, our ability to grow or support our business and to respond to business challenges and opportunities could be significantly limited.

Investors may experience dilution of their ownership interests because of the future issuance of additional shares of our capital stock.

We are authorized to issue 100,000,000 shares of common stock and 5,000,000 shares of preferred stock. As of September 30, 2018, there were approximately 42,478,000 shares of our common stock issued and outstanding and no shares of preferred stock outstanding. In addition, as of September 30, 2018, we had approximately 3,265,000 unvested restricted stock units, approximately 405,000 exercisable stock options, and approximately 4,727,000 shares available for grant under the 2011 Plan. Additionally, we have reserved a substantial number of shares of our common stock upon conversion of the Convertible Notes.

In the future, we may issue additional authorized but previously unissued equity securities resulting in the dilution of the ownership interests of our present stockholders. We may also issue additional shares of our capital stock or other securities that are convertible into or exercisable for our capital stock in connection with hiring or retaining employees or for other business purposes, including future sales of our securities for capital raising purposes. The future issuance of any such additional shares of capital stock may create downward pressure on the trading price of our common stock and our Convertible Notes.

Anti-takeover provisions in our charter documents and Delaware law and provisions in the indenture for our Convertible Notes could discourage, delay, or prevent a change in control of our company and may affect the trading price of our common stock.

We are a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay, or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our amended and restated certificate of incorporation and amended and restated bylaws may discourage, delay, or prevent a change in our management or control over us that stockholders may consider favorable. Institutional shareholder representative groups, shareholder activists and others may disagree with our corporate governance provisions or other practices, such as those listed below. We generally will consider recommendations of institutional shareholder representative groups, but we will make decisions based on what our board and management believe to be in the best long term interests of our company and stockholders. These groups could make recommendations to our stockholders against our practices or our board members if they disagree with our positions. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that:

- authorize the issuance of “blank check” preferred stock that could be issued by our board of directors to thwart a takeover attempt;

- establish a classified board of directors (that is being phased out over the next two years), which prevents, until the 2020 annual meeting of stockholders when all directors will be elected annually, the ability of a stockholder to launch a proxy contest to replace the entire board of directors;

- require that until the expiration of the term of any director elected to serve a three-year term, such directors may only be removed from office for cause and only upon a majority stockholder vote;

- provide that vacancies on the board of directors, including newly-created directorships, may be filled only by a majority vote of directors then in office;

- limit who may call special meetings of stockholders;

- prohibit stockholder action by written consent, thereby requiring all actions to be taken at a meeting of the stockholders; and
- require supermajority stockholder voting to effect certain amendments to our amended and restated certificate of incorporation and amended and restated bylaws.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time.

In addition, if a fundamental change occurs prior to the maturity date of the Convertible Notes, holders of the Convertible Notes will have the right, at their option, to require us to repurchase all or a portion of their Convertible Notes. If a “make-whole fundamental change” (as defined in the indenture) occurs prior the maturity date, we will in some cases be required to increase the conversion rate of the Convertible Notes for a holder that elects to convert its Convertible Notes in connection with such make-whole fundamental change. Furthermore, the indenture prohibits us from engaging in certain mergers or acquisitions unless, among other things, the surviving entity assumes our obligations under the Convertible Notes.

These and other provisions in our charter documents, Convertible Notes, indenture and in Delaware law could deter or prevent a third party from acquiring us or could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including to delay or impede a merger, tender offer, or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and the trading price of the Convertible Notes and limit opportunities for you to realize value in a corporate transaction.

Our business could be negatively affected as a result of a potential proxy contest for the election of directors at our annual meeting or other shareholder activism.

In 2016, we were subjected to a proxy contest, which resulted in the negotiation of changes to the board of directors and considerable costs were incurred. A future proxy contest would most likely require us to incur significant legal fees and proxy solicitation expenses and require significant time and attention by management and our board of directors. The potential of a proxy contest or other shareholder activism could interfere with our ability to execute our strategic plan, give rise to perceived uncertainties as to our future direction, result in the loss of potential business opportunities or make it more difficult to attract and retain qualified personnel, any of which could materially and adversely affect our business and operating results.

We have incurred substantial losses in past and current years and may incur additional losses in the future.

As of September 30, 2018 our accumulated deficit was $130.3 million. We generated a net loss in the nine months ended September 30, 2018 and we are also currently investing in our future growth through expanding our network and buildouts, investing in our software, and consideration of future business acquisitions. As a result, we will incur higher depreciation and other operating expenses, as well as potential acquisition costs, that may negatively impact our ability to achieve profitability in future periods unless and until these growth efforts generate enough revenue to exceed their operating costs and cover our additional overhead needed to scale our business for this anticipated growth. The current global financial condition may also impact our ability to achieve profitability if we cannot generate sufficient revenue to offset the increased costs. In addition, costs associated with the acquisition and integration of any acquired companies may also negatively impact our ability to achieve profitability. For example, in August 2018 we closed the acquisition of substantially all of the assets of Elauwit Networks, LLC and our integration costs may negatively impact our ability to achieve profitability. Finally, given the competitive and evolving nature of the industry in which we operate, we may not be able to achieve or increase profitability.

We do not intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We do not intend to declare and pay dividends on our capital stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, you are not likely to receive any dividends on your common stock, including common stock that may be issued upon conversion of our Convertible Notes, for the foreseeable future and the success of an investment in shares of our common stock or Convertible Notes will depend upon any future appreciation in their value.

Changes in accounting standards and their interpretations could adversely affect our operating results.

U.S. GAAP are subject to interpretation by the Financial Accounting Standards Board, or FASB, the Public Company Accounting Oversight Board, or PCAOB, the SEC, and various other bodies that promulgate and interpret appropriate accounting principles. These principles and related implementation guidelines and interpretations can be highly complex and involve subjective judgments. A change in these principles or interpretations, including the implementation of ASU 2016-02, *Leases (Topic 842)*, or accounting for the Convertible Notes could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before or after the announcement of a change. Additionally, the adoption of these standards may potentially require enhancements or changes in our systems and will require significant time and cost on behalf of our financial management. A discussion of these standards and other pending changes in accounting principles generally accepted in the United States, are further discussed in Footnote 2 in the notes to our condensed consolidated financial statements.

Items 2, 3 and 4 are not applicable and have been omitted.

Item 6. Exhibits

The following exhibits are filed as part of, or incorporated by reference into, this Quarterly Report on Form 10-Q:

Exhibit No.	Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
3.1	Amended and Restated Certificate of Incorporation.	S-1	03/21/2011	3.2	
3.2	Certificate of Amendment to the Certificate of Incorporation.	8-K	06/09/2017	3.1	
3.3	Amended and Restated Bylaws.	8-K	06/09/2017	3.2	
4.1	Indenture (including form of Note) with respect to the Company's 1.00% Convertible Senior Notes due 2023, dated as of October 5, 2018, between the Company and Wilmington Trust, National Association, as trustee.	8-K	10/05/2018	4.1	
10.1	Amendment to Credit Agreement dated October 1, 2018, among the Company, Bank of America, N.A., Silicon Valley Bank, and Citizen Bank, N.A. and certain other parties thereto.	8-K	10/05/2018	10.1	
10.2	Form of Base Capped Call Confirmation.	8-K	10/05/2018	99.1	
10.3	Form of Additional Capped Call Confirmation.	8-K	10/05/2018	99.2	
31.1	Certification of David Hagan, Chief Executive Officer, pursuant to Rule 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of Peter Hovenier, Chief Financial Officer, pursuant to Rule 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1	Certifications of David Hagan, Chief Executive Officer, and Peter Hovenier, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
101	The following financial information from the Quarterly Report on Form 10-Q of Boingo Wireless, Inc. for the quarter ended September 30, 2018, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets at September 30, 2018 and December 31, 2017 for Boingo Wireless, Inc.; (ii) Condensed Consolidated Statements				

Exhibit No.	Description	Incorporated by Reference Form	Date	Number	Filed Herewith
	of Operations for the three and nine months ended September 30, 2018 and 2017 for Boingo Wireless, Inc.; (iii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and nine months ended September 30, 2018 and 2017 for Boingo Wireless, Inc.; (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2018 and 2017 for Boingo Wireless, Inc.; (v) Condensed Consolidated Statement of Stockholders' Equity for Boingo Wireless, Inc.; and (vi) the Notes to Condensed Consolidated Financial Statements, tagged as blocks of text.				

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

	BOINGO WIRELESS, INC.
Date: November 5, 2018	By: /s/ DAVID HAGAN David Hagan Chairman of the Board and Chief Executive Officer (Principal Executive Officer)
	BOINGO WIRELESS, INC.
Date: November 5, 2018	By: /s/ PETER HOVENIER Peter Hovenier Chief Financial Officer (Principal Financial and Accounting Officer)

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Section 2: EX-31.1 (EX-31.1)

Exhibit 31.1

CERTIFICATIONS

I, David Hagan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Boingo Wireless, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ David Hagan
David Hagan
Chairman of the Board and Chief Executive Officer
(Principal Executive Officer)

Date: November 5, 2018

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Section 3: EX-31.2 (EX-31.2)

Exhibit 31.2

CERTIFICATIONS

I, Peter Hovenier, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Boingo Wireless, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Peter Hovenier
Peter Hovenier
Chief Financial Officer

(Principal Financial and Accounting Officer)

Date: November 5, 2018

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Section 4: EX-32.1 (EX-32.1)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

Pursuant to 18 U.S.C. § 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Boingo Wireless, Inc. (the “Company”) hereby certifies, to such officer’s knowledge, that:

1. the accompanying Quarterly Report on Form 10-Q of the Company for the fiscal quarter ended September 30, 2018 (the “Report”) fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David Hagan
David Hagan
Chairman of the Board and Chief Executive Officer
(Principal Executive Officer)
Date: November 5, 2018

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION OF CHIEF FINANCIAL OFFICER

Pursuant to 18 U.S.C. § 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Boingo Wireless, Inc. (the “Company”) hereby certifies, to such officer’s knowledge, that:

1. the accompanying Quarterly Report on Form 10-Q of the Company for the fiscal quarter ended September 30, 2018 (the “Report”) fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Peter Hovenier
Peter Hovenier
Chief Financial Officer
(Principal Financial and Accounting Officer)
Date: November 5, 2018

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

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