UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2018

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

Commission File Number: 001-38285

Bandwidth Inc.

(Exact name of registrant as specified in its charter)

Delaware	**56-2242657**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

900 Main Campus Drive
Raleigh, NC 27606
(Address of principal executive offices) (Zip Code)

(800) 808-5150
(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 x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes x No o

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	o	Accelerated filer	o
Non-accelerated filer	x	Smaller reporting company	o
(Do not check if a smaller reporting company)		Emerging growth company	x

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. o

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

As of July 31, 2018, 11,793,127 shares of the registrant's Class A common stock and 7,040,405 shares of registrant's Class B common stock were outstanding, respectively.

BANDWIDTH INC.

Quarterly Report on Form 10-Q

For the Three Months Ended June 30, 2018

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Special Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). All statements contained in this Quarterly Report on Form 10-Q, other than statements of historical fact, are forward-looking statements. Forward-looking statements generally can be identified by the words “may,” “will,” “expect,” “believe,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “estimate,” or “continue,” or the negative of these words or other similar terms or expressions that concern our expectations strategy, plans or intentions. Forward looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- our ability to attract and retain customers, including large enterprises;
- our approach to identifying, attracting and keeping new and existing customers, as well as our expectations regarding customer turnover;
- our beliefs regarding network traffic growth and other trends related to the usage of our products and services;
- our expectations regarding revenue, costs, expenses, gross margin, dollar based net retention rate, adjusted EBITDA, Non-GAAP net income and capital expenditures;
- our beliefs regarding the growth of our business and how that impacts our liquidity and capital resources requirements;
- the sufficiency of our cash and cash equivalents to meet our liquidity needs;
- our ability to attract, train, and retain qualified employees and key personnel;
- our beliefs regarding the expense and productivity of and competition for our sales force;
- our expectations regarding headcount;
- our ability to maintain and benefit from our corporate culture;
- our plans to further invest in and grow our business, and our ability to effectively manage our growth and associated investments;
- our ability to introduce new products and services and enhance existing products and services;
- our ability to compete successfully against current and future competitors;
- the evolution of technology affecting our products, services and markets;
- the impact of certain new accounting standards and guidance as well as the time and cost of continued compliance with existing rules and standards;
- our beliefs regarding the use of non-generally accepted accounting principles (“GAAP”) financial measures;
- our ability to maintain, protect and enhance our intellectual property;
- our expectations regarding litigation and other pending or potential disputes;
- our ability to comply with modified or new laws and regulations; and
- the increased expenses associated with being a public company.

We caution you that the foregoing list may not contain all the forward-looking statements made in this Quarterly Report on Form 10-Q.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Quarterly Report on Form 10-Q primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled “Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Quarterly Report on Form 10-Q. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements made in this Quarterly Report on Form 10-Q relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

BANDWIDTH INC.

Condensed Consolidated Balance Sheets
(In thousands)
(Unaudited)

	December 31, 2017	June 30, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 37,627	$ 45,806
Marketable securities	—	10,992
Accounts receivable, net of allowance for doubtful accounts	21,225	23,001
Prepaid expenses and other current assets	6,400	7,395
Total current assets	65,252	87,194
Property and equipment, net	14,946	19,331
Intangible assets, net	7,643	7,348
Deferred costs, non-current	2,068	1,811
Other long-term assets	1,192	798
Goodwill	6,867	6,867
Deferred tax asset	6,526	13,204
Total assets	$ 104,494	$ 136,553
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,025	$ 1,786
Accrued expenses and other current liabilities	15,725	18,531
Current portion of deferred revenue and advanced billings	5,768	5,607
Total current liabilities	24,518	25,924
Other liabilities	716	2,392
Deferred revenue, net of current portion	2,549	6,851
Total liabilities	27,783	35,167
Stockholders' equity:		
Class A and Class B common stock	17	19
Additional paid-in capital	102,465	110,437
Accumulated deficit	(25,771)	(9,068)
Accumulated other comprehensive loss	—	(2)
Total stockholders' equity	76,711	101,386
Total liabilities and stockholders' equity	$ 104,494	$ 136,553

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

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BANDWIDTH INC.

Condensed Consolidated Statements of Operations and Comprehensive Income

(In thousands, except share and per share amounts)

(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
Revenue	$ 39,526	$ 48,304	$ 79,151	$ 101,316
Cost of revenue	22,294	26,566	43,860	51,930
Gross profit	17,232	21,738	35,291	49,386
Operating expenses:				
Research and development	2,409	4,435	5,091	8,216
Sales and marketing	2,413	4,654	4,971	9,176
General and administrative	8,257	11,490	15,894	22,059
Total operating expenses	13,079	20,579	25,956	39,451
Operating income	4,153	1,159	9,335	9,935
Other (expense) income, net	(991)	90	(1,412)	139
Income before taxes	3,162	1,249	7,923	10,074
Income tax (provision) benefit	(1,215)	9,263	(2,987)	6,629
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703
Other comprehensive income (loss)				
Unrealized gain (loss) on marketable securities, net of income tax benefit	$ —	$ 4	$ —	$ (2)
Total comprehensive income	$ 1,947	$ 10,516	$ 4,936	$ 16,701
Earnings per share:				
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703
Less: net income allocated to participating securities	254	—	645	—
Net income attributable to common stockholders	$ 1,693	$ 10,512	$ 4,291	$ 16,703
Net income per share:				
Basic	$ 0.14	$ 0.58	$ 0.36	$ 0.93
Diluted	$ 0.13	$ 0.50	$ 0.33	$ 0.80
Weighted average number of common shares outstanding:				
Basic	11,814,584	18,154,964	11,806,619	17,908,159
Diluted	12,889,334	20,893,653	12,977,606	20,866,777

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

BANDWIDTH INC.

Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Six months ended June 30, 2017	Six months ended June 30, 2018
Operating activities		
Net income	$ 4,936	$ 16,703
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	2,821	2,683
Accretion of bond discount	—	(26)
Amortization of debt issuance costs	64	32
Stock-based compensation	490	1,255
Change in fair value of shareholders' anti-dilutive arrangement	553	—
Deferred taxes	2,456	(6,677)
Loss on disposal of property and equipment	9	10
Changes in operating assets and liabilities:		
Accounts receivable	(130)	(1,776)
Prepaid expenses and other assets	(1,180)	(620)
Deferred costs	(598)	225
Accounts payable	(2,997)	(2,375)
Accrued expenses and other liabilities	(2,229)	3,542
Deferred revenue and advanced billings	811	4,141
Net cash provided by operating activities	5,006	17,117
Investing activities		
Purchase of property and equipment	(1,123)	(3,113)
Capitalized software development costs	(1,598)	(1,547)
Proceeds from sale of property and equipment	3	3
Purchase of marketable securities	—	(13,995)
Maturities of marketable securities	—	3,000
Net cash used in investing activities	(2,718)	(15,652)
Financing activities		
Borrowings on line of credit	4,000	—
Repayments on line of credit	(6,500)	—
Payments on capital leases	(23)	(50)
Repayments on term loan	(1,000)	—
Payment of costs related to the initial public offering	—	(285)
Proceeds from issuances of common stock	109	7,004
Net cash (used in) provided by financing activities	(3,414)	6,669
Net (decrease) increase in cash, cash equivalents, and restricted cash	(1,126)	8,134
Cash, cash equivalents, and restricted cash, beginning of period	7,028	37,870
Cash, cash equivalents, and restricted cash, end of period	$ 5,902	$ 46,004
Supplemental disclosure of cash flow information		
Cash paid during the year for interest	$ 965	$ 45
Cash paid for taxes	$ 484	$ 155
Supplemental disclosure of noncash investing and financing activities		
Purchase of property and equipment, accrued but not paid	$ 74	$ 2,126

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

1. Organization and Description of Business

Bandwidth Inc. (together with its subsidiaries, “Bandwidth” or the “Company”) was founded in July 2000 and incorporated in Delaware on March 29, 2001. The Company’s headquarters are located in Raleigh, North Carolina. The Company is a cloud-based, software-powered communications platform-as-a-service (“CPaaS”) provider that enables enterprises to create, scale and operate voice or text communications services across any mobile application or connected device.

The Company has two operating and reportable segments, CPaaS and Other. CPaaS revenue is derived from usage and monthly services fees charged for usage of Voice, Messaging, 911 and Phone Numbers solutions through the Company’s proprietary CPaaS software application programming interfaces. Other revenue consists of fees charged for services provided such as: SIP trunking, data resale, and a hosted Voice-over Internet Protocol (“VoIP”). The Other segment also includes revenue from traffic generated by other carriers, SMS registration fees and other miscellaneous product lines.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (“GAAP”) and applicable rules and regulations of the SEC regarding interim financial reporting. Certain information and disclosures normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. Therefore, these condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes included in the Annual Report on Form 10-K filed with the SEC on February 26, 2018.

The condensed consolidated balance sheet as of December 31, 2017, included herein, was derived from the audited financial statements as of that date, but does not include all disclosures including certain notes required by GAAP on an annual reporting basis. Additionally, certain items in the prior period financial statements have been reclassified to conform with the current year presentation.

In the opinion of management, the accompanying unaudited condensed consolidated financial statements reflect all normal recurring adjustments necessary to present fairly the financial position, results of operations, comprehensive income and cash flows for the interim periods, but are not necessarily indicative of the results of operations to be anticipated for the full year 2018 or any future period.

Principles of Consolidation

The consolidated financial statements include the accounts of Bandwidth Inc. and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

(In thousands except share and per share amounts)

Use of Estimates

The preparation of the Company’s consolidated financial statements in conformity with U.S. GAAP requires the Company to make estimates and judgments that affect the amounts reported in these financial statements and accompanying notes. Although the Company believes that the estimates it uses are reasonable, due to the inherent uncertainty involved in making these estimates, actual results reported in future periods could differ from those estimates. These estimates in the consolidated financial statements include, but are not limited to, allowance for doubtful accounts, recoverability of long lived and intangible assets, customer relationship period, valuation allowances on tax assets, certain accrued expenses, and contingencies.

Cash and Cash Equivalents

The Company classifies all highly liquid investments with stated maturities of three months or less from date of purchase as cash equivalents and all highly liquid investments with stated maturities of greater than three months from the date of purchase as current marketable securities. The Company has a policy of making investments only with commercial institutions that have at least an investment grade credit rating. The Company invests its cash primarily in government securities and obligations, corporate debt securities, money market funds and reverse repurchase agreements (RRAs). RRAs are collateralized by deposits in the form of Government Securities and Obligations for an amount not less than 102% of their value. The Company does not record an asset or liability as the Company is not permitted to sell or repledge the associated collateral. The Company has a policy that the collateral has at least an "A" (or equivalent) credit rating. The Company utilizes a third party custodian to manage the exchange of funds and ensure that collateral received is maintained at 102% of the value of the RRAs on a daily basis. RRAs with stated maturities of greater than three months from the date of purchase are classified as marketable securities.

Restricted Cash

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the condensed consolidated balance sheets that sum to the total of the same such amounts shown in the condensed consolidated statements of cash flows:

For the six months ended June 30, 2018:

	December 31, 2017	June 30, 2018
Cash and cash equivalents	$ 37,627	$ 45,806
Restricted cash	243	198
Total cash, cash equivalents, and restricted cash shown in the statements of cash flows	$ 37,870	$ 46,004

For the six months ended June 30, 2017:

	December 31, 2016	June 30, 2017
Cash and cash equivalents	$ 6,788	$ 5,679
Restricted cash	240	223
Total cash, cash equivalents, and restricted cash shown in the statements of cash flows	$ 7,028	$ 5,902

Restricted cash is for Automated Clearing House (“ACH”) availability, customer deposits and for credit card security. The Company has classified this asset as a long-term asset in order to match the expected period of restriction and is included in Other long-term assets in the condensed consolidated balance sheets.

Concentration of Credit Risk

Financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents, marketable securities and trade accounts receivable. Cash deposits may be in excess of insured limits. The Company believes that the financial institutions that hold its cash deposits are financially sound and, accordingly, minimal credit risk exists with respect to these balances.

With regard to customers, credit evaluation and account monitoring procedures are used to minimize the risk of loss. The Company believes that no additional credit risk beyond amounts provided for by the allowance for doubtful accounts are inherent in accounts receivable. As of December 31, 2017, one customer represented approximately 13% of the Company's accounts receivable, net of allowance for doubtful accounts. As of June 30, 2018, no individual customer represented more than 10% of the Company's accounts receivable, net of allowance for doubtful accounts.

For the three and six months ended June 30, 2017 and 2018, no individual customer represented more than 10% of the Company's total revenue.

Recently Adopted Accounting Standards

In May 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-09, *Compensation-Stock Compensation (Topic 718), Scope of Modification Accounting*, which amends the scope of modification accounting for share-based payment arrangements. The ASU provides guidance on the types of changes to terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under ASC 718, Compensation-Stock Compensation. ASU 2017-09 was effective for fiscal years and interim periods within those years beginning after December 15, 2017. The adoption of this standard did not have a material impact on the Company's financial statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805) Clarifying the Definition of a Business*, which amends the guidance of FASB Accounting Standards Codification Topic 805, "Business Combinations", adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. This guidance was effective for annual and interim periods beginning after December 15, 2017. The impact from the adoption of this standard is dependent upon future transactions.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230)*, *Restricted Cash*, which requires a statement of cash flows to explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash and restricted cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 was effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2017. The adoption of this standard did not have a material impact on the Company's financial statements.

In November 2016, the FASB issued ASU 2016-16, *Intra-Entity Transfers of Assets Other Than Inventory*. ASU 2016-16 requires companies to account for the income tax effects of intercompany transfers of assets other than inventory (e.g., intangible assets) when the transfer occurs. This guidance was effective for fiscal years beginning after December 15, 2017. The adoption of this standard did not have a material impact on the Company's financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments*, which clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. The guidance also clarifies how the predominance principle should be applied when cash receipts and cash payments have aspects of more than one class of cash flows. ASU 2016-15 was effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. The Company adopted this standard retrospectively and it had no material impact on the Company's financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In February 2018, the FASB issued ASU 2018-02, *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which addresses the income tax effects of items in accumulated other comprehensive income ("AOCI") which were originally recognized in other comprehensive income, rather than in income from continuing operations. Specifically, it permits a reclassification from AOCI to retained earnings for the adjustment of deferred taxes due to the reduction of the historical corporate income tax rate to the newly enacted corporate income tax rate resulting from the U.S. tax law changes enacted in December 2017. This ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. The new guidance must be applied either on a prospective basis in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the U.S. tax law changes are recognized. The Company is evaluating the effect of adopting this new accounting guidance, but does not expect adoption will have a material impact on the Company's financial statements.

In January 2017, the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*, which simplifies the accounting for goodwill impairment. The ASU requires impairment charges to be based on the first step in today's two-step impairment test. ASU 2017-04 is effective for annual and interim impairment tests performed in periods beginning after December 15, 2021, and early adoption is permitted. Management does not expect the adoption of this guidance to have a significant impact on the Company's financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases.* The standard will affect all entities that lease assets and will require lessees to recognize a lease liability and a right-of-use asset for all leases (except for short- term leases that have a duration of less than one year) as of the date on which the lessor makes the underlying asset available to the lessee. For lessors, accounting for leases is substantially the same as in prior periods. ASU 2016-02 is effective for fiscal years beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020, and early adoption is permitted. For leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, lessees and lessors must apply a modified retrospective transition approach. While the Company expects the adoption of this standard to result in an increase to the reported assets and liabilities, it has not yet determined the full impact the adoption of this standard will have on its financial statements and related disclosures.

In May 2014, the FASB issued ASU 2014-09, "*Revenue from Contracts with Customers*." This new guidance will replace most existing GAAP guidance on this topic. The new revenue recognition standard provides a unified model to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued ASU 2015-14 "*Revenue from Contracts with Customers: Deferral of the effective date,*" which deferred by one year the effective date for the new revenue reporting standard for entities reporting under GAAP. In accordance with the deferral, this guidance will be effective for the Company beginning in the year ended December 31, 2019. This guidance can be applied either retrospectively to each period presented or as a cumulative effect adjustment as of the date of adoption. In December 2016, the FASB issued ASU 2016-20, "Revenue from Contracts with Customers, Technical Corrections and Improvements to Topic 606," which made 12 additional technical corrections and improvements to the new revenue standard. In March 2016, the FASB issued ASU 2016-08, "*Revenue from Contracts with Customers, Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*" clarifying the implementation guidance on principal versus agent considerations. Specifically, an entity is required to determine whether the nature of a promise is to provide the specified good or service itself (that is, the entity is a principal) or to arrange for the good or service to be provided to the customer by the other party (that is, the entity is an agent). The determination influences the timing and amount of revenue recognition. In April 2016, the FASB issued ASU 2016-10, "*Revenue from Contracts with Customers, Identifying Performance Obligations and Licensing*", clarifying the implementation guidance on identifying performance obligations and licensing. Specifically, the amendments reduce the cost and complexity of identifying promised goods or services and improve the guidance for determining whether promises are separately identifiable. The amendments also provide implementation guidance on accounting for an entity's promise to grant a license. In May 2016, the FASB issued ASU 2016-12, *"Revenue from Contracts with Customers, Narrow-Scope Improvements and Practical Expedients,"* clarifying guidance on assessing collectability, presentation of sales taxes, noncash consideration, completed contracts and contract modifications. The effective date and transition requirements for ASU 2016-20, ASU 2016-08 and ASU 2016-10 are the same as the effective date and transition requirements for ASU 2014-09, which will be effective for the Company beginning January 1, 2019.

(In thousands except share and per share amounts)

The Company is in the process of completing its evaluation of the potential impacts of the new standard on its consolidated financial statements and has selected a modified retrospective transition method with cumulative effect adjustment. Additionally, the Company has engaged a third-party service provider to assist in the design of a new technology solution to comply with the requirements of ASU 2014-09. While the Company has not yet completed the full analysis of the impact of the new standard, based on the evaluation to date, the Company does not expect the adoption of the guidance to have a material impact on its financial results. The Company will continue to monitor and assess the impact of the changes of the new standard and the related interpretations of its application as they become available.

3. Fair Value of Financial Instruments

The carrying amounts of cash and cash equivalents, marketable securities, accounts receivable, accounts payable and accrued expenses approximate fair value as of December 31, 2017 and June 30, 2018 because of the relatively short duration of these instruments. Marketable securities consist of U.S. treasury securities not otherwise classified as cash equivalents. All marketable securities are considered to be available-for-sale and are recorded at their estimated fair values. Unrealized gains and losses for available-for-sale securities are recorded in other comprehensive income (loss).

The Company evaluated its financial assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level in which to classify them for each reporting period. The following table summarizes the assets measured at fair value as of December 31, 2017 and June 30, 2018:

	Fair value measurements on a recurring basis December 31, 2017			
	Level 1	**Level 2**	**Level 3**	**Total**
Financial assets:				
Money market account (included in cash and cash equivalents	$ 28,015	$ —	$ —	$ 28,015
Total financial assets	$ 28,015	$ —	$ —	$ 28,015

There were no marketable securities as of December 31, 2017.

Notes to Condensed Consolidated Financial Statements (continued)
(In thousands except share and per share amounts)

	Amortized cost or carrying value	Unrealized gains	Unrealized losses	Fair value measurements on a recurring basis June 30, 2018			
				Level 1	Level 2	Level 3	Total
Financial assets:							
Cash and cash equivalents:							
Money market account	$ 15,177	$ —	$ —	$ 15,177	$ —	$ —	$ 15,177
U.S. Reverse repurchase agreements	17,000	—	—	—	17,000	—	17,000
Total included in cash and cash equivalents	32,177	—	—	15,177	17,000	—	32,177
Marketable securities:							
U.S. treasury securities	10,995	—	(3)	—	10,992	—	10,992
Total marketable securities	10,995	—	(3)	—	10,992	—	10,992
Total financial assets	$ 43,172	$ —	$ (3)	$ 15,177	$ 27,992	$ —	$ 43,169

The Company classifies its marketable securities as current assets as they are available for current operating needs. The following table summarizes the contractual maturities of marketable securities as of June 30, 2018:

	Amortized cost	Aggregate fair value
Financial assets:		
Less than one year	$ 10,995	$ 10,992
Total	$ 10,995	$ 10,992

For fixed income securities that had unrealized losses as of June 30, 2018, the Company determined that no other-than-temporary impairment existed. As of June 30, 2018, all securities in an unrealized loss position have been in an unrealized loss position for less than one year. During the three and six months ended June 30, 2018, there were $3,000 in maturities of marketable securities. Interest earned on marketable securities in the three and six months ended June 30, 2018 was $32 and $48, respectively, and is recorded as other (expense) income, net, in the accompanying condensed consolidated statements of operations and comprehensive income.

4. Financial Statement Components

Accounts receivable, net of allowance for doubtful accounts consist of the following:

	December 31, 2017	June 30, 2018
Trade accounts receivable	$ 44,692	$ 13,375
Unbilled accounts receivable	8,653	10,791
Allowance for doubtful accounts	(32,463)	(1,473)
Other accounts receivable	343	308
Total accounts receivable, net	$ 21,225	$ 23,001

Notes to Condensed Consolidated Financial Statements (continued)
(In thousands except share and per share amounts)

Components of allowance for doubtful accounts are as follows:

	Three months ended June 30,		Six months ended June 30,	
Allowance for doubtful accounts:	**2017**	**2018**	**2017**	**2018**
Balance, beginning of period	$ 88	$ 142	$ 255	$ 189
Charged to bad debt expense	55	209	12	210
Deductions (1)	(31)	(209)	(155)	(257)
Balance, end of period	$ 112	$ 142	$ 112	$ 142

(1) Write off of uncollectible accounts after all collection efforts have been exhausted.

	Three months ended June 30,		Six months ended June 30,	
Allowance for CABS revenue:	**2017**	**2018**	**2017**	**2018**
Balance, beginning of period	$ 24,736	$ 1,148	$ 22,316	$ 32,274
Write-off of previously outstanding and fully reserved billings related to settlement	—	—	—	(24,968)
Billings deemed not probable of collection (1)	2,706	183	5,169	301
Revenue recognized from outstanding billings previously deemed uncollectible related to settlement	—	—	—	(6,268)
Deductions (2)	(41)	—	(84)	(8)
Balance, end of period	$ 27,401	$ 1,331	$ 27,401	$ 1,331

(1) Represents amounts billed in the period but where collectibility is not probable based on customers collection experience. Amounts were charged to a contra-revenue account.
(2) Write off of uncollectible accounts after all collection efforts have been exhausted.

	Three months ended June 30,		Six months ended June 30,	
CABS revenue:	**2017**	**2018**	**2017**	**2018**
Billed	$ 4,939	$ 3,129	$ 9,550	$ 7,208
Revenue recognized from current billings (2)	2,233	2,946	4,381	6,907
Billings deemed not probable of collection (1)	$ 2,706	$ 183	$ 5,169	$ 301

(1) Represents amounts billed in the period but where collectibility is not probable based on customers collection experience. Amounts were charged to a contra-revenue account.

(2) Does not include $6,268 in revenue recognized as a result of a settlement agreement related to previously billed and outstanding and uncollectible invoices.

On January 29, 2018, the Company and Verizon entered into a settlement agreement to resolve an ongoing dispute and litigation with Verizon, which is a CABS customer of the Company. The settlement agreement also resolved Verizon’s counter-claims against the Company. Pursuant to the settlement agreement, Verizon made a lump sum payment to the Company on February 8, 2018 of $4,400, which was recognized as revenue during the three months ended March 31, 2018. Immediately following receipt of the $4,400 payment, the Company issued to Verizon bill credits with respect to other CABS amounts previously billed and reserved to Verizon of $24,968. The amount credited to Verizon comprised the majority of the allowance for CABS revenue as of December 31, 2017. During the three months ended March 31, 2018, the Company recognized as revenue $6,268, including the $4,400 payment made on February 8, 2018 and the remaining outstanding receivables which had been previously reserved as uncollectible, but for which collection was no longer in doubt as a result of the settlement. The settlement agreement also specifies certain terms for the Company’s CABS billings to Verizon prospectively.

(In thousands except share and per share amounts)

Accrued expenses and other current liabilities consisted of the following:

	December 31, 2017	June 30, 2018
Accrued expense	$ 6,851	$ 9,955
Accrued compensation and benefits	5,237	4,121
Accrued sales, use, and telecom related taxes	3,030	3,525
Other accrued expenses	607	930
Total accrued expenses and other current liabilities	$ 15,725	$ 18,531

5. Property and Equipment

Property and equipment, net consisted of the following:

	December 31, 2017	June 30, 2018
Furniture and fixtures	$ 863	$ 872
Computer and office equipment	7,545	7,028
Telecommunications equipment	19,985	22,758
Leasehold improvements	453	2,374
Software development costs	15,517	17,172
Automobile	10	10
Total cost	44,373	50,214
Less—accumulated depreciation	(29,427)	(30,883)
Total property and equipment, net	$ 14,946	$ 19,331

The Company capitalized $921 and $1,598 of software development costs in the three and six months ended June 30, 2017, respectively, and $1,106 and $1,547 in the three and six months ended June 30, 2018, respectively.

Amortization expense related to capitalized software development costs were $556 and $1,136 in the three and six months ended June 30, 2017, respectively, and $425 and $873 in the three and six months ended June 30, 2018, respectively.

The Company recognized depreciation expense, which includes amortization of capitalized software development costs, as follows:

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
Cost of revenue	$ 1,036	$ 1,015	$ 2,083	$ 2,078
Research and development	13	31	23	61
Sales and marketing	6	12	13	22
General and administrative	180	108	282	227
Total depreciation expense	$ 1,235	$ 1,166	$ 2,401	$ 2,388

Notes to Condensed Consolidated Financial Statements (continued)
(In thousands except share and per share amounts)

6. Intangible Assets

Intangible assets consisted of the following as of December 31, 2017:

	Gross amount	Accumulated amortization	Net carrying value	Amortization period
				(Years)
Customer relationships	$ 10,396	$ (3,552)	$ 6,844	20
Domain name and related trademarks	2,678	(2,643)	35	3–7
Licenses, amortizable	341	(341)	—	2
Non-compete agreements	139	(139)	—	2–5
Developed technology	775	(775)	—	3
Licenses, indefinite lived	764	—	764	Indefinite
Total intangible assets, net	$ 15,093	$ (7,450)	$ 7,643	

Intangible assets consisted of the following as of June 30, 2018:

	Gross amount	Accumulated amortization	Net carrying value	Amortization period
				(Years)
Customer relationships	$ 10,396	$ (3,812)	$ 6,584	20
Domain name and related trademarks	2,678	(2,678)	—	3–7
Licenses, amortizable	341	(341)	—	2
Non-compete agreements	139	(139)	—	2–5
Developed technology	775	(775)	—	3
Licenses, indefinite lived	764	—	764	Indefinite
Total intangible assets, net	$ 15,093	$ (7,745)	$ 7,348	

Amortization expense for definite lived intangible assets was $210 and $420 in the three and six months ended June 30, 2017, respectively, and $130 and $295 in the three and six months ended June 30, 2018, respectively.

Future estimated amortization expense for definite lived intangible assets subsequent to June 30, 2018 is as follows:

	Amount
2018 (remaining)	$ 260
2019	520
2020	520
2021	520
2022	520
Thereafter	4,244
	$ 6,584

7. Debt

Revolving Loan

(In thousands except share and per share amounts)

As of December 31, 2017 and June 30, 2018, the Company had $0 outstanding on the revolving loan and was in compliance with all financial and non-financial covenants for all periods presented. The available borrowing capacity under the revolving loan was $25,000 as of June 30, 2018.

As of December 31, 2017 and June 30, 2018, the outstanding unamortized loan fees associated with the availability of the revolving loan were $175 and $143, respectively, and are included in other long-term assets.

Capital Leases

The Company leases various equipment under leases accounted for as capital leases with expiration dates ranging from October 2018 through December 2018. As of December 31, 2017, cost and accumulated depreciation of the assets under capital leases recorded by the Company were $1,951 and $1,832, respectively. As of June 30, 2018, cost and accumulated depreciation of the assets under capital leases recorded by the Company were $1,951 and $1,871, respectively.

Remaining payments due on the Company’s capital lease obligations as of June 30, 2018, are as follows:

	Amount
2018 (remaining)	$ 42
Less amount representing interest	—
Current portion of long-term capital lease obligation (1)	42
Less current maturities	42
Long-term capital lease obligation	$ —

(1) Included in accrued expenses and other current liabilities on the condensed consolidated balance sheets.

8. Segment and Geographic Information

The Company has two reportable segments, CPaaS and Other. Segments are primarily evaluated based on revenue and gross profit. The Company does not allocate operating expenses, interest expense or income tax expense to its segments. Accordingly, the Company does not report such information. Additionally, the Chief Operating Decision Maker does not evaluate the Company’s operating segments using discrete asset information. The segments share the majority of the Company’s assets. Therefore, no segment asset information is reported.

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
CPaaS				
Revenue	$ 31,547	$ 39,833	$ 63,194	$ 78,730
Cost of revenue	18,919	23,137	37,147	45,042
Gross profit	$ 12,628	$ 16,696	$ 26,047	$ 33,688
Other				
Revenue	$ 7,979	$ 8,471	$ 15,957	$ 22,586
Cost of revenue	3,375	3,429	6,713	6,888
Gross profit	$ 4,604	$ 5,042	$ 9,244	$ 15,698
Consolidated				
Revenue	$ 39,526	$ 48,304	$ 79,151	$ 101,316
Cost of revenue	22,294	26,566	43,860	51,930
Gross profit	$ 17,232	$ 21,738	$ 35,291	$ 49,386

(In thousands except share and per share amounts)

All assets were held in the United States as of December 31, 2017 and June 30, 2018.

The Company generates its revenue primarily in the United States. Revenue by geographical area is detailed in the table below (which is determined based on the customer billing address):

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
United States	$ 39,385	$ 48,154	$ 78,903	$ 100,978
International	141	150	248	338
Total	$ 39,526	$ 48,304	$ 79,151	$ 101,316

9. Stockholders' Equity

Preferred Stock

As of December 31, 2017 and June 30, 2018, the Company had authorized 10,000,000 shares of undesignated preferred stock, par value $0.001, of which no shares were issued and outstanding.

Common Stock

As of December 31, 2017 and June 30, 2018, the Company had authorized 100,000,000 shares of Class A common stock with one vote per share and 20,000,000 shares of Class B common stock with ten votes per share, each par value $0.001. As of December 31, 2017, 4,197,831 and 13,440,724 shares of Class A and B common stock, respectively, were issued and outstanding. As of June 30, 2018, 11,375,229 and 7,436,718 shares of Class A and B common stock, respectively, were issued and outstanding.

Shares of Class B common stock are convertible into shares of Class A common stock upon the stockholder's voluntary written notice to the Company's transfer agent or a transfer by the stockholder, subject to limited exceptions for transfers for estate planning purposes.

The Company had reserved shares of common stock for issuance under stock-based award agreements as follows:

	December 31, 2017	June 30, 2018
Stock options issued and outstanding	3,659,791	2,545,717
Nonvested restricted stock units issued and outstanding	—	314,728
Stock purchase warrants issued and outstanding	51,350	—
Stock-based awards available for grant under the 2017 Plan	1,050,000	917,284
	4,761,141	3,777,729

10. Stock Based Compensation

2001 and 2010 Stock Option Plans

During 2001, the Company adopted the Bandwidth Inc. Stock Option Plan (the "2001 Plan"). As of July 26, 2010, the Company adopted the 2010 Equity Compensation Plan (the "2010 Plan").

Following the effectiveness of the 2010 Plan, the Company did not make any further grants under the 2001 Plan. However, the 2001 Plan continues to govern the terms and conditions of the outstanding awards granted under it. On November 9, 2017, the 2010 Plan was terminated in connection with the Company's IPO. Accordingly, no shares are available for future issuance under the 2010 Plan. However, the 2010 Plan continues to govern the terms and conditions of the outstanding awards granted thereunder.

2017 Incentive Award Plan

The Company's 2017 Incentive Award Plan (the "2017 Plan") became effective on November 9, 2017. The 2017 Plan provides for the grant of stock options, including incentive stock options and non-qualified stock options, stock appreciation rights, restricted stock, dividend equivalents, restricted stock units, and other stock or cash based awards to employees, consultants and directors of the Company. A total of 1,050,000 shares of the Company's Class A common stock were originally reserved for issuance under the 2017 Plan. These available shares automatically increase each January 1, beginning on January 1, 2018, by 5% of the number of shares of the Company's Class A common stock outstanding on the final day of the immediately preceding calendar year. On January 1, 2018, the shares available for grant under the 2017 Plan were automatically increased by 200,000 shares.

The terms of the stock option grants are determined by the Company's Board of Directors. The Company's stock options vest based on terms of the stock option agreements, which is generally over four years. The stock options have a contractual life of ten years.

RSUs granted under the 2017 Plan are subject to a time-based vesting condition. The compensation expense related to these awards is based on the grant date fair value of the RSUs and is recognized on a ratable basis over the applicable service period. The Company granted restricted stock units to its non-employee Board of Directors, some of which vested immediately while others vest 25% as of each calendar quarter immediately following the grant date. Other RSUs awarded to executives and employees are earned over a service period of four years.

Stock options

The fair value of options granted is estimated on the date of grant using the Black-Scholes option pricing model based on the assumptions in the table below:

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
Expected dividend yield	0%	N/A	0%	0%
Expected stock price volatility	47%	N/A	47%	47%
Average risk-free interest rate	1.9%	N/A	1.9%-2.3%	2.5%
Expected life	6.2 years	N/A	6.2 years	6.2 years
Fair value of common stock	$9.60	N/A	$9.60	$22.81

No options were granted in the three months ended June 30, 2018.

The following summarizes the stock option activity for the six months ended June 30, 2018:

	Number of options outstanding	Weighted-average exercise price (per share)	Weighted-average remaining contract life (in years)	Aggregate intrinsic value (in thousands)
Outstanding as of December 31, 2017	3,659,791	$ 6.88	4.38	$ 59,436
Granted	17,988	22.81		
Exercised	(1,117,646)	6.23		33,525
Forfeited or cancelled	(14,416)	12.07		
Outstanding as of June 30, 2018	2,545,717	$ 7.25	4.35	$ 78,239
Options vested and exercisable at June 30, 2018	2,197,792	$ 6.46	3.74	$ 69,275

Aggregate intrinsic value represents the total pre-tax intrinsic value, which is computed based on the difference between the option exercise price and the estimated fair value of the Company’s common stock. Prior to the IPO, the fair value of the Company’s common stock was estimated by the Company’s board of directors. After the IPO, the fair value of the Company’s common stock is the Company’s Class A common stock price as reported on the NASDAQ Global Select Market.

The weighted average grant-date fair value of stock options granted was $4.30 and $4.34 for the three and six months ended June 30, 2017, respectively, and $11.10 for the six months ended June 30, 2018. No options were granted during the three months ended June 30, 2018.

The total estimated grant date fair value of options vested was $510 and $627 for the three and six months ended June 30, 2017, respectively, and $360 and $471 for the three and six months ended June 30, 2018, respectively.

As of June 30, 2018, total unrecognized compensation cost related to all non-vested stock options was $1,618, which will be amortized over a weighted-average period of 2.40 years.

(In thousands except share and per share amounts)

Restricted Stock Units

The following summarizes the restricted stock unit activity for the periods presented:

	Number of awards outstanding	Weighted-average grant date fair value (per share)
Nonvested RSUs as of December 31, 2017	—	$ —
Granted	325,730	26.01
Vested	(6,512)	22.81
Forfeited or cancelled	(4,490)	28.89
Nonvested RSUs as of June 30, 2018	314,728	$ 26.03

As of June 30, 2018, total unrecognized compensation cost related to non-vested RSUs was $7,573, which will be amortized over a weighted-average period of 3.63 years.

Stock-Based Compensation Expense

The Company recognized total stock-based compensation expense in continuing operations as follows:

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
Cost of revenue	$ 21	$ 32	$ 41	$ 49
Research and development	30	129	62	203
Sales and marketing	43	140	70	218
General and administrative	150	461	317	785
Total	$ 244	$ 762	$ 490	$ 1,255

11. Commitments and Contingencies

Operating Leases

The Company leases approximately 178,000 square feet of office space under operating lease agreements that expire at various dates beginning in 2021 and extend through 2025 in several locations within the United States including its headquarters, which is located in Raleigh, NC. On January 12, 2018, the Company entered into an 84-month operating lease agreement to provide 40,035 square feet of additional office space. This new lease is expected to be occupied in September 2018. On March 27, 2018, the Company entered into a 60-month operating lease agreement to provide 5,930 square feet of additional office space, which commenced in June 2018. The leases contain escalation clauses and various landlord concessions including tenant improvement allowances. The Company recognizes the total minimum lease payments on a straight-line basis over the term of the lease.

(In thousands except share and per share amounts)

Future minimum lease payments required under operating leases as of June 30, 2018 are as follows:

	Amount
2018 (remaining)	$ 2,262
2019	5,004
2020	5,180
2021	5,254
2022	3,438
Thereafter	3,717
	$ 24,855

The Company incurred rent expense of $868 and $1,380 for the three and six months ended June 30, 2017, respectively, and $1,022 and $1,955 for the three and six months ended June 30, 2018, respectively, which is included in general and administrative expenses in the condensed consolidated statements of operations and comprehensive income.

On April 20, 2015, the Company created a wholly owned subsidiary, Republic Wireless, Inc. ("Republic"), which was incorporated in Delaware. On November 30, 2016, the Company completed a pro-rata distribution of the common stock of Republic to its stockholders of record as of the close of business (the "Spin-Off").

In conjunction with the Spin-Off, the Company signed a Facilities Service Agreement with Republic in which the Company agreed to sub-lease 40,657 square feet of office space to Republic. The sub-lease is non-cancellable and extends to May 2022. The Company recorded a reduction of rent expense of $217 and $446 for the three and six months ended June 30, 2017, respectively, and $251 and $502 for the three and six months ended June 30, 2018, respectively, which is included in general and administrative expenses in the condensed consolidated statements of operations and comprehensive income.

Future minimum sub-lease receipts required under the non-cancellable lease as of June 30, 2018 are as follows:

	Amount
2018 (remaining)	$ 513
2019	1,042
2020	1,065
2021	1,089
2022	594
Thereafter	$ 4,303

Contractual Obligations

On October 25, 2015, the Company entered into an agreement with a telecommunications service provider. The service agreement requires the Company to pay a monthly recurring charge beginning on January 1, 2016 associated with the services received. The service agreement is non-cancellable and contains annual minimum commitments of $1,200 to be fulfilled over five years or for as long as the Company continues to receive services from this vendor. In addition, as of June 30, 2018 the Company has $4,590 in other non-cancellable purchase obligations, consisting of primarily network equipment maintenance and software license contracts.

Legal Matters

The Company is involved as a defendant in various lawsuits alleging that the Company failed to bill, collect and remit certain taxes and surcharges associated with the provision of 911 services pursuant to applicable laws in various jurisdictions. In August 2016, the Company received a Civil Investigative Demand from the Consumer Protection Division of the North Carolina Department of Justice, though no formal complaint has been filed in connection with that investigation. The North Carolina Department of Justice is investigating the billing, collection and remission of certain taxes and surcharges associated with 911 service pursuant to applicable laws of the State of North Carolina.

While the results of these legal proceedings cannot be predicted with certainty, in the opinion of management, the ultimate resolution of these matters will not have a material adverse effect on the Company’s financial position or results of operations.

12. Employee Benefit Plan

The Company sponsors a defined contribution 401(k) plan which allows eligible employees to defer a portion of their compensation. The Company, at its discretion, may make matching contributions. The Company made matching contributions of $64 and $415 for the three and six months ended June 30, 2017, respectively, and $259 and $546 for the three and six months ended June 30, 2018, respectively.

13. Income Taxes

At the end of each interim reporting period, the Company determines the income tax provision by using an estimate of the annual effective tax rate, adjusted for discrete items occurring in the quarter. The effective income tax rate reflects the effect of federal and state income taxes, the benefit associated with research and development income tax credits and certain non-deductible items.

The Company’s effective tax rate was 38.4% and 37.7% for the three and six months ended June 30, 2017, respectively, and (741.6)% and (65.8)% for the three and six months ended June 30, 2018, respectively. The change in tax rate is primarily due to the decrease in the federal statutory tax rate under the Tax Cuts and Jobs Act from 35% to 21%, prior and current year research and development tax credits, as well as the impact of stock compensation tax deductions as a result of exercises, which occurred during the three months ended June 30, 2018.

The Company’s effective tax rate for the three and six months ended June 30, 2018, respectively, is lower than the U.S. federal statutory rate of 21.0% primarily due to the impact of stock compensation tax deductions.

There has been no material change to the Company’s SAB 118 assertion.

14. Related Parties

In connection with the Spin-Off on November 30, 2016, the Company and Republic entered into certain agreements in order to govern the ongoing relationships between the two companies after the Spin-Off and to provide for an orderly transition. The agreements include a Transition Services Agreement, Facilities Sharing Agreement, Tax Sharing Agreement, and Master Services Agreement. The equity holders of Bandwidth pre-IPO are comprised of substantially the same individuals and entities that are the equity owners of Republic. The Company has determined the equity owners of Republic are related parties of Bandwidth. The Company has certain involvement with Republic via ongoing services arrangements, with these ongoing services arrangements creating a variable interest in Republic. The Company assessed the relationship with Republic under guidance for variable interest entities. Because investors in Republic have disproportionate voting rights, the Company concluded that Republic is a VIE, but Bandwidth is not a primary beneficiary. The Company’s maximum exposure to loss relating to this variable interest entity is limited to amounts due under the service agreements between the Company and Republic.

The Company received net compensation under the Transition Services Agreement of $160 and $511 for the three and six months ended June 30, 2017, respectively, and $22 and $50 for the three and six months ended June 30, 2018, respectively, which is included in general and administrative expenses in the condensed consolidated statements of operations and comprehensive income. In addition, there was approximately $15 and $6 due from Republic as of December 31, 2017 and June 30, 2018, respectively, which was recorded within accounts receivable in the accompanying condensed consolidated balance sheets.

The Company received rental payments under the Facilities Sharing Agreement of $216 and $446 for the three and six months ended June 30, 2017, respectively, and $251 and $502 for the three and six months ended June 30, 2018, respectively, which is included in general and administrative expenses in the condensed consolidated statements of operations and comprehensive income. No amounts were due to the Company under the Facilities Sharing Agreement as of December 31, 2017 and June 30, 2018.

The Tax Sharing Agreement governs rights and obligations after the Spin-Off regarding income taxes and other taxes, including tax liabilities and benefits, attributes, returns and contests. There are no amounts outstanding or payable under this agreement as of December 31, 2017 and June 30, 2018.

The Master Services Agreement specifies certain wholesale telecommunications services to be provided by the Company. The agreement is cancellable at any time by either party. The Company provided telecommunication services to Republic of $540 and $1,073 for the three and six months ended June 30, 2017, respectively, and $1,005 and $1,991 for the three and six months ended June 30, 2018, respectively. The Company recognized such amounts as revenue in the accompanying condensed consolidated statements of operations and comprehensive income. As of December 31, 2017 and June 30, 2018, the Company had a receivable of $311 and $343, respectively, under the Master Services Agreement.

Subsequent to the expiration of the 180-day blackout window on May 9, 2018, Republic employees that held Bandwidth stock options began exercising their options. Upon exercise, Bandwidth withholds the employee tax amounts due from the proceeds. For the three months ended June 30, 2018, Bandwidth had collected on behalf of and remitted withholding tax to Republic of $6,475 and had a related payable of $0 as of June 30, 2018.

15. Basic and Diluted Income per Common Share

As of December 31, 2017, the Company used the two-class method to compute net income per common share, because it had issued securities, other than common stock, that contractually entitled the holders to participate in dividends and earnings. These participating securities included the Company's redeemable convertible preferred stock which had non-forfeitable rights to participate in any dividends declared on the Company's common stock. The two-class method requires earnings for the period to be allocated between common stock and participating securities based upon their respective rights to receive distributed and undistributed earnings.

Under the two-class method, for periods with net income, basic net income per common share is computed by dividing the net income attributable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Net income attributable to common stockholders is computed by subtracting from net income the portion of current period earnings that the participating securities would have been entitled to receive pursuant to their dividend rights had all of the period's earnings been distributed. No such adjustment to earnings is made during periods with a net loss, as the holders of the participating securities have no obligation to fund losses.

Diluted net income per common share is computed under the two-class method by using the weighted average number of shares of common stock outstanding, plus, for periods with net income attributable to common stockholders, the potential dilutive effects of stock options and warrants. The Company analyzed the potential dilutive effect of any outstanding dilutive securities under the "if-converted" method and treasury-stock method when calculating diluted earnings per share, in which it is assumed that the outstanding participating securities convert into common stock at the beginning of the period or date of issuance, if later. The Company reports the more dilutive of the approaches (two-class or "if-converted") as its diluted net income per share during the period.

(In thousands except share and per share amounts)

As of January 1, 2018, the Company no longer had outstanding securities other than common stock, which required holders' participation in dividends and earnings; therefore, the Company no longer was required to calculate EPS under the two-class method. Basic net income per share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period. Diluted net income per share is computed by giving effect to all potential shares of common stock, including stock options, stock related to unvested restricted stock awards, and outstanding warrants to the extent dilutive.

The components of basic and diluted earnings per share, or EPS, are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
Earnings per share				
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703
Less: net income allocated to participating securities	254	—	645	—
Net income attributable to common stockholders	$ 1,693	$ 10,512	$ 4,291	$ 16,703
Net income per share:				
Basic	$ 0.14	$ 0.58	$ 0.36	$ 0.93
Diluted	$ 0.13	$ 0.50	$ 0.33	$ 0.80
Weighted Average Number of Common Shares Outstanding				
Basic	11,814,584	18,154,964	11,806,619	17,908,159
Dilutive effect of stock options, restricted stock units, and warrants	1,074,750	2,738,689	1,170,987	2,958,618
Diluted	12,889,334	20,893,653	12,977,606	20,866,777

The following common share equivalents have been excluded from the calculation of weighted-average common shares outstanding, because the effect is anti-dilutive for the periods presented:

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
Anti-dilutive Disclosure				
Series A redeemable convertible preferred stock outstanding	1,775,000	—	1,775,000	—
Stock options issued and outstanding	747,581	—	648,788	15,603

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 condensed consolidated financial statements and related notes that are included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors" in this Quarterly Report on Form 10-Q. Our fiscal year ends on December 31.

Overview

We are a leading cloud-based communications platform for enterprises in the United States. Our solutions include a broad range of software application programming interfaces (“APIs”) for voice and text functionality and our owned and managed, purpose-built internet protocol (“IP”) voice network, one of the largest in the nation. Our sophisticated and easy-to-use software APIs allow enterprises to enhance their products and services by incorporating advanced voice and text capabilities. Companies use our platform to more frequently and seamlessly connect with their end users, add voice calling capabilities to residential Internet of Things (“IoT”) devices, offer end users new mobile application experiences and improve employee productivity, among other use cases. By owning and operating a capital-efficient, purpose-built IP voice network, we are able to offer advanced monitoring, reporting and analytics, superior customer service, dedicated operating teams, personalized support, and flexible cost structures. Over the last ten years, we have pioneered the communications platform-as-a-service (“CPaaS”) space through our innovation-rich culture and focus on empowering enterprises with end-to-end communications solutions.

Our voice software APIs allow enterprises to make and receive phone calls and create advanced voice experiences. Integration with our purpose-built IP voice network ensures enterprise-grade functionality and secure, high-quality connections. Our messaging software APIs provide enterprises with advanced tools to connect with end users via messaging. Our customers also use our solutions to enable 911 response capabilities, real-time provisioning and activation of phone numbers and toll-free number messaging.

We are the only CPaaS provider in the industry with our own nationwide IP voice network, which we have purpose-built for our platform. Our network is capital-efficient and custom-built to support the applications and experiences that make a difference in the way enterprises communicate. Since a communications platform is only as strong as the network that backs it, we believe our network provides a significant competitive advantage in the control, quality, pricing power and scalability of our offering. We are able to control the quality and provide the support our customers expect, as well as efficiently meet scalability and cost requirements.

For the three months ended June 30, 2017 and 2018, total revenue was $39.5 million and $48.3 million, respectively. CPaaS revenue for the three months ended June 30, 2017 and 2018 was $31.5 million and $39.8 million, respectively, representing an increase of 26%. Net income for the three months ended June 30, 2017 and 2018 was $1.9 million and $10.5 million, respectively. The number of active CPaaS customer accounts increased from 865 as of June 30, 2017, to 1,092 as of June 30, 2018, or 26%.

Key Performance Indicators

We monitor the following key performance indicators (“KPIs”) to help us evaluate our business, identify trends affecting our business, formulate business plans, and make strategic decisions. We believe the following KPIs are useful in evaluating our business:

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
	(Dollars in thousands)			
Number of active CPaaS customers (as of period end)	865	1,092	865	1,092
Dollar-based net retention rate	105%	119%	107%	117%
Adjusted EBITDA	$ 5,842	$ 3,218	$ 12,655	$ 13,883
Free cash flow	$ 4,061	$ 2,616	$ 2,285	$ 12,457

Number of Active CPaaS Customer Accounts

We believe that the number of active CPaaS customer accounts is an important indicator of the growth of our business, the market acceptance of our platform and our future revenue trends. We define an active CPaaS customer account at the end of any period as an individual account, as identified by a unique account identifier, for which we have recognized at least $100 of revenue in the last month of the period. We believe that the use of our platform by active CPaaS customer accounts at or above the $100 per month threshold is a stronger indicator of potential future engagement than trial usage of our platform at levels below $100 per month. A single organization may constitute multiple unique active CPaaS customer accounts if it has multiple unique account identifiers, each of which is treated as a separate active CPaaS customer account. Customers who pay after using our platform and customers that have credit balances are included in the number of active CPaaS customer accounts. Customers from our Other segment are excluded in the number of active CPaaS customer accounts, unless they are also CPaaS customers.

For the three and six months ended June 2017 and 2018, revenue from active CPaaS customer accounts represented approximately 99% of total CPaaS revenue.

Dollar-Based Net Retention Rate

Our ability to drive growth and generate incremental revenue depends, in part, on our ability to maintain and grow our relationships with our existing customers that generate CPaaS revenue and seek to increase their use of our platform. We track our performance in this area by measuring the dollar-based net retention rate for our customers who generate CPaaS revenue. Our dollar-based net retention rate compares the CPaaS revenue from customers in a quarter to the same quarter in the prior year. To calculate the dollar-based net retention rate, we first identify the cohort of customers that generate CPaaS revenue and that were customers in the same quarter of the prior year. The dollar-based net retention rate is obtained by dividing the CPaaS revenue generated from that cohort in a quarter, by the CPaaS revenue generated from that same cohort in the corresponding quarter in the prior year. When we calculate dollar-based net retention rate for periods longer than one quarter, we use the average of the quarterly dollar-based net retention rates for the quarters in such period. Our dollar-based net retention rate increases when such customers increase usage of a product, extend usage of a product to new applications or adopt a new product. Our dollar-based net retention rate decreases when such customers cease or reduce usage of a product or when we lower prices on our solutions.

As our customers grow their business and extend the use of our platform, they sometimes create multiple customer accounts with us for operational or other reasons. As such, when we identify a significant customer organization (defined as a single customer organization generating more than 1% of CPaaS revenue in a quarterly reporting period) that has created a new CPaaS customer, this new customer is tied to, and CPaaS revenue from this new customer is included with, the original CPaaS customer for the purposes of calculating this metric.

Key Components of Statements of Operations

Revenue

We generate a majority of our revenue from our CPaaS segment. CPaaS revenue is derived from voice usage, phone number services, 911-enabled phone number services, messaging services and other services. We generate a portion of our CPaaS revenue from usage-based fees which include voice calling and messaging services. For the three months ended June 30, 2017 and 2018, we generated 57% and 64% of our CPaaS revenue, respectively, from usage-based fees. We also earn monthly fees from services such as phone number services and 911 access service. For the three months ended June 30, 2017 and 2018, we generated 41% and 34% of our CPaaS revenue in each period from monthly per unit fees.

For the six months ended June 30, 2017 and 2018, we generated 57% and 64% of our CPaaS revenue, respectively, from usage-based fees. We also earn monthly fees from services such as phone number services and 911 access service. For the six months ended June 30, 2017 and 2018, we generated 41% and 35% of our CPaaS revenue in each period from monthly per unit fees.

The remainder of our revenue is generated by our Other segment. Other revenue is composed of revenue earned from our legacy services and indirect revenue. Other revenue as a percentage of total revenue is expected to continue to decline over time.

We recognize accounts receivable at the time the customer is invoiced. Additionally, we record a receivable and revenue for unbilled revenue if the services have been delivered and are billable in subsequent periods. Unbilled revenue made up 46% and 47% of outstanding accounts receivable, net of allowance for doubtful accounts as of June 30, 2017 and 2018, respectively.

Cost of Revenue and Gross Margin

CPaaS cost of revenue consists primarily of fees paid to other network service providers from whom we buy services such as minutes of use, phone numbers, messages, porting of customer numbers and network circuits. Cost of revenue also contains costs related to support of our IP voice network, web services, cloud infrastructure, capacity planning and management, rent for network facilities, software licenses, hardware and software maintenance fees and network engineering services. Personnel costs (including non-cash stock-based compensation expenses) associated with personnel who are responsible for the delivery of services, operation and maintenance of our communications network, and customer support, as well as, third-party support agreements and depreciation of network equipment, amortization of internally developed software and gain (loss) on disposal of property and equipment are also included in cost of revenue.

Other cost of revenue consists of costs supporting non-CPaaS services including leased circuit costs paid to third party providers, internet connectivity expenses, minutes of use, direct operations, contractors, regulatory fees, surcharges and other pass-through costs and software and hardware maintenance fees.

Gross margin is calculated by subtracting cost of revenue from revenue, divided by total revenue, expressed as a percentage. Our cost of revenue and gross margin have been, and will continue to be, affected by several factors, including the timing and extent of our investments in our network, our ability to manage off-network minutes of use and messaging costs, the product mix of revenue, the timing of amortization of capitalized software development costs and the extent to which we periodically choose to pass on any cost savings to our customers in the form of lower usage prices.

Operating Expenses

The most significant components of operating expenses are personnel costs, which consist of salaries, benefits, bonuses, and stock-based compensation expenses. We also incur other non-personnel costs related to our general overhead expenses, including facility expenses, software licenses, web services, depreciation and amortization of assets unrelated to delivery of our services. We expect that our operating expenses will increase in absolute dollars.

Research and Development

Research and development ("R&D") consist primarily of personnel costs (including non-cash stock-based compensation expenses), outsourced software development and engineering service and cloud infrastructure fees for staging and development of outsourced engineering services. We capitalize the portion of our software development costs in instances where we invest resources to develop software for internal use. We plan to continue to invest in R&D to enhance current product offerings and develop new services.

Sales and Marketing

Sales and marketing expenses consist primarily of personnel costs, including commissions for our sales employees and non-cash stock-based compensation expenses. Sales and marketing expenses also include expenditures related to advertising, marketing, our brand awareness activities, sales support and professional services fees.

We focus our sales and marketing efforts on creating sales leads and establishing and promoting our brand. We plan to continue to invest in sales and marketing in order to expand our CPaaS customer base by growing headcount, driving our go-to-market strategies, building brand awareness, advertising and sponsoring additional marketing events.

General and Administrative

General and administrative expenses consist primarily of personnel costs, including stock-based compensation, for our accounting, finance, legal, human resources and administrative support personnel and executives. General and administrative expenses also include costs related to product management and reporting, customer billing and collection functions, information services, professional services fees, credit card processing fees, rent associated with our headquarters in Raleigh, North Carolina and our other offices, and depreciation and amortization. We expect that we will incur increased costs associated with supporting the growth of our business and to meet the increased compliance requirements associated with our transition to, and operation as, a public company.

Income Taxes

For the three months ended June 30, 2017 and 2018, our effective tax rate was 38.4% and (741.6)%, respectively. The decrease in our effective tax rate is primarily due to the impact of stock compensation tax deductions from stock option exercises, as well as the decrease in the federal statutory tax rate under the Tax Cuts and Jobs Act (the "Act").

For the six months ended June 30, 2017 and 2018, our effective tax rate was 37.7% and (65.8)%, respectively. The decrease in our effective tax rate is primarily due to the impact of stock compensation tax deductions from stock option exercises, as well as, the decrease in the federal statutory tax rate under the Act.

Non-GAAP Financial Measures

We use Non-GAAP gross profit, Non-GAAP gross margin, Adjusted EBITDA, Non-GAAP net income and free cash flow for financial and operational decision making and to evaluate period-to-period differences in our performance. Non-GAAP gross profit, Non-GAAP gross margin, Adjusted EBITDA, Non-GAAP net income and free cash flow are non-GAAP financial measures, which we believe are useful for investors in evaluating our overall financial performance. We believe these measures provide useful information about operating results, enhance the overall understanding of past financial performance and future prospects and allow for greater transparency with respect to key performance indicators used by management in its financial and operational decision making. For a reconciliation of each of the non-GAAP financial measures described below, see below.

Non-GAAP Gross Profit and Non-GAAP Gross Margin

GAAP defines gross profit as revenue less cost of revenue. Cost of revenue includes all expenses associated with our various service offerings as more fully described under the caption "Key Components of Statement of Operations-Cost of Revenue and Gross Margin." We define Non-GAAP gross profit as gross profit after adding back the following items:

- depreciation; and
- stock-based compensation.

We add back depreciation and stock-based compensation because they are non-cash items. We eliminate the impact of these non-cash items because we do not consider them indicative of our core operating performance. Their exclusion facilitates comparisons of our operating performance on a period-to-period basis. Therefore, we believe that showing gross margin, as Non-GAAP to remove the impact of these non-cash expenses, such as depreciation, amortization and stock-based compensation, is helpful to investors in assessing our gross profit and gross margin performance in a way that is similar to how management assesses our performance.

We calculate Non-GAAP gross margin by dividing Non-GAAP gross profit by revenue, expressed as a percentage of revenue.

Management uses Non-GAAP gross profit and Non-GAAP gross margin to evaluate operating performance and to determine resource allocation among our various service offerings. We believe that Non-GAAP gross profit and Non-GAAP gross margin provide useful information to investors and others to understand and evaluate our operating results in the same manner as our management and board of directors and allows for better comparison of financial results among our competitors. Non-GAAP gross profit and Non-GAAP gross margin may not be comparable to similarly titled measures of other companies because other companies may not calculate Non-GAAP gross profit and Non-GAAP gross margin or similarly titled measures in the same manner as we do.

Consolidated

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
	(In thousands)			
Consolidated Gross Profit	$ 17,232	$ 21,738	$ 35,291	$ 49,386
Depreciation	1,036	1,015	2,083	2,078
Stock-based compensation	21	32	41	49
Non-GAAP Gross Profit	**$ 18,289**	**$ 22,785**	**$ 37,415**	**$ 51,513**
Non-GAAP Gross Margin %	**46%**	**47%**	**47%**	**51%**

By Segment

CPaaS

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
	(In thousands)			
CPaaS Gross Profit	$ 12,628	$ 16,696	$ 26,047	$ 33,688
Depreciation	1,036	1,015	2,083	2,078
Stock-based compensation	21	32	41	49
Non-GAAP Gross Profit	**$ 13,685**	**$ 17,743**	**$ 28,171**	**$ 35,815**
Non-GAAP CPaaS Gross Margin %	**43%**	**45%**	**45%**	**45%**

Other

There are no Non-GAAP adjustments to gross profit for the Other segment.

Adjusted EBITDA

We define Adjusted EBITDA as net income adjusted to reflect the addition or elimination of certain income statement items including, but not limited to:

- income tax provision (benefit);
- interest expense (income), net;
- depreciation and amortization expense;
- stock-based compensation expense;
- impairment of intangible assets, if any;
- loss on disposal of property and equipment; and
- change in fair value of financial instruments, including any change in shareholders’ anti-dilutive arrangements.

Adjusted EBITDA is a key measure used by management to understand and evaluate our core operating performance and trends, to generate future operating plans and to make strategic decisions regarding the allocation of capital. In particular, the exclusion of certain expenses in calculating Adjusted EBITDA facilitates comparisons of our operating performance on a period-to-period basis.

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
	(In thousands)			
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703
Income tax provision (benefit) (2)	1,215	(9,263)	2,987	(6,629)
Interest expense (income), net	438	(90)	859	(139)
Depreciation	1,235	1,166	2,401	2,388
Amortization	210	130	420	295
Stock-based compensation	244	762	490	1,255
Loss on disposal of property and equipment	—	1	9	10
Change in fair value of shareholders' anti-dilutive arrangement (1)	553	—	553	—
Adjusted EBITDA	**$ 5,842**	**$ 3,218**	**$ 12,655**	**$ 13,883**

(1) Relates to an anti-dilutive agreement which allows certain principal non-founder shareholders the ability to purchase additional common shares. See Note 4, *Fair Value of Financial Instruments*, in the Annual Report on Form 10-K for further explanation.

(2) Includes $7,052 of excess tax benefits associated with the exercise of stock options in the three and six months ended June 30, 2018.

Non-GAAP Net Income

We define Non-GAAP net income as net income adjusted for certain items affecting period-to-period comparability. Non-GAAP net income excludes:

- stock-based compensation;
- change in fair value of shareholders’ antidilutive arrangement;
- amortization of acquired intangible assets related to the acquisition of Dash Carrier Services, LLC;
- impairment charges of intangibles assets, if any;
- loss on disposal of property and equipment;
- estimated tax impact of above adjustments;
- income tax benefit resulting from excess tax benefits associated with the exercise of stock options;

- benefit resulting from the release of the valuation allowance on our deferred tax assets (“DTA”); and
- impact on remeasurement of DTA as a result of 2017 tax reform.

We calculate Non-GAAP basic and diluted shares by adding the weighted average of outstanding Series A redeemable convertible preferred stock, if any, to the weighted average number of outstanding basic and diluted shares, respectively.

We believe Non-GAAP net income is a meaningful measure because by removing certain non-cash and other expenses we are able to evaluate our operating results in a manner we believe is more indicative of the current period’s performance. We believe the use of Non-GAAP net income may be helpful to investors because it provides consistency and comparability with past financial performance, facilitates period-to-period comparisons of results of operations and assists in comparisons with other companies, many of which may use similar non-GAAP financial information to supplement their GAAP results.

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
	(In thousands)			
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703
Stock-based compensation	244	762	490	1,255
Change in fair value of shareholders' anti-dilutive arrangement (1)	553	—	553	—
Amortization related to acquisitions	130	130	260	260
Loss on disposal of property and equipment	—	1	9	10
Estimated tax effects of adjustments	(355)	(229)	(501)	(391)
Income tax benefit of option exercises	—	(7,052)	—	(7,052)
Non-GAAP net income	**$ 2,519**	**$ 4,124**	**$ 5,747**	**$ 10,785**
Non-GAAP net income per Non-GAAP share				
Basic	$ 0.19	$ 0.23	$ 0.42	$ 0.60
Diluted	$ 0.17	$ 0.20	$ 0.39	$ 0.52
Non-GAAP Weighted Average Number of Shares outstanding				
Basic	11,814,584	18,154,964	11,806,619	17,908,159
Series A redeemable convertible preferred stock outstanding	1,775,000	—	1,775,000	—
Non-GAAP Basic Shares	**13,589,584**	**18,154,964**	**13,581,619**	**17,908,159**
Diluted	12,889,334	20,893,653	12,977,606	20,866,777
Series A redeemable convertible preferred stock outstanding	1,775,000	—	1,775,000	—
Non-GAAP Diluted Shares	**14,664,334**	**20,893,653**	**14,752,606**	**20,866,777**

(1) Relates to an anti-dilutive agreement which allowed certain principal non-founder shareholders the ability to purchase additional common shares. See Note 4, *Fair Value of Financial Instruments*, in the Annual Report on Form 10-K for further explanation.

Free Cash Flow

Free cash flow represents net cash provided by or used in operating activities less net cash used in the acquisition of property, plant and equipment and capitalized development costs of software for internal use. We believe free cash flow is a useful indicator of liquidity and provides information to management and investors about the amount of cash generated from our core operations that can be used for investing in our business. Free cash flow has certain limitations in that it does not represent the total increase or decrease in the cash balance for the period, it does not take into consideration investment in long-term securities, nor does it represent the residual cash flows available for discretionary expenditures. Therefore, it is important to evaluate free cash flow along with our condensed consolidated statements of cash flows.

	Three months ended June 30,		Six months ended June 30,	
	2017	**2018**	**2017**	**2018**
	(In thousands)			
Net cash provided by operating activities	$ 5,975	$ 5,874	$ 5,006	$ 17,117
Net cash used in investing in capital assets (1)	(1,914)	(3,258)	(2,721)	(4,660)
Free cash flow	**$ 4,061**	**$ 2,616**	**$ 2,285**	**$ 12,457**

(1) Represents the acquisition cost of property, equipment and capitalized development costs for software for internal use.

Results of Operations

Consolidated Results of Operations

The following table sets forth the consolidated statements of operations for the periods indicated.

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
	(In thousands)			
Revenue:				
CPaaS revenue	$ 31,547	$ 39,833	$ 63,194	$ 78,730
Other revenue	7,979	8,471	15,957	22,586
Total revenue	39,526	48,304	79,151	101,316
Cost of revenue:				
CPaaS cost of revenue	18,919	23,137	37,147	45,042
Other cost of revenue	3,375	3,429	6,713	6,888
Total cost of revenue	22,294	26,566	43,860	51,930
Gross profit:				
CPaaS	12,628	16,696	26,047	33,688
Other	4,604	5,042	9,244	15,698
Total gross profit	17,232	21,738	35,291	49,386
Operating expenses:				
Research and development	2,409	4,435	5,091	8,216
Sales and marketing	2,413	4,654	4,971	9,176
General and administrative	8,257	11,490	15,894	22,059
Total operating expenses	13,079	20,579	25,956	39,451
Operating income	4,153	1,159	9,335	9,935
Other expense:				
Interest (expense) income, net	(438)	90	(859)	139
Change in fair value of stockholders’ anti-dilutive arrangement	(553)	—	(553)	—
Income before income taxes	3,162	1,249	7,923	10,074
Income tax (provision) benefit	(1,215)	9,263	(2,987)	6,629
Net income	$ 1,947	$ 10,512	$ 4,936	$ 16,703

The following table sets forth our results of operations as a percentage of our total revenue for the periods presented. *

	Three months ended June 30,		Six months ended June 30,	
	2017	2018	2017	2018
Revenue:				
CPaaS revenue	80 %	82%	80 %	78%
Other revenue	20 %	18%	20 %	22%
Total revenue	100 %	100%	100 %	100%
Cost of revenue:				
CPaaS cost of revenue	48 %	48%	47 %	44%
Other cost of revenue	9 %	7%	8 %	7%
Total cost of revenue	57 %	55%	55 %	51%
Gross profit:				
CPaaS	32 %	35%	33 %	33%
Other	12 %	10%	12 %	15%
Total gross profit	44 %	45%	45 %	48%
Operating expenses:				
Research and development	6 %	9%	6 %	8%
Sales and marketing	6 %	10%	6 %	9%
General and administrative	21 %	24%	20 %	22%
Total operating expenses	33 %	43%	32 %	39%
Operating income	11 %	2%	12 %	10%
Other expense:				
Interest (expense) income, net	(1)%	—%	(1)%	—%
Change in fair value of stockholders’ anti-dilutive arrangement	(1)%	—%	(1)%	—%
Income before income taxes	11 %	6%	10 %	10%
Income tax (provision) benefit	(3)%	19%	(4)%	7%
Net income	5 %	22%	6 %	16%

(*) Columns may not foot due to rounding.

Comparison of the Three Months Ended June 30, 2017 and 2018

Revenue

	Three months ended June 30, 2017	Three months ended June 30, 2018	Change	
	(Dollars in thousands)			
CPaaS revenue	$ 31,547	$ 39,833	$ 8,286	26%
Other revenue	7,979	8,471	492	6%
Total revenue	$ 39,526	$ 48,304	$ 8,778	22%

For the three months ended June 30, 2018, total revenue increased by $8.8 million, or 22%, compared to the same period in 2017, and CPaaS revenue increased by $8.3 million, or 26%, compared to the same period in 2017. The increase in CPaaS revenue was primarily attributable to an increase in the usage of all our service offerings, particularly our voice and messaging usage, which accounted for $10.5 million of the increase in CPaaS revenue, and our phone number services and 911-enabled phone number services, which accounted for $1.7 million of the increase in CPaaS revenue. This overall increase in CPaaS revenue was partially offset by $3.9 million related to pricing decreases that we have implemented over time with our customers in the form of lower usage prices to increase the reach and scale of our platform. The changes in usage and price in the three months ended June 30, 2018 compared to the same period in 2017 were reflected in our dollar-based net retention rate of 119%. The increase in usage was also attributable to a 26% increase in the number of active CPaaS customer accounts, from 865 as of June 30, 2017 to 1,092 as of June 30, 2018. In addition, revenue from new CPaaS customers contributed $2.1 million, or 7%, to CPaaS revenue for the three months ended June 30, 2018 compared to $1.2 million, or 4% to CPaaS revenue in the same period in 2017. As a percentage of total revenue, CPaaS revenue increased from 80% to 82% from the three months ended June 30, 2017 to the same period in 2018. Other revenue increased by $0.5 million, or 6%, due to an increase in indirect revenue of $1.2 million, partially offset by the expected declines in our legacy services of $0.7 million.

Cost of Revenue and Gross Margin

	Three months ended June 30, 2017	Three months ended June 30, 2018	Change	
	(Dollars in thousands)			
Cost of revenue:				
CPaaS cost of revenue	$ 18,919	$ 23,137	$ 4,218	22%
Other cost of revenue	3,375	3,429	54	2%
Total cost of revenue	$ 22,294	$ 26,566	$ 4,272	19%
Gross profit	$ 17,232	$ 21,738	$ 4,506	26%
Gross margin:				
CPaaS	40%	42%		
Other	58%	60%		
Total gross margin	44%	45%		

For the three months ended June 30, 2018, total gross profit increased by $4.5 million, or 26%, compared to the same period in 2017. Total gross margin increased from 44% to 45% during the same period. In 2018, CPaaS cost of revenue increased by $4.2 million, or 22% compared to the same period in 2017. CPaaS cost of revenue increased primarily due to an increase in voice usage costs of $2.9 million due to growth in minutes used by customers, partially offset by a decrease in the cost per minute from vendors. Network costs also increased $1.5 million. Cost of messaging increased by $0.2 million due to growth in messages used by customers. Cost of phone numbers and 911 enabled numbers decreased by $0.2 million and $0.1 million respectfully due to a decrease in cost from vendors. For the three months ended June 30, 2018, CPaaS gross margin increased from 40% to 42% compared to the same period in 2017. Excluding depreciation and stock-based compensation of $1.1 million and $1.0 million for the three months ended June 30, 2017 and 2018, respectively, CPaaS Non-GAAP gross margin would have been 43% and 45% for the three months ended June 30, 2017 and 2018, respectively, and total Non-GAAP gross margin would have been 46% and 47% for the same periods.

Other cost of revenue increased by $0.1 million, which was due to a $0.4 million increase in cost of indirect revenue related to cost of carrier access revenue, partially offset by a $0.3 million decrease as a result of churn in legacy services.

Operating Expenses

	Three months ended June 30,			
	2017	2018	Change	
	(Dollars in thousands)			
Research and development	$ 2,409	$ 4,435	$ 2,026	84%
Sales and marketing	2,413	4,654	2,241	93%
General and administrative	8,257	11,490	3,233	39%
Total operating expenses	$ 13,079	$ 20,579	$ 7,500	57%

For the three months ended June 30, 2018, research and development expenses increased by $2.0 million, or 84%, compared to the same period in 2017. This increase was primarily due to increased personnel costs of $1.8 million and other non-headcount costs of $0.2 million.

For the three months ended June 30, 2018, sales and marketing expenses increased by $2.2 million, or 93%, compared to the same period in 2017 primarily due to an overall increase in sales personnel costs of $2.0 million and other non-headcount costs of $0.3 million.

General and administrative expenses increased by $3.2 million for the three months ended June 30, 2018, or 39%, compared to the same period in 2017. This increase was due to higher personnel cost of $1.7 million. Professional expenses of $0.7 million, facilities expense of $0.3 million, hosted software costs of $0.3 million and other non-headcount costs of $0.3 million also contributed the overall increase in general and administrative expenses.

Interest Expense, Net

For the three months ended June 30, 2018, interest expense decreased by $0.5 million compared to the same period in 2017, due to a decrease in the outstanding balance as a result of the repayment of all outstanding debt in 2017 with the proceeds from the IPO.

Income Tax Expense

For the three months ended June 30, 2018, income tax expense decreased by $10.5 million compared to the same period in 2017. The effective tax rate for the three months ended June 30, 2018 was (741.6)% compared to 38.4% in the same period in 2017. The decrease in our effective tax rate is primarily due to the impact of stock compensation tax deductions from stock option exercises, as well as, the decrease in the federal statutory tax rate under the Act.

Comparison of the Six Months Ended June 30, 2017 and 2018

Revenue

	Six months ended June 30,			
	2017	2018	Change	
	(Dollars in thousands)			
CPaaS revenue	$ 63,194	$ 78,730	$ 15,536	25%
Other revenue	15,957	22,586	6,629	42%
Total revenue	$ 79,151	$ 101,316	$ 22,165	28%

For the six months ended June 30, 2018, total revenue increased by $22.2 million, or 28%, compared to the same period in 2017, and CPaaS revenue increased by $15.5 million, or 25%, compared to the same period in 2017. The increase in CPaaS revenue was primarily attributable to an increase in the usage of all our service offerings, particularly our voice and messaging usage, which accounted for $20.6 million of the increase in CPaaS revenue, and our phone number services and 911-enabled phone number services, which accounted for $3.1 million of the increase in CPaaS revenue. This overall increase in CPaaS revenue was partially offset by $8.1 million related to pricing decreases that we have implemented over time with our customers in the form of lower usage prices to increase the reach and scale of our platform. The changes in usage and price in the six months ended June 30, 2018 compared to the same period in 2017 were reflected in our dollar-based net retention rate of 117%. The increase in usage was also attributable to a 26% increase in the number of active CPaaS customer accounts, from 865 as of June 30, 2017 to 1,092 as of June 30, 2018. In addition, revenue from new CPaaS customers contributed $4.5 million, or 7%, to CPaaS revenue for the six months ended June 30, 2018 compared to $2.6 million, or 5% to CPaaS revenue in the same period in 2017. As a percentage of total revenue, CPaaS revenue decreased from 80% to 78% from the six months ended June 30, 2017 to the same period in 2018. Other revenue increased by $6.6 million, or 42%, due to an increase in indirect revenue of $8.1 million resulting from the settlement of a dispute, partially offset by expected declines in our legacy services of $1.5 million.

Cost of Revenue and Gross Margin

	Six months ended June 30,			
	2017	2018	Change	
	(Dollars in thousands)			
Cost of revenue:				
CPaaS cost of revenue	$ 37,147	$ 45,042	$ 7,895	21%
Other cost of revenue	6,713	6,888	175	3%
Total cost of revenue	$ 43,860	$ 51,930	$ 8,070	18%
Gross profit	$ 35,291	$ 49,386	$ 14,095	40%
Gross margin:				
CPaaS	41%	43%		
Other	58%	70%		
Total gross margin	45%	49%		

For the six months ended June 30, 2018, total gross profit increased by $14.1 million, or 40%, compared to the same period in 2017. Total gross margin increased from 45% to 49% during the same period. In 2018, CPaaS cost of revenue increased by $7.9 million, or 21%, compared to the same period in 2017. CPaaS cost of revenue increased primarily due to an increase in voice usage costs of $5.9 million due to growth in minutes used by customers, partially offset by a decrease in the cost per minute from vendors. Network costs also increased $2.0 million. Cost of messaging increased by $0.2 million due to growth in messages used by customers. Cost of phone numbers and 911 enabled numbers decreased by $0.1 million and $0.1 million, respectively, due to a decrease in cost from vendors. For the six months ended June 30, 2018, CPaaS gross margin increased from 41% to 43% compared to the same period in 2017. Excluding depreciation and stock-based compensation of $2.1 million for both the six months ended June 30, 2017 and 2018, respectively, CPaaS Non-GAAP gross margin would have been 45% and 45% for the six months ended June 30, 2017 and 2018, respectively, and total Non-GAAP gross margin would have been 47% and 51% for the same periods.

Other cost of revenue increased by $0.2 million, which was due to a $0.8 million increase in cost of indirect revenue related to cost of carrier access revenue, partially offset by a $0.6 million decrease as a result of churn in legacy services.

Operating Expenses

	Six months ended June 30, 2017	Six months ended June 30, 2018	Change	
	(Dollars in thousands)			
Research and development	$ 5,091	$ 8,216	$ 3,125	61%
Sales and marketing	4,971	9,176	4,205	85%
General and administrative	15,894	22,059	6,165	39%
Total operating expenses	$ 25,956	$ 39,451	$ 13,495	52%

For the six months ended June 30, 2018, research and development expenses increased by $3.1 million, or 61%, compared to the same period in 2017. This increase was primarily due to increased personnel costs of $2.8 million and other non-headcount costs of $0.3 million.

For the six months ended June 30, 2018, sales and marketing expenses increased by $4.2 million, or 85%, compared to the same period in 2017 primarily due to an overall increase in sales personnel costs of $3.4 million and other non-headcount costs of $0.8 million.

General and administrative expenses increased by $6.2 million for the six months ended June 30, 2018, or 39%, compared to the same period in 2017. This increase was due to higher personnel cost of $2.9 million, professional expenses of $1.4 million, facilities expense of $0.8 million and hosted software costs of $0.5 million also contributed the overall general and administrative expenses.

Interest Expense, Net

For the six months ended June 30, 2018, interest expense decreased by $1.0 million compared to the same period in 2017, due to repayment of all outstanding debt in 2017 with the proceeds from the IPO and increased interest income from investments in marketable securities.

Income Tax Expense

For the six months ended June 30, 2018, income tax expense decreased by $9.6 million compared to the same period in 2017. The effective tax rate for the six months ended June 30, 2018 was (65.8)% compared to 37.7% in the same period in 2017. The decrease in our effective tax rate is primarily due to the impact of stock compensation tax deductions from stock option exercises, as well as, the decrease in the federal statutory tax rate under the Act.

Liquidity and Capital Resources

To date, our principal sources of liquidity have been the proceeds of $74.4 million, net of underwriting discounts and commissions, from our initial public offering in November 2017, in addition to free cash flow driven by payments received from customers using our services, as well as borrowings under our senior secured credit facility. We believe that our cash and cash equivalents balances, our marketable securities portfolio, our credit facility and the cash flows generated by our operations will be sufficient to satisfy our anticipated cash needs for working capital and capital expenditures for at least the next 12 months. However, our belief may prove to be incorrect, and we could utilize our available financial resources sooner than we currently expect. Our future capital requirements and the adequacy of available funds will depend on many factors, including those set forth in the section titled “Risk Factors.” We may be required to seek additional equity or debt financing in order to meet these future capital requirements. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us, or at all. If we are unable to raise additional capital when desired, our business, results of operations and financial condition would be adversely affected.

Statement of Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Six months ended June 30,	
	2017	2018
	(In thousands)	
Net cash provided by operating activities	$ 5,006	$ 17,117
Net cash used in investing activities	(2,718)	(15,652)
Net cash (used in) provided by financing activities	(3,414)	6,669
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (1,126)	$ 8,134

Cash Flows from Operating Activities

For the six months ended June 30, 2018, cash provided by operating activities was $17.1 million, consisting of net income of $16.7 million adjusted for non-cash items. These non-cash items included depreciation and amortization expense of $2.7 million, stock-based compensation expenses of $1.3 million, deferred tax benefit of $6.7 million and cash provided by changes in operating assets and liabilities of $3.1 million. Cash generated from operating assets and liabilities included an increase in deferred revenue of $4.1 million, an increase in accrued expenses and other liabilities of $3.5 million and a decrease in deferred costs of $0.2 million. Offsetting these cash generating items in assets and liabilities were an increase in accounts receivable of $1.8 million, a decrease in accounts payable of $2.4 million and an increase in prepaid expenses and other assets of $0.6 million, respectively.

For the six months ended June 30, 2017, cash provided by operating activities was $5.0 million, consisting of net income of $4.9 million adjusted for non-cash items. These non-cash items included depreciation and amortization expense of $2.8 million, deferred tax expense of $2.5 million, stock-based compensation expenses of $0.5 million, and cash used for changes in operating assets and liabilities of $6.3 million. Cash outflows from operating assets and liabilities included increases in accounts receivable of $0.1 million, prepaid expenses and other assets of $1.2 million, deferred costs of $0.6 million along with decreases in accounts payable of $3.0 million and accrued expenses of $2.2 million. Offsetting these cash outflows was an increase in deferred revenue and advanced billings of $0.8 million.

Cash Flows from Investing Activities

For the six months ended June 30, 2018, cash used in investing activities from continuing operations was $15.7 million from the investment in marketable securities of $14.0 million, the purchase of property and equipment of $3.1 million and capitalized internally developed software costs of $1.5 million, partially offset by maturities of marketable securities of $3.0 million.

For the six months ended June 30, 2017, cash used in investing activities from continuing operations was $2.7 million from the purchase of property and equipment of $1.1 million and capitalized internally developed software costs of $1.6 million.

Cash Flows from Financing Activities

For the six months ended June 30, 2018, cash provided by financing activities from continuing operations was $6.7 million consisting primarily of $7.0 million in proceeds from the exercises of stock options, partially offset by $0.3 million in payments related to the cost of the IPO.

For the six months ended June 30, 2017, cash used in financing activities from continuing operations was $3.4 million consisting primarily of $2.5 million in net repayments on our line of credit and $1.0 million in repayments on our term loan.

Debt

As of June 30, 2018, the Company had $0 outstanding on the revolving loan and was in compliance with all financial and non-financial covenants for all periods presented. The available borrowing capacity under our revolving credit facility loan was $25.0 million as of June 30, 2018.

As of June 30, 2018, the outstanding unamortized loan fees for the revolving loan was $0.1 million and were included in other long-term assets.

Contractual Obligations and Other Commitments

The following table summarizes our non-cancellable contractual obligations as of June 30, 2018:

	Total	Less than 1 Year	1 to 2 Years	3 to 5 Years	More than 5 years
			(In thousands)		
Operating leases (1)	$ 24,855	$ 3,471	$ 10,261	$ 9,126	$ 1,997
Capital leases	42	42	—	—	—
Purchase obligations (2)	7,591	4,000	3,159	432	—
Total	$ 32,488	$ 7,513	$ 13,420	$ 9,558	$ 1,997

(1) Operating leases represent total future minimum rent payments under non-cancellable operating lease agreements.
(2) Purchase obligations represent total future minimum payments under contracts to various service providers. Purchase obligations exclude agreements that are cancellable without penalty.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements and do not have any holdings in variable interest entities.

Critical Accounting Policies and Significant Judgments and Estimates

Our condensed consolidated financial statements are prepared in accordance with GAAP. The preparation of these financial statements requires our management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs, and expenses and related disclosures. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these judgments and estimates under different assumptions or conditions and any such differences may be material.

We believe that the assumptions and estimates associated with revenue recognition and deferred revenue, stock-based compensation, the valuation of goodwill and intangible assets, internal-use software development costs, income taxes and other contingencies have the greatest potential impact on our condensed consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates.

There have been no material changes to our critical accounting policies and significant judgments and estimates as compared to the critical accounting policies and significant judgments and estimates disclosed in our Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on February 26, 2018.

Recently Issued Accounting Guidance

See Note 2, "Summary of Significant Accounting Policies," to the unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q, for a summary of recently adopted accounting standards and recent accounting pronouncements not yet adopted.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to certain market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and, to a lesser extent, inflation.

Interest Rate Risk

Our primary exposure to market risk relates to interest rate changes. We had cash and cash equivalents of $45.8 million and marketable securities of $11.0 million as of June 30, 2018, which were held for working capital purposes. Our cash and cash equivalents are comprised primarily of interest bearing checking accounts and money market accounts. Marketable securities consist of U.S. treasury securities not otherwise classified as cash equivalents.

Such interest-earning instruments carry a degree of interest rate risk. To date, fluctuations in interest income have not been significant. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure. Due to the short-term nature of our investments, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates.

Our debt is comprised of a revolving line of credit account, which had no amount outstanding as of June 30, 2018. The revolving line of credit has an interest rate based on the 1-month LIBOR rate plus 225 basis points as of June 30, 2018. A one-eighth percentage point increase or decrease in the applicable rate for our credit facility (assuming the revolving portion of the credit facility is fully drawn) would have an annual impact of less than $0.1 million on cash interest expense.

Foreign Currency Risk

Our customers consume our services primarily in the United States. Our revenue and expenses are denominated in U.S. dollars and as a result we have no foreign currency risk.

Inflation

We do not believe inflation has had a material effect on our business, financial condition or results of operations. We continue to monitor the impact of inflation in order to minimize its effects through pricing strategies, productivity improvements and cost reductions. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act during the period covered by this Quarterly Report on Form 10-Q that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent limitation on the effectiveness of internal control

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

In April 2014, Phone Recovery Services, LLC (“Phone Recovery Services”) filed a complaint against us in the Superior Court of the District of Columbia. The complaint alleges that we failed to bill, collect and remit certain taxes and surcharges associated with the provision of 911 services pursuant to applicable laws of the District of Columbia. In November 2015, the Superior Court of the District of Columbia dismissed Phone Recovery Services’ complaint with prejudice. Phone Recovery Services subsequently appealed, and we are currently awaiting a decision regarding Phone Recovery Services’ appeal.

Phone Recovery Services, acting or purporting to act on behalf of applicable jurisdictions, or the applicable county or city itself, has filed similar lawsuits against us and/or one of our subsidiaries in the Superior Court of the State of Rhode Island, the Court of Common Pleas of Allegheny County, Pennsylvania and the District Court of Ramsey County, Minnesota that are currently in various stages of litigation. The case in Ramsey County, Minnesota was dismissed in November 2016; in August 2017, the Minnesota Court of Appeals affirmed that dismissal. On September

5, 2017, Phone Recovery Services filed a notice of appeal to the Minnesota Supreme Court. To date, we have not received any material adverse decision in connection with those matters.

We face similar lawsuits brought directly by various state and local governments alleging underpayment of 911 taxes and surcharges, although we understand that Phone Recovery Services may be working in conjunction with each state or local government as a consultant on a contingency basis. The following county or municipal governments have named us in lawsuits associated with the collection and remittance of 911 taxes and surcharges: Birmingham Emergency Communications District, Alabama; Clayton County, Cobb County, DeKalb County, Fulton County, Gwinnett County, Macon-Bibb County, Georgia and Columbus Consolidated Government, Georgia (collectively, the “Georgia Cases”); Cook County and Kane County Illinois; City of Chicago, Illinois; the State of Illinois (collectively, the “Illinois Case”); Beaver County, Berks County, Bucks County, Butler County, Chester Co., Clarion County, Cumberland County, Dauphin County, Delaware County, Lancaster County, Lebanon County, Mercer County, Somerset County, Washington County, Westmoreland County, and York County, Pennsylvania (collectively, the “Pennsylvania Cases”); and Charleston County, South Carolina. The complaints allege that we failed to bill, collect and remit certain taxes and surcharges associated with 911 service pursuant to applicable laws. The Georgia Cases have been closed administratively during the appeal of a related case in the Georgia courts; the Georgia Cases may be reopened. We understand that Augusta-Richmond County, Bartow County, Chatham County, Cherokee County, City of Atlanta, City of Savannah, Forsyth County, Houston County and Spalding County, Georgia each intends to initiate legal proceedings against us with allegations substantially similar to those in the Georgia Cases. The Pennsylvania Case in Butler County, Pennsylvania was dismissed in August 2016 and that dismissal is currently pending appeal; the remaining Pennsylvania Cases have been stayed until the appeal of the dismissal of the Butler County, Pennsylvania Case is resolved. The Illinois Case was dismissed in December 2016; Phone Recovery Services timely filed a notice of appeal and the appeal is underway.

We intend to vigorously defend these lawsuits and believe we have meritorious defenses to each. However, litigation is inherently uncertain, and any judgment or injunctive relief entered against us or any adverse settlement could negatively affect our business, results of operations and financial condition.

In August 2016, we received a Civil Investigative Demand from the Consumer Protection Division of the North Carolina Department of Justice, though no formal complaint has been filed in connection with that investigation. The North Carolina Department of Justice is investigating the billing, collection and remission of certain taxes and surcharges associated with 911 service pursuant to applicable laws of the State of North Carolina.

In addition to the litigation discussed above, from time to time, we may be subject to legal actions and claims in the ordinary course of business. We have received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. Future litigation may be necessary to defend ourselves, our partners and our customers by determining the scope, enforceability and validity of third-party proprietary rights, or to establish our proprietary rights. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

Item 1A. Risk Factors

A description of the risks and uncertainties associated with our business is set forth below. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q, including the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q. The risks and uncertainties described below may not be the only ones we face. If any of the risks actually occur, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the market price of our Class A common stock could decline.

Risks Related to Our Business

The success of our growth and expansion plans depends on a number of factors that are beyond our control.

We have grown our business considerably over the last several years. We cannot guarantee that we will be able to maintain our growth or that we will choose to target the same pace of growth in the future. Our success in achieving continued growth depends upon several factors including:

- the availability and retention of qualified and effective personnel with the expertise required to sell and operate effectively or successfully;
- the overall economic health of new and existing markets;
- the number and effectiveness of competitors;
- the pricing structure under which we will be able to purchase services required to serve our customers;
- the availability to us of technologies needed to remain competitive; and
- federal and state and regulatory conditions, including the maintenance of state regulation that protects us from unfair business practices by traditional network service providers or others with greater market power who have relationships with us as both competitors and suppliers.

The market in which we participate is highly competitive, and if we do not compete effectively, our business, results of operations and financial condition could be harmed.

The market for cloud communications is rapidly evolving, significantly fragmented and highly competitive, with relatively low barriers to entry in some segments. The principal competitive factors in our market include completeness of offering, credibility with developers, global reach, ease of integration and programmability, product features, platform scalability, reliability, security and performance, brand awareness and reputation, the strength of sales and marketing efforts, customer support, as well as the cost of deploying and using our services. Our competitors fall into two primary categories:

- CPaaS companies that offer a narrower set of software APIs, less robust customer support and fewer other features while relying on third-party networks and physical infrastructure; and
- network service providers that offer limited developer functionality on top of their own networks and physical infrastructure, such as AT&T, Level 3 and Verizon.

Some of our competitors and potential competitors are larger and have greater name recognition, longer operating histories, more established customer relationships, a larger global reach, larger budgets and significantly greater resources than we do. In addition, they have the operating flexibility to bundle competing products and services at little or no incremental cost, including offering them at a lower price as part of a larger sales transaction. As a result, our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. In addition, some competitors may offer services that address one or a limited number of functions at lower prices, with greater depth than our services or in different geographies. Our current and potential competitors may develop and market new services with comparable functionality to our services, and this could lead to us having to decrease prices in order to remain competitive. In addition, some of our competitors have lower list prices than us, which may be attractive to certain customers even if those services have different or lesser functionality. If we are unable to maintain our current pricing due to the competitive pressures, our margins will be reduced and our business, results of operations and financial condition would be adversely affected. Customers utilize our services in many ways and use varying levels of functionality that our services offer or are capable of supporting or enabling within their applications. Customers that use many of the features of our services or use our services to support or enable core functionality for their applications may have difficulty or find it impractical to replace our services with a competitor's services, while customers that use only limited functionality may be able to more easily replace our services with competitive offerings.

With the introduction of new services and new market entrants, we expect competition to intensify in the future. In addition, some of our customers choose to use our services and our competitors' services at the same time. Moreover, as we expand the scope of our services, we may face additional competition. Further, customers and consumers may choose to adopt other forms of electronic communications or alternative communication platforms, including developing necessary networks and platforms in-house.

Furthermore, if our competitors were to merge such that the combined entity would be able to compete fully with our service offering, then our business, results of operations and financial condition may be adversely effected. If one or more of our competitors were to merge or partner with another of our competitors, the change in the competitive landscape could also adversely affect our ability to compete effectively. In addition, pricing pressures and increased competition generally could result in reduced revenue, reduced margins, increased losses or the failure of our services to achieve or maintain widespread market acceptance, any of which could harm our business, results of operations and financial condition.

We presently operate in the United States and provide certain limited services in Canada. Our IP voice network, which is at the core of our product offerings, is located in the United States. Our current and potential competitors have developed and may develop in the future product solutions that are available internationally as well as domestically. To the extent that customers seek product solutions that include support and scaling internationally, they may choose to use other service providers to fill their communication service needs. Furthermore, while we believe the U.S. market is sufficiently large and expanding to allow us to continue to grow our business, we may face slower growth due to our relative lack of exposure to international markets. Each of these factors could lead to reduced revenue, slower growth and lower brand name recognition amongst our industry competitors, any or all of which could harm our business, results of operations and financial condition.

If we are unable to attract new customers in a cost-effective manner, then our business, results of operations and financial condition would be adversely affected.

In order to grow our business, we must continue to attract new customers in a cost-effective manner. We use a variety of marketing channels to promote our services, our Bandwidth Communications Platform, and we periodically adjust the mix of our marketing programs. If the costs of the marketing channels we use increase dramatically, then we may choose to use alternative and less expensive channels, which may not be as effective as the channels we currently use. As we add to or change the mix of our marketing strategies, we may need to expand into more expensive channels than those we are currently in, which could adversely affect our business, results of operations and financial condition. We will incur marketing expenses before we are able to recognize any revenue that the marketing initiatives may generate, and these expenses may not result in increased revenue or brand awareness. We have made in the past, and may make in the future, significant expenditures and investments in new marketing campaigns. We cannot assure you that any new investments in sales and marketing, including any increased focus on enterprise sales efforts, will lead to the cost-effective acquisition of additional customers or increased sales or that our sales and marketing efficiency will be consistent with prior periods. If we are unable to maintain effective marketing programs, then our ability to attract new customers could be materially and adversely affected, our advertising and marketing expenses could increase substantially and our results of operations may suffer.

The market for some of our services and platform is new and unproven, may decline or experience limited growth and is dependent in part on enterprises and developers continuing to adopt our platform and use our services.

We have been developing and providing a cloud-based platform that enables developers and organizations to integrate voice and messaging communications capabilities into their software applications. This market is relatively new and unproven and is subject to a number of risks and uncertainties. We believe that our future success will depend in large part on the growth, if any, of this market. For example, the utilization of software APIs by developers and organizations to build communications functionality into their applications is still relatively new, and developers and organizations may not recognize the need for, or benefits of, our services and platform. Moreover, if they do not recognize the need for and benefits of our services and platform, they may decide to adopt alternative services and/or develop the necessary services in-house to satisfy their business needs. In order to grow our business and expand our market position, we intend to focus on educating enterprise customers about the benefits of our services and platform, expanding the functionality of our services and bringing new technologies to market to increase market acceptance and use of our platform. Our ability to expand the market that our services and platform address depends upon a number of factors, including the cost, performance and perceived value associated with such services and platform. The market for our services and platform could fail to grow significantly or there could be a reduction in demand for our services and platform as a result of a lack of customer acceptance, technological changes or challenges, competing services, platforms and services, decreases in spending by current and prospective customers, weakening economic conditions and other causes. If our market does not experience significant growth or demand for our services and platform decreases, then our business, results of operations and financial condition could be adversely affected.

We must increase the network traffic and resulting revenue from the services that we offer to realize our targets for anticipated revenue growth, cash flow and operating performance.

We must increase the network traffic and resulting revenue from our inbound and outbound voice calling, text messaging, emergency voice functions, telephone numbers and related services at acceptable margins to realize our targets for anticipated revenue growth, cash flow and operating performance. If:

- we do not maintain or improve our current relationships with existing key customers;
- we are not able to expand the available capacity on our network to meet our customers’ demands in a timely manner;
- we do not develop new large wholesale and enterprise customers; or
- our customers determine to obtain these services from either their own network or from one of our competitors,

then we may be unable to increase or maintain our revenue at acceptable margins.

Our business depends on customers increasing their use of our services and any loss of customers or decline in their use of our services could materially and adversely affect our business, results of operations and financial condition.

Our ability to grow and generate incremental revenue depends, in part, on our ability to maintain and grow our relationships with existing customers and to have them increase their usage of our Bandwidth Communications Platform. If our customers do not increase their use of our services, then our revenue may decline and our results of operations may be harmed. Customers generally are charged based on the usage of our services. Most of our customers do not have long-term contractual financial commitments to us and, therefore, most of our customers may reduce or cease their use of our services at any time without penalty or termination charges. We cannot accurately predict customers’ usage levels and the loss of customers or reductions in their usage levels of our services may each have a negative impact on our business, results of operations and financial condition. If a significant number of customers cease using, or reduce their usage of, our services, then we may be required to spend significantly more on sales and marketing than we currently plan to spend in order to maintain or increase revenue from customers. Such additional sales and marketing expenditures could adversely affect our business, results of operations and financial condition.

If we are unable to increase the revenue that we derive from enterprises, our business, results of operations and financial condition may be adversely affected.

We currently generate all of our revenue from enterprise customers. Our ability to expand our sales to enterprise customers will depend, in part, on our ability to effectively organize, focus and train our sales and marketing personnel and to attract and retain sales personnel with experience selling to enterprises. We believe that there is significant competition for experienced sales professionals with the skills and technical knowledge that we require. Our ability to achieve significant revenue growth in the future will depend, in part, on our ability to recruit, train and retain a sufficient number of experienced sales professionals, particularly those with experience selling to enterprises. In addition, even if we are successful in hiring qualified sales personnel, new hires require significant training and experience before they achieve full productivity, particularly for sales efforts targeted at enterprises and new territories. Our recent hires and planned hires may not become as productive as quickly as we expect and we may be unable to hire or retain sufficient numbers of qualified individuals in the future in the markets where we do business.

With respect to enterprise customers, the decision to adopt our services may require the approval of multiple technical and business decision makers, including security, compliance, procurement, operations and IT. In addition, while enterprise customers may quickly deploy our services on a limited basis, before they will commit to deploying our services at scale, they often require extensive education about our services and significant customer support time, engage in protracted pricing negotiations and seek to secure readily available development resources. In addition, sales cycles for enterprises are inherently complex, and some enterprise customers may not generate revenue that justifies the cost to obtain such customers. In addition, these complex and resource-intensive sales efforts could place additional strain on our limited product and engineering resources. Further, enterprises, including some of our customers, may choose to develop their own solutions that do not include our services. They also may demand reductions in pricing as their usage of our services increases, which could have an adverse impact on our gross margin. Our efforts to sell to these potential customers may not be successful. If we are unable to increase the revenue that we derive from enterprises, then our business, results of operations and financial condition may be adversely affected.

If we do not develop enhancements to our services and introduce new services that achieve market acceptance, our business, results of operations and financial condition could be adversely affected.

Our ability to attract new customers and increase revenue from existing customers depends in part on our ability to enhance and improve our existing services, increase adoption and usage of our services and introduce new services. The success of any enhancements or new services depends on several factors, including timely completion, adequate quality testing, actual performance quality, market-accepted pricing levels and overall market acceptance. Enhancements and new services that we develop may not be introduced in a timely or cost-effective manner, may contain errors or defects, may have interoperability difficulties with our Bandwidth Communications Platform or other services or may not achieve the broad market acceptance necessary to generate significant revenue. In certain instances, the introduction of new services requires the successful development of new technology. To the extent that upgrades of existing technology are required for the introduction of new services, the success of these upgrades may be dependent on reaching mutually acceptable terms with vendors and on vendors meeting their obligations in a timely manner.

Furthermore, our ability to increase the usage of our services depends, in part, on the development of new use cases for our services, which may be outside of our control. Our ability to generate usage of additional services by our customers may also require increasingly sophisticated and more costly sales efforts and result in a longer sales cycle. If we are unable to successfully enhance our existing services to meet evolving customer requirements, increase adoption and usage of our services or develop new services, or if our efforts to increase the usage of our services are more expensive than we expect, then our business, results of operations and financial condition would be adversely affected.

We have experienced rapid growth and expect our growth to continue, and if we fail to effectively manage our growth, then our business, results of operations and financial condition could be adversely affected.

We have experienced substantial growth in our business since inception, which has placed and may continue to place significant demands on our corporate culture, operational infrastructure and management. We believe that our corporate culture has been a critical component of our success. We have invested substantial time and resources in building our team and nurturing our culture. As we expand our business and mature as a public company, we may find it difficult to maintain our corporate culture while managing this growth. Any failure to manage our anticipated growth and organizational changes in a manner that preserves the key aspects of our culture could hurt our chance for future success, including our ability to recruit and retain personnel, and effectively focus on and pursue our corporate objectives. This, in turn, could adversely affect our business, results of operations and financial condition.

In addition, in order to successfully manage our rapid growth, our organizational structure has become more complex. In order to manage these increasing complexities, we will need to continue to scale and adapt our operational, financial and management controls, as well as our reporting systems and procedures. The expansion of our systems and infrastructure will require us to commit substantial financial, operational and management resources before our revenue increases and without any assurances that our revenue will increase.

Finally, continued growth could strain our ability to maintain reliable service levels for our customers. If we fail to achieve the necessary level of efficiency in our organization as we grow, then our business, results of operations and financial condition could be adversely affected.

Our pricing and billing systems are complex and errors could adversely affect our revenue and profits.

Our pricing and billing efforts are complex to develop and challenging to implement. To be profitable, we must have accurate and complete information about the costs associated with voice and text communications, and properly incorporate such information into our pricing model. Our pricing model must also reflect accurate and current information about the market for our services, including the pricing of competitive alternatives for our services, as well as reliable forecasts of traffic volume. We may determine pricing for our services based on data that is outdated or otherwise flawed. Even if we have complete and accurate market information, we may not set prices to optimize both revenue and profitability. If we price our services too high, the amount of traffic that our customers may route to our network may decrease and accordingly our revenue may decline. If we price our services too low, our margins may be adversely affected, which will reduce our ability to achieve and maintain profitability.

Additionally, we rely heavily on third parties to provide us with key software and services for our billing. If these third parties cease to provide those services to us for any reason, or fail to perform billing services accurately and completely, we may not be able to deliver accurate invoices promptly. Delays in invoicing can lead to delays in revenue recognition, and inaccuracies in our billing could result in lost revenue. If we fail to adapt quickly and effectively to changes affecting our costs, pricing and billing, our profitability and cash flow will be adversely affected.

We must continue to develop effective business support systems to implement customer orders and to provide and bill for services.

We depend on our ability to continue to develop effective business support systems. This complicated undertaking requires significant resources and expertise and support from third-party vendors. Following the development of the business support systems, the data migration must be completed for the full benefit of the systems to be realized. Business support systems are needed for:

- quoting, accepting and inputting customer orders for services;
- provisioning, installing and delivering services;
- providing customers with direct access to the information systems included in our Bandwidth Communications Platform so that they can manage the services they purchase from us, generally through web-based customer portals; and
- billing for services.

Because our business provides for continued rapid growth in the number of customers that we serve, the volume of services offered, as well as the integration of any acquired companies' business support systems, if any, we must continue to develop our business support systems on a schedule sufficient to meet proposed milestone dates. If we fail to develop effective business support systems or complete the data migration into these systems, it could materially adversely affect our ability to implement our business plans, realize anticipated benefits from our acquisitions, if any, and meet our financial goals and objectives.

If we are not able to maintain and enhance our brand and increase market awareness of our company and services, then our business, results of operations and financial condition may be adversely affected.

We believe that maintaining and enhancing our brand identity and increasing market awareness of our company and services are critical to achieving widespread acceptance of our company and our Bandwidth Communications Platform, as well as to strengthen our relationships with our existing customers and to our ability to attract new customers. The successful promotion of our brand will depend largely on our continued marketing efforts, our ability to continue to offer high quality services and our ability to successfully differentiate our services from competing products and services. Our brand promotion activities may not be successful or yield increased revenue. In addition, independent industry analysts often provide reviews of our services and competing products and services, which may significantly influence the perception of our services in the marketplace. If these reviews are negative or not as strong as reviews of our competitors' services, then our brand may be harmed.

From time to time, our customers have complained about our services, such as complaints about our pricing and customer support. If we do not handle customer complaints effectively, then our brand and reputation may suffer, our customers may lose confidence in us and they may reduce or cease their use of our services. In addition, many of our customers post and discuss on social media about products and services, including our services and our Bandwidth Communications Platform. Our success depends, in part, on our ability to generate positive customer feedback and minimize negative feedback on social media channels where existing and potential customers seek and share information. If actions we take or changes we make to our services or our Bandwidth Communications Platform upset these customers, then their online commentary could negatively affect our brand and reputation. Complaints or negative publicity about us, our services or our Bandwidth Communications Platform could materially and adversely affect our ability to attract and retain customers, our business, results of operations and financial condition.

The promotion of our brand also requires us to make substantial expenditures, and we anticipate that these expenditures will increase as our market becomes more competitive and as we expand into new markets. To the extent that these activities increase revenue, this revenue still may not be enough to offset the increased expenses we incur. If we do not successfully maintain and enhance our brand, then our business may not grow, we may see our pricing power reduced relative to competitors and we may lose customers, all of which would adversely affect our business, results of operations and financial condition.

Any failure to deliver and maintain high-quality customer support may adversely affect our relationships with our customers and prospective customers and could adversely affect our reputation, business, results of operations and financial condition.

Many of our customers depend on our customer support team to assist them in deploying or using our services effectively, to help them resolve post-deployment issues quickly and to provide ongoing support. If we do not devote sufficient resources or are otherwise unsuccessful in assisting our customers effectively, it could adversely affect our ability to retain existing customers and could prevent prospective customers from adopting our services. We may be unable to respond quickly enough to accommodate short-term increases in demand for customer support. We also may be unable to modify the nature, scope and delivery of our customer support to compete with changes in the support services provided by our competitors. Increased demand for customer support, without corresponding revenue, could increase costs and adversely affect our business, results of operations and financial condition. Our sales are highly dependent on our business reputation and on positive recommendations from existing customers. Any failure to deliver and maintain high-quality customer support, or a market perception that we do not maintain high-quality customer support, could adversely affect our reputation, business, results of operations and financial condition.

Our revenue is concentrated in a limited number of enterprise customers.

A significant portion of our revenue is concentrated among a limited number of enterprise customers. If we lost one or more of our top ten customers, or, if one or more of these major customers significantly decreased orders for our services, our business would be materially and adversely affected.

Breaches of our networks or systems, or those of third parties upon which we rely, could degrade our ability to conduct our business, compromise the integrity of our services and our Bandwidth Communications Platform, result in significant data losses and the theft of our intellectual property, damage our reputation, expose us to liability to third parties and require us to incur significant additional costs to maintain the security of our networks and data.

We depend upon our IT systems to conduct virtually all of our business operations, ranging from our internal operations and R&D activities to our marketing and sales efforts and communications with our customers and business partners. Cyber attacks, including through the use of malware, computer viruses, dedicated denial of services attacks, credential harvesting and other means for obtaining unauthorized access to or disrupting the operation of our networks and systems and those of our suppliers, vendors and other service providers, could cause harm to our business, including by misappropriating our proprietary information or that of our customers, employees and business partners or to cause interruptions of our services and our Bandwidth Communications Platform. Cyber attacks may cause equipment failures, loss of information, including sensitive personal information of customers or employees or valuable technical and marketing information, as well as disruptions to our or our customers' operations. Cyber attacks against companies have increased in frequency, scope and potential harm in recent years. Further, the perpetrators of cyber attacks are not restricted to particular groups or persons. These attacks may be committed by company employees or external actors operating in any geography, including jurisdictions where law enforcement measures to address such attacks are unavailable or ineffective, and may even be launched by or at the behest of nation states. While, to date, we have not been subject to cyber attacks which, individually or in the aggregate, have been material to our operations or financial condition, the preventive actions we take to reduce the risks associated with cyber attacks, including protection of our systems and networks, may be insufficient to repel or mitigate the effects of a major cyber attack in the future. Because the techniques used by such individuals or entities to access, disrupt or sabotage devices, systems and networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques, and we may not become aware in a timely manner of such a security breach which could exacerbate any damage we experience. Additionally, we depend upon our employees and contractors to appropriately handle confidential and sensitive data, including customer data and customer proprietary network information pursuant to applicable federal law, and to deploy our IT resources in a safe and secure manner that does not expose our network systems to security breaches or the loss of data. Any data security incidents, including internal malfeasance by our employees, unauthorized access or usage, virus or similar breach or disruption of us or our services providers, could result in a loss of confidential information, theft of our intellectual property, damage to our reputation, loss of customers, litigation, regulatory investigations, fines, penalties and other liabilities.

Our existing general liability insurance may not cover, or may cover only a portion of, any potential claims related to security breaches to which we are exposed or may not be adequate to indemnify us for all or any portion of liabilities that may be imposed. Accordingly, if our cybersecurity measures and those of our service providers, fail to protect against unauthorized access, attacks (which may include sophisticated cyber attacks) and the mishandling of data by our employees and contractors, then our reputation, business, results of operations and financial condition could be adversely affected.

We are currently subject to litigation related to taxes and charges associated with our provision of 911 services, which could divert management's attention and adversely affect our results of operations.

We, along with many other telecommunications companies and similar service providers, currently are subject to litigation and a civil investigation regarding our billing, collection and remittance of non-income-based taxes and other similar charges regarding 911 services alleged to apply in certain states, counties, and municipalities located in Alabama, Georgia, Illinois, Minnesota, North Carolina, Pennsylvania, Rhode Island, South Carolina and the District of Columbia. See the section titled "Item 1. Legal Proceedings." We may face similar litigation in other jurisdictions in the future. While we are vigorously defending these lawsuits, litigation is inherently uncertain. Tax assessments, penalties and interest or future requirements arising from these lawsuits, or any other lawsuits that may arise in other jurisdictions, may adversely affect our business, results of operations and financial condition.

We face a risk of litigation resulting from customer misuse of our services and software to make or send unauthorized calls and/or text messages in violation of the Telephone Consumer Protection Act.

Calls and/or text messages originated by our customers may subject us to potential risks. For example, the Telephone Consumer Protection Act of 1991 (the "TCPA") restricts telemarketing and the use of technologies that enable automatic calling and/or SMS text messages without proper consent. This may result in civil claims against us and requests for information through third-party subpoenas or regulatory investigations. The scope and interpretation of the laws that are or may be applicable to the making and/or delivery of calls and/or text messages are continuously evolving and developing. If we do not comply with these laws or regulations or if we become liable under these laws or regulations due to the failure of our customers to comply with these laws by obtaining proper consent, we could become subject to lawsuits, fines, civil penalties, potentially significant statutory damages, consent decrees, injunctions, adverse publicity, loss of user confidence in our services, loss of users and other adverse consequences, which could materially harm our business.

The communications industry faces significant regulatory uncertainties and the resolution of these uncertainties could harm our business, results of operations and financial condition.

If current or future regulations change, the Federal Communications Commission ("FCC") or state regulators may not grant us any required regulatory authorization or may take action against us if we are found to have provided services without obtaining the necessary authorizations, or to have violated other requirements of their rules and orders. Delays in receiving required regulatory approvals or the enactment of new adverse regulation or regulatory requirements may slow our growth and have a material adverse effect on our business, results of operations and financial condition.

Proceedings before the FCC could limit our access to various network services or further increase the rates we must pay for such services. Likewise, proceedings before the FCC could impact the availability and price of special access facilities. Other proceedings before the FCC could result in an increase in the amount we pay to other carriers or a reduction in the revenue we derive from other carriers in, or retroactive liability for, access charges and reciprocal compensation. Additionally, other proceedings before the FCC could result in increases in the cost of regulatory compliance. For example, the FCC has opened a proceeding to examine how to improve the delivery of emergency 911 services and whether to expand requirements to include communications services not currently subject to emergency calling obligations. A number of states also have proceedings pending that could impact our access to and the rates we pay for network services. Other state proceedings could limit our pricing and billing flexibility. Our business would be substantially impaired if the FCC, the courts or state commissions eliminated our access to the facilities and services we use to serve our customers, substantially increased the rates we pay for facilities and services, increased the costs or complexity associated with providing emergency 911 services or adversely affected the revenue we receive from other carriers or our customers. In addition, congressional legislative efforts to rewrite the Telecommunications Act of 1996 or enact other telecommunications legislation, as well as various state legislative initiatives, may cause major industry and regulatory changes. We cannot predict the outcome of these proceedings or legislative initiatives or the effects, if any, that these proceedings or legislative initiatives may have on our business and operations.

While we believe we are currently in compliance with all federal, state and local rules and regulations, these regulations are subject to interpretation and the relevant regulators may determine that our application of these rules and regulations is not consistent with their interpretation. Additionally, in certain instances, third parties or government agencies may bring action with federal, state or local regulators if they believe a provider has breached applicable rules and regulations.

The effects of increased regulation of IP-based service providers are unknown.

While the FCC has to date generally subjected IP-based service providers to less stringent regulatory oversight than traditional common carriers, the FCC has imposed certain regulatory obligations on providers of VoIP services, including the obligations to contribute to the Universal Service Fund, to provide 911 services and/or to comply with the Communications Assistance for Law Enforcement Act. Some states have imposed taxes, fees and/or surcharges on VoIP telephony services. The imposition of additional regulations could have a material adverse effect on our business.

We must obtain and maintain permits and licenses to operate our network.

If we are unable, on acceptable terms and on a timely basis, to obtain and maintain the permits and licenses needed to expand and operate our network, our business could be materially adversely affected. In addition, the cancellation or non-renewal of the permits or licenses that are obtained could materially adversely affect our business. In particular, although we have received approval from the FCC and almost all applicable state public utility commissions, we are currently awaiting approval from the state public utility commission of California in connection with our expected change of control (the “Necessary Approvals”). We are not able to restrict holders of our Class B common stock from converting their shares of Class B common stock to Class A common stock, which may result in a change of control. If a change of control occurs prior to receipt of regulatory approval in a jurisdiction, we may be subject to fines, penalties, enforcement actions or loss of our authorization in such jurisdiction. In the event we are the target of an acquisition, the regulatory agencies responsible for granting, renewing or transferring permits and licenses may delay or reject applications to transfer such permits or licenses and as a result these uncertainties, we may not be as attractive an acquisition target.

Our operations are subject to regulation and require us to obtain and maintain several governmental licenses and permits. If we violate those regulatory requirements or fail to obtain and maintain those licenses and permits, including payment of related fees, if any, we may not be able to conduct our business. Moreover, those regulatory requirements could change in a manner that significantly increases our costs or otherwise adversely affects our operations.

In the ordinary course of operating our network and providing our services, we must obtain and maintain a variety of telecommunications and other licenses and authorizations. We also must comply with a variety of regulatory obligations. There can be no assurance we can maintain our licenses or that they will be renewed upon their expiration. Our failure to obtain or maintain necessary licenses, authorizations or to comply with the obligations imposed upon license holders, including the payment of fees, may cause sanctions or additional costs, including the revocation of authority to provide services.

Our operations are subject to regulation at the national level and, often, at the state and local levels. Changes to existing regulations or rules, or the failure to regulate going forward in areas historically regulated on matters such as network neutrality, licensing fees, environmental, health and safety, privacy, intercarrier compensation, emergency 911 services interconnection and other areas, in general or particular to our industry, may increase costs, restrict operations or decrease revenue. Our inability or failure to comply with telecommunications and other laws and regulations could cause the temporary or permanent suspension of our operations, and if we cannot provide emergency calling functionality through our Bandwidth Communications Platform to meet any new federal or state requirements, the competitive advantages that we currently have may not persist, adversely affecting our ability to obtain and to retain enterprise customers which could have an adverse impact on our business.

The FCC recently repealed its Network Neutrality Rules. Our business could suffer with respect to the quality of the services we offer, our ability to maintain our internet-based services and our services offered through our Bandwidth Communications Platform, decrease our profitability or increase the price of our services making our offerings less competitive in the marketplace.

In January 2018, the FCC adopted an order largely repealing its network neutrality rules. Among other things, the pre-existing network neutrality rules prevented providers of broadband internet access services - like cable and telephone companies - from blocking, impairing and degrading service offerings from non-affiliated third parties like us. The repeal of the pre-existing rules is not yet effective and several state attorneys' general and associations have appealed the FCC's repeal of the pre-existing network neutrality rules. There are also efforts in Congress to repeal the FCC's January 2018 order. We cannot predict whether either the appeals or Congress will be successful and result in restoring the pre-existing network neutrality rules that prevent broadband internet access service providers from blocking, impairing and degrading offerings from third parties like us. If broadband providers were to block, impair or degrade our internet-based services or services we offer through our Bandwidth Communications Platform, or if broadband internet access providers were to charge us or our customers to access and use our internet-based services or services offered through our Bandwidth Communications Platform, we could lose customers, our profitability could decrease, or we may have to raise prices making our service less competitive in the marketplace. Most of the major broadband internet access providers have publicly stated that they will not block, impair or degrade third party offerings. We cannot predict the potential impact of the January 2018 FCC network neutrality order on our offerings at this time.

We are subject to privacy and data security obligations in the U.S. The FCC, other Federal agencies or state attorneys' general could fine or subject us to other adverse actions that may negatively impact our business reputation. If we are subject to an investigation or suffer a breach, we may incur costs or be subject to forfeitures and penalties that could reduce our profitability.

For certain of our internet-based and Bandwidth Communications Platform offerings, we are subject to individual or joint jurisdiction of the FCC, the Federal Trade Commission, and state attorneys' general with respect to privacy and data security obligations. If we were to suffer or if one of our customers were to suffer a breach, we may be subject to the jurisdiction of a variety of federal agencies' jurisdictions as well as state attorneys' general. We may have to comply with a variety of data breach laws at the federal and state levels, comply with any resulting investigations, as well as offer mitigation to customers and potential end users of certain wholesale customers to which we provide services. We could also be subject to fines, forfeitures and other penalties that may adversely impact our business.

We are or may be subject to data privacy, security and transfer rules in the European Union. The current law governing the transfer of personal data from the European Union to the United States is ambiguous. We may be subject to enforcement actions or we may have to restructure our service offerings in order to comply with relevant law. Our business reputation could suffer, we could be subject to fines, penalties or forfeitures, and we could be subject to increased costs that could negatively impact our profitability or require us to increase the prices for our offerings making our services less competitive.

Like many other companies operating in the European Union ("EU") and the U.S., we rely on certain methods to transfer personal data from the EU to the U.S. There has been considerable litigation and legal uncertainty associated with all established methods for transferring personal data from the EU to the U.S. As a result, there is substantial uncertainty as to the state of law governing the transfer of personal data between the EU and the U.S. for all companies engaged in such transfers including us. We cannot predict when or how this issue will be resolved nor can we predict its impact on us at this time. We may be subject to fines or penalties if the existing data transfer methods are invalidated or we may have to restructure our business operations. Depending on what we may have to do to comply with the law when and if it is ultimately resolved, we could incur increased operating costs which may decrease our profitability or we may increase the price of our services that may result in our services being less competitive in the marketplace.

The European Union's General Data Protection Regulation ("GDPR") became effective on May 25, 2018. If we are found to be in non-compliance with the GDPR, we could be subject to substantial monetary forfeitures and other penalties. Our business reputation could also suffer.

The EU adopted the GDPR, which became effective on May 25, 2018, replacing the Data Protection Directive 95/46/EC. The GDPR provides for far more significant forfeitures and penalties than the regulation it replaces for noncompliance. Much remains unknown with respect to how to interpret and implement the GDPR. Moreover, for our internet-based service offerings as well as those services we offer through the Bandwidth Communications Platform, there is substantial complexity associated with interpreting and implementing the GDPR. Should we be found to be not in compliance with the GDPR, we could be subject to substantial monetary forfeitures and other penalties that could negatively impact our operating results. Our business reputation could also suffer. We cannot evaluate our potential liability at this time.

Our business could suffer if we cannot obtain or retain local or toll-free numbers, are prohibited from obtaining local or toll-free numbers, or are limited to distributing local or toll-free numbers to only certain customers.

Our future success depends on our ability to procure large quantities of local and toll-free numbers to meet customer demands in the United States at reasonable cost and without undue restrictions. Our ability to procure and distribute numbers depends on factors outside of our control, such as applicable regulations, the practices of the communications carriers that provide numbers to us in certain jurisdictions, the cost of obtaining and managing numbers and the level of demand for new numbers. Due to their limited availability, there are certain popular area code prefixes and specialized "vanity" toll-free numbers that we may not be able to obtain in desired quantities or at all. Our inability to acquire or retain numbers for our operations would make our services, including our Bandwidth Communications Platform, less attractive to potential customers that desire assignments of particular numbering resources. In addition, future growth of our customer base, together with growth of customer bases of other providers of communications services, has increased, which increases our dependence on needing large quantities of local and toll-free numbers associated with desirable area codes or specific toll-free numbering resources at a reasonable cost and without undue restriction. If we are not able to obtain or retain adequate local and toll-free numbers, or attractive subsets of such resources, our business, results of operations and financial condition could be materially adversely affected.

Intellectual property and proprietary rights of others could prevent us from using necessary technology to provide our services or subject us to expensive intellectual property litigation.

If technology that we require to provide our services, including our Bandwidth Communications Platform, was determined by a court to infringe a patent held by another entity that will not grant us a license on terms acceptable to us, we could be precluded by a court order from using that technology and we would likely be required to pay significant monetary damages to the patent holder. The successful enforcement of these patents, or our inability to negotiate a license for these patents on acceptable terms, could force us to cease (i) using the relevant technology and (ii) offering services incorporating the technology. If a claim of infringement was brought against us based on the use of our technology or against our customers based on their use of our services for which we are obligated to indemnify, we could be subject to litigation to determine whether such use or sale is, in fact, infringing. This litigation could be expensive and distracting, regardless of the outcome.

While our own limited patent portfolio may deter other operating companies from bringing such actions, patent infringement claims are increasingly being asserted by patent holding companies, which do not use technology and whose sole business is to enforce patents against operators, such as us, for monetary gain. Because such patent holding companies, commonly referred to as patent "trolls," do not provide services or use technology, the assertion of our own patents by way of counter-claim would be largely ineffective.

Our use of open source software could negatively affect our ability to sell our services and subject us to possible litigation.

Our services, including our Bandwidth Communications Platform, incorporate open source software, and we expect to continue to incorporate open source software in our services in the future. Few of the licenses applicable to open source software have been interpreted by courts, and there is a risk that these licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our services, including our Bandwidth Communications Platform. Moreover, although we have implemented policies to regulate the use and incorporation of open source software into our services, we cannot be certain that we have not incorporated open source software in our services in a manner that is inconsistent with such policies. If we fail to comply with open source licenses, we may be subject to certain requirements, including requirements that we offer our services that incorporate the open source software for no cost, that we make available source code for modifications or derivative works we create based upon, incorporating or using the open source software and that we license such modifications or derivative works under the terms of applicable open source licenses. If an author or other third-party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations and could be subject to significant damages, enjoined from generating revenue from customers using services that contained the open source software and required to comply with onerous conditions or restrictions on these services. In any of these events, we and our customers could be required to seek licenses from third parties in order to continue offering our services and to re-engineer our services or discontinue offering our services to customers in the event re-engineering cannot be accomplished on a timely basis. Any of the foregoing could require us to devote additional R&D resources to re-engineer our services, could result in customer dissatisfaction and may adversely affect our business, results of operations and financial condition.

Indemnity provisions in various agreements potentially expose us to substantial liability for intellectual property infringement and other losses.

Our agreements with customers and other third parties typically include indemnification or other provisions under which we agree to indemnify or otherwise be liable to them for losses suffered or incurred as a result of claims of intellectual property infringement, damages caused by us to property or persons or other liabilities relating to or arising from our services or platform or other acts or omissions. The term of these contractual provisions often survives termination or expiration of the applicable agreement. Large indemnity payments or damage claims from contractual breach could harm our business, results of operations and financial condition. Although we normally contractually limit our liability with respect to such obligations, we may still incur substantial liability related to them. Any dispute with a customer with respect to such obligations could have adverse effects on our relationship with that customer and other current and prospective customers, reduce demand for our services and adversely affect our business, results of operations and financial condition.

The storage, processing and use of personal information and related data subjects us to evolving governmental laws and regulation, commercial standards, contractual obligations and other legal obligations related to consumer and data privacy, which may have a material impact on our costs, use of our services, or expose us to increased liability.

Federal, state, local and foreign laws and regulations, commercial obligations and industry standards, each provide for obligations and restrictions with respect to data privacy and security, as well as the collection, storage, retention, protection, use, processing, transmission, sharing, disclosure and protection of personal information and other customer data, including customer proprietary network information under applicable federal law. The evolving nature of these obligations and restrictions subjects us to the risk of differing interpretations, inconsistency or conflicts among countries or rules, and creates uncertainty regarding their application to our business.

These obligations and restrictions may limit our ability to collect, store, process, use, transmit and share data with our customers, employees and third-party providers and to allow our customers to collect, store, retain, protect, use, process, transmit, share and disclose data with others through our services. Compliance with, and other burdens imposed by, such obligations and restrictions could increase the cost of our operations and impact our ability to market our services through effective segmentation.

Failure to comply with obligations and restrictions related to applicable data protection laws, regulations, standards, and codes of conduct, as well as our own posted privacy policies and contractual commitments could subject us to lawsuits, fines, criminal penalties, statutory damages, consent decrees, injunctions, adverse publicity, loss of user confidence in our services, and loss of users, which could materially harm our business. Because these obligations and restrictions have continued to develop and evolve rapidly, it is possible that we may not be, or may not have been, compliant with each such obligation and restriction. Additionally, third-party contractors may have access to customer or employee data. If these or other third-party vendors violate obligations and restrictions related to applicable data protection laws or our policies, such violations may also put our customers' or employees' information at risk and could in turn have a material and adverse effect on our business.

If we fail to protect our internally developed systems, technology and software and our patents and trademarks, we may become involved in costly litigation or our business or brand may be harmed.

Our ability to compete effectively is dependent in large part upon the maintenance and protection of systems and software that we have developed internally, including some systems and software-based on open standards. While we have eight U.S. patents and three pending U.S. patent applications, we cannot patent much of the technology that is important to our business. In addition, our pending patent applications may not be granted, and any issued patent that we own may be challenged, narrowed, invalidated or circumvented. To date, we have relied on patent, copyright and trade secret laws, as well as confidentiality procedures and licensing arrangements, to establish and protect our rights to our technology. While we typically enter into confidentiality agreements with our employees, consultants, customers, and vendors in an effort to control access to and distribution of technology, software, documentation and other information, these agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Despite these precautions, it may be possible for a third-party to copy or otherwise obtain and use our technology without authorization. In addition, others may independently discover trade secrets and proprietary information, and in such cases we could not assert any rights against such party. Policing unauthorized use of our technology is difficult. The steps we take may not prevent misappropriation of the technology we rely on. In addition, effective protection may be unavailable or limited in some jurisdictions outside the United States. Litigation may be necessary in the future to enforce or protect our rights or to determine the validity and scope of the rights of others. That litigation could cause us to incur substantial costs and divert resources away from our daily business, which in turn could adversely affect our business, results of operations and financial condition.

The unlicensed use of our brands by third parties could harm our reputation, cause confusion among our customers or impair our ability to market our services. Accordingly, we have registered numerous trademarks and service marks and have applied for registration of our trademarks and service marks in the United States to establish and protect our brand names as part of our intellectual property strategy. We cannot assure you that our pending or future trademark applications will be approved. Although we anticipate that we would be given an opportunity to respond to any such rejections, we may be unable to overcome any such rejections. In addition, in proceedings before the United States Patent and Trademark Office third parties are given an opportunity to oppose pending trademark applications and seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. In the event that our trademarks are successfully challenged, we could be forced to rebrand our services, which could result in loss of brand name recognition. Moreover, successful opposition to our applications might encourage third parties to make additional oppositions or commence trademark infringement proceedings against us, which could be costly and time consuming to defend against. If we decide to take limited or no action to protect our trademarks, our trademark rights may be diluted and subject to challenge or invalidation, which could materially and adversely affect our brand in the marketplace. Certain of the trademarks we may use may become so well known by the public that their use becomes generic and they lose trademark protection. Over the long term, if we are unable to establish name recognition based on our trademark and tradenames, then we may not be able to compete effectively and our business may be adversely affected. Further, we cannot assure you that competitors will not infringe our trademarks or that we will have adequate resources to enforce our trademarks.

We are subject to litigation in the ordinary course of business, and uninsured judgments or a rise in insurance premiums may adversely affect our results of operations.

In the ordinary course of business, we are subject to various claims and litigation. Any such claims, regardless of merit, could be time-consuming and expensive to defend and could divert management's attention and resources. In accordance with customary practice, we maintain insurance against some, but not all, of these potential claims. We may elect not to obtain insurance if we believe that the cost of available insurance is excessive relative to the risks presented. The levels of insurance we maintain may not be adequate to fully cover any and all losses or liabilities. Further, we may not be able to maintain insurance at commercially acceptable premium levels or at all. If any significant judgment, claim (or a series of claims) or other event is not fully insured or indemnified against, it could have a material adverse impact on our business, financial condition and results of operations. There can be no assurance as to the actual amount of these liabilities or the timing thereof. We cannot be certain that the outcome of current or future litigation will not have a material adverse impact on our business and results of operations.

We may be liable for the information that content owners or distributors distribute over our network.

The law relating to the liability of private network operators for information carried on or disseminated through their networks remains unsettled. While we disclaim any liability for third-party content in our services agreements, we may become subject to legal claims relating to the content disseminated on our network, even though such content is owned or distributed by our customers or a customer of our customers. For example, lawsuits may be brought against us claiming that material distributed using our network was inaccurate, offensive or violated the law or the rights of others. Claims could also involve matters such as defamation, invasion of privacy and copyright infringement. In addition, the law remains unclear over whether content may be distributed from one jurisdiction, where the content is legal, into another jurisdiction, where it is not. Companies operating private networks have been sued in the past, sometimes successfully, based on the nature of material distributed, even if the content is not owned by the network operator and the network operator has no knowledge of the content or its legality. It is not practical for us to monitor all of the content distributed using our network. We may need to take costly measures to reduce our exposure to these risks or to defend ourselves against such claims, which could adversely affect our results of operations and financial condition.

Third parties may fraudulently use our name to obtain access to customer accounts and other personal information, use our services to commit fraud or steal our services, which could damage our reputation, limit our growth or cause us to incur additional expenses.

Our customers may have been subject to “phishing,” which occurs when a third-party calls or sends an email or pop-up message to a customer that claims to be from a business or organization that provides services to the customer. The purpose of the inquiry is typically to encourage the customer to visit a bogus website designed to look like a website operated by the legitimate business or organization or provide information to the operator. At the bogus website, the operator attempts to trick the customer into divulging customer account or other personal information such as credit card information or to introduce viruses through “Trojan horse” programs to the customers’ computers. This could result in identity theft from our customers and the unauthorized use of our services. Third parties also have used our communications services to commit fraud. If we are unable to detect and prevent “phishing” and other similar methods, use of our services for fraud and similar activities, our brand reputation and growth may suffer and we may incur additional costs, including costs to increase security, or be required to credit significant amounts to customers.

Third parties also have used our communications services without paying, including by submitting fraudulent credit information and fraudulent credit card information. This has resulted in our incurring the cost of providing the services, including incurring call termination fees, without any corresponding revenue. We have implemented anti-fraud procedures in order to limit the expenses resulting from theft of service. If our procedures are not effective, theft of service could significantly increase our expenses and adversely affect our business, results of operations and financial condition.

If our customers or their end users do not accept the differences between our service and traditional telephone service, they may choose to remain with their current telephone service provider or may choose to return to service provided by traditional network service providers.

Aspects of our services based on VoIP, including our Bandwidth Communications Platform, are not the same as traditional network service providers. Our continued growth is dependent on the adoption of our services by mainstream customers and their end users, so these differences are important. For example:

- Our 911 calling services are different, in significant respects, from the 911 service associated with traditional wireline and wireless telephone providers and, in certain cases, with other VoIP providers.

- In the event of a power loss or Internet access interruption experienced by a customer, our service may be interrupted.
- Our customers' end users may experience lower call quality than they are used to from traditional wireline or wireless telephone companies, including static, echoes and delays in transmissions.
- Our customers' end users may not be able to call premium-rate telephone numbers such as 1-900 numbers and 976 numbers.

We may lose customers if we experience failures of our system or Bandwidth Communications Platform that significantly disrupt the availability and quality of the services that we provide. Such failures may also cause interruptions to service delivery and the completion of other corporate functions.

Our operations depend on our ability to limit and mitigate interruptions or degradation in service for customers. Interruptions in service or performance problems, for whatever reason, could undermine our customers' confidence in our services and cause us to lose customers or make it more difficult to attract new ones. Because many of our services are critical to the businesses or daily lives of many of our customers or our customers' end users, any significant interruption or degradation in service also could result in lost profits or other losses to customers. Although our service agreements generally limit our liability for service failures and generally exclude any liability for "consequential" damages such as lost profits, a court might not enforce these limitations on liability, which could expose us to financial loss. We also sometimes provide our customers with committed service levels. If we fail to meet these committed service levels, we could be required to provide service credits or other compensation to our customers, which could adversely affect our results of operations.

The failure of any equipment or facility on our network, including our network operations control centers and network data storage locations, could interrupt customer service and other corporate functions until we complete necessary repairs or install replacement equipment. Our business continuity plans also may be inadequate to address a particular failure that we experience. Delays, errors or network equipment or facility failures could result from natural disasters, disease, accidents, terrorist acts, power losses, security breaches, vandalism or other illegal acts, computer viruses or other causes. These delays, errors or failures could significantly impair our business due to:

- service interruptions;
- misfunction of our Bandwidth Communications Platform on which our enterprise users rely for voice, messaging or 911 functionality;
- exposure to customer liability;
- the inability to install new service;
- the unavailability of employees necessary to provide services;
- the delay in the completion of other corporate functions such as issuing bills and the preparation of financial statements; or
- the need for expensive modifications to our systems and infrastructure.

Defects or errors in our services could diminish demand for our services, harm our business and results of operations and subject us to liability.

Our customers use our services for important aspects of their businesses, and any errors, defects or disruptions to our services and any other performance problems with our services could damage our customers' businesses and, in turn, hurt our brand and reputation. We provide regular updates to our services, which have in the past contained, and may in the future contain, undetected errors, failures, vulnerabilities and bugs when first introduced or released. Real or perceived errors, failures or bugs in our services could result in negative publicity, loss of or delay in market acceptance of our platform, loss of competitive position, lower customer retention or claims by customers for losses sustained by them. In such an event, we may be required, or may choose, for customer relations or other reasons, to expend additional resources in order to help correct the problem. In addition, we may not carry insurance sufficient to compensate us for any losses that may result from claims arising from defects or disruptions in our services. As a result, our brand and reputation could be harmed, and our business, results of operations and financial condition may be adversely affected.

If our 911 services do not function properly, we may be exposed to significant liability from our users.

Certain of our IP telephony offerings, as well as the 911 solutions that we offer are subject to FCC rules governing the delivery of emergency calling services. Similar to other providers of IP telephony services, our 911 service are different from those associated with traditional local telecommunications services. These differences may lead to an inability to make and complete calls that would not occur for users of traditional telephony services. For example, to provide the emergency calling services required by the FCC's rules to our IP telephony consumers, we may use components of both the wireline and wireless infrastructure in unique ways that can result in failed connections and calls routed to incorrect emergency call centers. Routing emergency calls over the Internet may be adversely affected by power outages and network congestion that may not occur for users of traditional telephony services. Emergency call centers may not be equipped with appropriate hardware or software to accurately process and respond to emergency calls initiated by consumers of our IP telephony services, and calls routed to the incorrect emergency call center can significantly delay response times for first responders. Users of our interconnected VoIP telephony services from a fixed address are required to manually update their location information for use when calling 911, and failure to do so may result in dispatching of assistance to the wrong location. Even manual updates made appropriately require a certain amount of time before the updated address appears in the relevant databases which could result in misrouting emergency calls to the wrong emergency calling center, dispatching first responders to the wrong address, or both. Moreover, the relevant rules with respect to what address information should be provided to emergency call centers when the call originates from a mobile application are unsettled. As a result, we could be subject to enforcement action by the FCC or other entities-possibly exposing us to significant monetary penalties, cease and desist orders, civil liability, loss of user confidence in our services, loss of users, and other adverse consequences, which could materially harm our business. The FCC's rules, and some states, also impose other obligations on us, such as properly recording our customers' registered locations, obtaining affirmative acknowledgement from customers that they are aware of the differences between emergency calling services associated with IP telephony as compared with traditional telecommunications services, and distribution of appropriate warning labels to place on or near hardware used to place IP telephony calls. Failure to comply with these requirements, or failure of our Bandwidth Communications Platform such that 911 calls did not complete or were misrouted, may result in FCC enforcement action, state attorneys' general investigations, potential exposure to significant monetary penalties, cease and desist orders, civil liability to our users and their customers, loss of user confidence in our services, loss of users, and other adverse consequences, which could materially harm our business.

The FCC's rules also require that we timely report certain 911 service outages. The FCC may make further inquiries regarding matters related to any reported 911 service outage. Any inquiry could result in FCC enforcement action, potential monetary penalties and other adverse consequences.

Termination of relationships with key suppliers could cause delay and additional costs.

Our business is dependent on third-party suppliers for fiber, computers, software, transmission electronics and related network components, as well as providers of network colocation facilities that are integrated into our network, some of which are critical to the operation of our business. If any of these critical relationships is terminated, a supplier either exits or curtails its business as a result of economic conditions, a supplier fails to provide critical services or equipment, or the supplier is forced to stop providing services due to legal constraints, such as patent infringement, and we are unable to reach suitable alternative arrangements quickly, we may experience significant additional costs or we may not be able to provide certain services to customers. If that happens, our business, results of operations and financial condition could be materially adversely affected.

Many of our third-party suppliers do not have long-term committed contracts with us and may terminate their agreements with us without notice or by providing 30 days prior written notice. Although we expect that we could receive similar services from other third-party suppliers, if any of our arrangements with our third-party suppliers are terminated, we could experience interruptions in our ability to make our services available to customers, as well as delays and additional expenses in arranging alternative providers. If a significant portion of our third-party suppliers fail to provide these services to us on a cost-effective basis or otherwise terminate these services, the delay caused by qualifying and switching to other providers could be time consuming and costly and could adversely affect our business, results of operations and financial condition.

One of our third-party suppliers, Level 3, provides us with certain 911 call routing and termination services. Pursuant to the agreement with Level 3, Level 3 is our preferred provider for these services until December 31, 2020, after which the agreement automatically renews for consecutive one-year periods, unless terminated by either Level 3 or us. After December 31, 2020, Level 3 may cancel the agreement upon two years' notice and we may cancel the agreement upon one year's notice. If our agreement with Level 3 terminates for any reason other than our default, Level 3 must continue to provide these services to us for at least two years to allow us to transition to another provider. We are obligated to pay Level 3 a minimum of $100,000 per month for as long as the agreement continues. Additionally, Level 3 has a right of first refusal to provide these 911 call routing and termination services to us in additional geographic areas.

Our growth and financial health are subject to a number of economic risks.

The financial markets in the United States have experienced substantial uncertainty during recent years. This uncertainty has included, among other things, extreme volatility in securities prices, drastically reduced liquidity and credit availability, rating downgrades of certain investments and declining values with respect to others. If capital and credit markets continue to experience uncertainty and available funds remain limited, we may not be able to obtain debt or equity financing or to refinance our existing indebtedness on favorable terms or at all, which could affect our strategic operations and our financial performance and force modifications to our operations. These conditions currently have not precluded us from accessing credit markets or financing our operations, but there can be no assurance that financial markets and confidence in major economies will not deteriorate. An extended period of economic deterioration could materially adversely affect our results of operations and financial condition and exacerbate some of the other risk factors contained in this Quarterly Report on Form 10-Q. For example, our customers might defer or entirely decline purchases of our services due to tighter credit or negative financial news or reduce demand for our services. Our customers also may not be able to obtain adequate credit, which could adversely affect the timeliness of their payments to us or ultimately result in a filing by the customer for protection from creditors under applicable insolvency or bankruptcy laws. If our customers cannot make timely payments to us, our accounts receivable could increase. The demand for, and the prices of, our services also may decline due to the actions of our competitors or otherwise.

Key vendors upon which we rely also could be unwilling or unable to provide us with the materials or services that we need to operate our Bandwidth Communications Platform or otherwise on a timely basis or on terms that we find acceptable. Our financial counterparties, insurance providers or others also may default on their contractual obligations to us. If any of our key vendors fail, we may not be able to replace them without disruptions to, or deterioration of, our services and we also may incur higher costs associated with new vendors. Transitioning to new vendors also may result in the loss of the value of assets associated with our integration of third-party services into our network or service offerings.

Our customer churn rate may increase.

Customer churn occurs when a customer discontinues service with us, whether voluntarily or involuntarily, such as a customer switching to a competitor or going out of business. Changes in the economy, increased competition from other providers, or issues with the quality of service we deliver can impact our customer churn rate. We cannot predict future pricing by our competitors, but we anticipate that price competition will continue. Lower prices offered by our competitors could contribute to an increase in customer churn. We cannot predict the timing, duration or magnitude of any deteriorated economic conditions or its impact on our target of customers. Higher customer churn rates could adversely affect our revenue growth. Higher customer churn rates could cause our dollar-based net retention rate to decline. A sustained and significant growth in the churn rate could have a material adverse effect on our business.

The market prices for certain of our services have decreased in the past and may decrease in the future, resulting in lower revenue than we anticipate.

Market prices for certain of our services have decreased over recent years. These decreases resulted from downward market pressure and other factors including:

- technological changes and network expansions, which have resulted in increased transmission capacity available for sale by us and by our competitors; and
- some of our competitors have been willing to accept smaller operating margins in the short term in an attempt to increase long-term revenue.

To retain customers and revenue, we must sometimes reduce prices in response to market conditions and trends. We cannot predict to what extent we may need to reduce our prices to remain competitive or whether we will be able to sustain future pricing levels as our competitors introduce competing services or similar services at lower prices. Our ability to meet price competition may depend on our ability to operate at costs equal to or lower than our competitors or potential competitors. As our prices for some of our services decrease, our operating results may suffer unless we are able to either reduce our operating expenses or increase traffic volume from which we can derive additional revenue.

The need to obtain additional IP circuits from other providers increases our costs. In addition, the need to interconnect our network to networks that are controlled by others could increase our costs.

We lease over 150,000 IP circuits from third parties nationwide. We could incur material expenses if we were required to locate alternative IP circuits. We may not be able to obtain reasonable alternative IP circuits if needed. Failure to obtain usage of alternative IP circuits, if necessary, could have a material adverse effect on our ability to carry on business operations. In addition, some of our agreements with other providers require the payment of amounts for services whether or not those services are used. Our reliance on third-party providers may reduce our operating flexibility, ability to make timely service changes and ability to control quality of service.

In the normal course of business, we need to enter into interconnection agreements with many local telephone companies, as well as the owners of networks that our customers desire to access to deliver their services. We are not always able to secure these interconnection agreements on favorable terms. Costs of obtaining service from other communications carriers comprise a significant proportion of the operating expenses of long distance carriers. Changes in regulation, particularly the regulation of telecommunication carriers and local access network owners, could indirectly, but significantly, affect our competitive position. These changes could increase or decrease the costs of providing our services. Further, if problems occur with our third-party providers or local telephone companies, it may cause errors or poor quality communications, and we could encounter difficulties identifying the source of the problem. The occurrence of errors or poor quality communications on our services, whether caused by our platform or a third-party provider, may result in the loss of our existing customers or the delay of adoption of our services by potential customers and may adversely affect our business, results of operations and financial condition.

We depend largely on the continued services of our senior management and other key employees, the loss of any of whom could adversely affect our business, results of operations and financial condition.

Our future performance depends on the continued services and contributions of our senior management and other key employees to execute on our business plan, to develop our platform, to deliver our services to customers, to attract and retain customers and to identify and pursue opportunities. The loss of services of senior management or other key employees could significantly delay or prevent the achievement of our development and strategic objectives. In particular, we depend to a considerable degree on the vision, skills, experience and effort of our Cofounder, Chief

Executive Officer and Chairman, David A. Morken. The replacement of any of our senior management personnel would likely involve significant time and costs, and such loss could significantly delay or prevent the achievement of our business objectives. The loss of the services of our senior management or other key employees for any reason could adversely affect our business, results of operations and financial condition.

If we are unable to hire, retain and motivate qualified personnel, our business will suffer.

Our future success depends, in part, on our ability to continue to attract and retain highly skilled personnel. We believe that there is, and will continue to be, intense competition for highly skilled management, technical, sales and other personnel with experience in our industry in the Raleigh, North Carolina area, where our headquarters are located, and in other locations where we maintain offices. We must provide competitive compensation packages and a high-quality work environment to hire, retain and motivate employees. If we are unable to retain and motivate our existing employees and attract qualified personnel to fill key positions, we may be unable to manage our business effectively, including the development, marketing and sale of our services, which could adversely affect our business, results of operations and financial condition. To the extent we hire personnel from competitors, we also may be subject to allegations that they have been improperly solicited or hired, or that they divulged proprietary or other confidential information.

Volatility in, or lack of performance of, our stock price may also affect our ability to attract and retain key personnel. Many of our key personnel are, or will soon be, vested in a substantial amount of shares of Class A common stock, Class B common stock or stock options. Employees may be more likely to terminate their employment with us if the shares they own or the shares underlying their vested options have significantly appreciated in value relative to the original purchase prices of the shares or the exercise prices of the options, or, conversely, if the exercise prices of the options that they hold are significantly above the trading price of our Class A common stock. If we are unable to retain our employees, our business, results of operations and financial condition could be adversely affected.

Our management team has limited experience managing a public company.

Most members of our management team have limited, if any, experience managing a publicly-traded company, interacting with public company investors and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage us as a public company. As a result of being a public company, we are subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, results of operations and financial condition.

We could be subject to liability for historic and future sales, use and similar taxes, which could adversely affect our results of operations.

We conduct operations in many tax jurisdictions throughout the United States. In many of these jurisdictions, non-income-based taxes such as sales, use and telecommunications taxes, including those associated with (or potentially associated with) VoIP telephony services or 911 services, are or may be assessed on our operations. The systems and procedures necessary to comply in these jurisdictions are complex to develop and challenging to implement. Additionally, we rely heavily on third parties to provide us with key software and services for compliance. If these third parties cease to provide those services to us for any reason, or fail to perform services accurately and completely, we may not be able to accurately bill, collect or remit applicable non-income-based taxes. Historically, we have not billed or collected certain of these taxes and, in accordance with GAAP, we have recorded a provision for our tax exposure in these jurisdictions when it is both probable that a liability has been incurred and the amount of the exposure can be reasonably estimated. These estimates include several key assumptions including, but not limited to, the taxability of our services, the jurisdictions in which we believe we have nexus, and the sourcing of revenue to those jurisdictions. In the event these jurisdictions challenge our assumptions and analysis, our actual exposure could differ materially from our current estimates.

Taxing authorities also may periodically perform audits to verify compliance and include all periods that remain open under applicable statutes, which customarily range from three to four years. At any point in time, we may undergo audits that could result in significant assessments of past taxes, fines and interest if we were found to be non-compliant. During the course of an audit, a taxing authority may, as a matter of policy, question our interpretation and/or application of their rules in a manner that, if we were not successful in substantiating our position, could potentially result in a significant financial impact to us.

Furthermore, certain jurisdictions in which we do not collect sales, use and similar taxes may assert that such taxes are applicable, which could result in tax assessments, penalties and interest, and we may be required to collect such taxes in the future. Such tax assessments, penalties and interest or future requirements may adversely affect our business, results of operations and financial condition.

We may be subject to significant U.S. federal income tax-related liabilities if certain ownership changes were to occur, including as a result of subsequent issuances or acquisitions of our stock, and we may determine to forego certain transactions in light of such liabilities as well as the restrictions and obligations imposed by and under the Tax Sharing Agreement.

We may be subject to significant U.S. federal income tax-related liabilities with respect to our prior distribution of all of the issued and outstanding shares of the common stock of Republic Wireless, Inc. ("Republic Wireless"), our former subsidiary, to our stockholders as of and on November 30, 2016 (the "Spin-Off"), if certain ownership changes were to occur. In particular, even if the Spin-Off otherwise qualifies as a tax-free transaction to us and our stockholders under Section 355, Section 368(a)(1)(D) and related provisions of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), it may result in corporate-level taxable gain to us under Section 355(e) of the Code ("Section 355(e)") if there is a 50% or greater change in ownership, by vote or value, of shares of our stock or Republic Wireless's stock occurring as part of a plan or series of related transactions that includes the Spin-Off. In addition, pursuant to the Tax Sharing Agreement, dated November 30, 2016, between us and Republic Wireless (the "Tax Sharing Agreement"), we and Republic Wireless are each prohibited from taking or failing to take any action that prevents the Spin-Off from qualifying for tax-free treatment under Section 355, Section 368(a)(1)(D) and related provisions of the Code, and we and Republic Wireless must generally indemnify one another for any taxes or losses incurred by the other (or its respective subsidiaries), as applicable, resulting from the application of Section 355(e) to the Spin-Off as a result of subsequent actions we or Republic Wireless take or fail to take.

To preserve the tax-free nature of the Spin-Off to us as well as Republic Wireless (and its subsidiaries), we might forego certain transactions that might otherwise have been advantageous. In particular, we might continue to operate certain of our business operations for the foreseeable future even if a sale or discontinuance of such business might have otherwise been advantageous.

In addition, for purposes of Section 355(e), any acquisitions or issuances of our stock or Republic Wireless's stock that occur within two years after the Spin-Off will generally be presumed to be part of a plan or series of related transactions with respect to the Spin-Off. Although we or Republic Wireless may be able to rebut that presumption, determining whether an acquisition or issuance is part of a plan or series of related transactions under these rules is generally complex, inherently factual and subject to interpretation of the facts and circumstances of a particular case. For this purpose, whether any increase in voting power by holders of our Class B common stock by reason of the conversion by other holders of our Class B common stock to our Class A common stock should be considered an acquisition of voting power as part of a plan or series of related transactions is unclear.

In light of the implications that would arise for us if Section 355(e) were to apply to the Spin-Off, we received an opinion from Kilpatrick Townsend & Stockton LLP, our special tax counsel, in conjunction with our initial public offering to the effect that (i) as of November 9, 2017, we are not required to recognize gain with respect to the Spin-Off pursuant to Section 355(e) as a result of one or more persons directly or indirectly acquiring our stock, and (ii) any increases in voting power attributable to conversions of our Class B common stock to Class A common stock by those who hold our Class B common stock as of our initial public offering will not cause us to recognize gain with respect to the Spin-Off pursuant to Section 355(e) (the “Tax Opinion”). The Tax Opinion is not binding on the Internal Revenue Service (the “IRS”) or the courts, however, and the IRS or the courts may not agree with the conclusions reached in the Tax Opinion. Moreover, the Tax Opinion was based upon, among other things, then-current law and certain assumptions and representations as to factual matters made by us. Any change in currently applicable law, which may be retroactive, or the failure of any such assumptions or representations to be true, could adversely affect the validity of the conclusions reached in the Tax Opinion. If the conclusions in the Tax Opinion were not correct and Section 355(e) were to apply to the Spin-Off, we would be liable for significant U.S. federal income tax related liabilities and indemnity obligations under the Tax Sharing Agreement.

Even if Section 355(e) does not apply to the Spin-Off as of the date of our initial public offering or as a result of an increase in voting power attributable to conversions of our Class B common stock by those who hold such stock as of our initial public offering, subsequent acquisitions or issuances of our stock could be treated as part of a plan or series of related transactions with respect to the Spin-Off. Accordingly, in light of the requirements of Section 355(e), we might forego share repurchases, stock issuances and other strategic transactions for some period of time following our initial public offering. Notwithstanding the foregoing, it is possible that we, Republic Wireless or the holders of our respective stock might inadvertently cause, permit or otherwise not prevent a change in the ownership of our stock or Republic Wireless’s stock to occur, which would cause Section 355(e) to apply to the Spin-Off, thereby triggering significant U.S. federal income tax-related liabilities and indemnity obligations under the Tax Sharing Agreement of approximately $50 million. This approximation is based on our current expectations and the tax laws in effect as of our initial public offering. However, we cannot provide any assurance that this estimate will prove to be accurate in the event that Section 355(e) were to apply.

If our estimates or judgments relating to our critical accounting policies prove to be incorrect, our results of operations could be adversely affected.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The results of these estimates form the basis for making judgments about the carrying values of assets, liabilities and equity, and the amount of revenue and expenses that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to revenue recognition, capitalized internal-use software costs, other non-income taxes, business combination and valuation of goodwill and purchased intangible assets and share-based compensation. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our Class A common stock.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”), and the rules and regulations of the applicable listing standards of the NASDAQ Global Select Market. We expect that the requirements of these rules and regulations will continue to increase our legal, accounting and financial compliance costs, make some activities more difficult, time-consuming and costly and place significant strain on our personnel, systems and resources.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. Our disclosure controls and other procedures are designed to ensure that information required to be disclosed by us in the reports that we will file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and that information required to be disclosed in reports under the Exchange Act is accumulated and communicated to our principal executive and financial officers, and we continue to evaluate how to improve controls. We are also continuing to improve our internal control over financial reporting. In order to develop, maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant resources, including accounting-related costs and significant management oversight.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, weaknesses in our disclosure controls and internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls or any difficulties encountered in their implementation or improvement could harm our results of operations or cause us to fail to meet our reporting obligations and may result in a restatement of our consolidated financial statements for prior periods. Any failure to implement and maintain effective internal control over financial reporting could also adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we will eventually be required to include in our periodic reports that will be filed with the SEC. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our Class A common stock. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the NASDAQ Global Select Market. We are not currently required to comply with the SEC rules that implement Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. As a public company, we are required to provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our second Annual Report on Form 10-K.

Our independent registered public accounting firm is not required to attest to the effectiveness of our internal control over financial reporting until after we are no longer an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our internal control over financial reporting is documented, designed or operating. Any failure to maintain effective disclosure controls and internal control over financial reporting could have a material and adverse effect on our business, results of operations and financial condition and could cause a decline in the trading price of our Class A common stock.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

We review our intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. An adverse change in market conditions, particularly if such change has the effect of changing one of our critical assumptions or estimates, could result in a change to the estimation of fair value that could result in an impairment charge to our goodwill or intangible assets. Any such charges may adversely affect our results of operations.

We are an “emerging growth company” and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act, and take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies,” including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We may take advantage of these exemptions for so long as we are an “emerging growth company.” We cannot predict if investors will find our Class A common stock less attractive because we will rely on these exemptions. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock and the trading price of our Class A common stock may be more volatile.

Earthquakes, hurricanes, fires, floods, power outages, terrorist attacks and other significant events could disrupt our business and ability to serve our clients.

A significant event, such as an earthquake, hurricane, a fire, a flood or a power outage, could have a material adverse effect on our business, results of operations or financial condition. Our IP network is designed to be redundant and to offer seamless backup support in an emergency. While our network is designed to withstand the loss of any one data center at any point in time, the simultaneous failure of multiple data centers could disrupt our ability to serve our clients. Additionally, certain of our capabilities cannot be made redundant feasibly or cost-effectively. Acts of physical or cyber terrorism or other geopolitical unrest also could cause disruptions in our business. The adverse impacts of these risks may increase if our disaster recovery plans prove to be inadequate.

As we have elected to avail ourselves of the JOBS Act extended accounting transition period, our financial statements may not be easily comparable to other companies.

Pursuant to the JOBS Act, as an "emerging growth company," we can elect to avail ourselves of the extended transition period for any new or revised accounting standards that may be issued by the Public Company Accounting Oversight Board or the SEC. We have elected to avail ourselves of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an "emerging growth company," expect to adopt the standard on the timeline for private companies. This may make comparison of our financial statements with other public companies that are not emerging growth companies or emerging growth companies that have opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Our financial condition and growth may depend upon the successful integration of acquired businesses. We may not be able to efficiently and effectively integrate acquired operations, and thus may not fully realize the anticipated benefits from such acquisitions.

Achieving the anticipated benefits of any acquisitions depends in part upon whether we can integrate new businesses in an efficient and effective manner. The integration of any acquired businesses involves a number of risks, including, but not limited to:

- demands on management related to any significant increase in size after the acquisition;
- the disruption of ongoing business and the diversion of management's attention from the management of daily operations to management of integration activities;
- failure to fully achieve expected synergies and costs savings;
- unanticipated impediments in the integration of departments, systems, including accounting systems, technologies, books and records and procedures, as well as in maintaining uniform standards, controls, including internal control over financial reporting required by the Sarbanes-Oxley Act, procedures and policies;
- loss of customers or the failure of customers to order incremental services that we expect them to order;
- failure to provision services that are ordered by customers during the integration period;
- higher integration costs than anticipated; and
- difficulties in the assimilation and retention of highly qualified, experienced employees, many of whom may be geographically dispersed.

Successful integration of any acquired businesses or operations will depend on our ability to manage these operations, realize opportunities for revenue growth presented by strengthened service offerings and expanded geographic market coverage, obtain better terms from our vendors due to increased buying power, and eliminate redundant and excess costs to fully realize the expected synergies. Because of difficulties in combining geographically distant operations and systems which may not be fully compatible, we may not be able to achieve the financial strength and growth we anticipate from the acquisitions.

We may not realize our anticipated benefits from our acquisitions, if any, or may be unable to efficiently and effectively integrate acquired operations as planned. If we fail to integrate acquired businesses and operations efficiently and effectively or fail to realize the benefits we anticipate, we would be likely to experience material adverse effects on our business, financial condition, results of operations and future prospects.

Our credit facility contains restrictive and financial covenants that may limit our operating flexibility.

Our credit facility contains certain restrictive covenants that either limit our ability to, or require a mandatory prepayment in the event we, among other things, incur additional indebtedness, issue guarantees, create liens on assets, make certain investments, merge with or acquire other companies, change business locations, pay dividends or make certain other restricted payments, transfer or dispose of assets, enter into transactions with affiliates and enter into various specified transactions. We, therefore, may not be able to engage in any of the foregoing transactions unless we obtain the consent of our lenders or prepay the outstanding amount under our credit facility. Our credit facility also contains certain financial covenants and financial reporting requirements. Our obligations under our credit facility are secured by all of our property, with certain exceptions. We may not be able to generate sufficient cash flow or sales to meet the financial covenants or pay the principal and interest under our credit facility. Furthermore, future working capital, borrowings or equity financing could be unavailable to repay or refinance the amounts outstanding under our credit facility. In the event of a liquidation, all outstanding principal and interest would have to be repaid prior to distribution of assets to unsecured creditors, and the holders of our Class A and Class B common stock would receive a portion of any liquidation proceeds only if all of our creditors, including our lenders, were first repaid in full.

If we are unable to comply with the restrictive and financial covenants in our credit facility, there would be a default under the terms of that agreement, and this could result in an acceleration of payment of funds that have been borrowed.

If we were unable to comply with the restrictive and financial covenants in our credit facility, there would be a default under the terms of that agreement. As a result, any borrowings under other instruments that contain cross-acceleration or cross default provisions may also be accelerated and become due and payable. If any of these events occur, there can be no assurance that we would be able to make necessary payments to the lenders or that we would be able to find alternative financing. Even if we were able to obtain alternative financing, there can be no assurance that it would be on terms that are acceptable.

Risks Related to Ownership of Our Class A Common Stock

The trading price of our Class A common stock may be volatile, and you could lose all or part of your investment.

Prior to our initial public offering, there was no public market for shares of our Class A common stock. On November 10, 2017, we sold shares of our Class A common stock to the public at $20.00 per share. From November 10, 2017, the date that our Class A common stock began trading on the NASDAQ Global Select Market, through July 31, 2018, the trading price of our Class A common stock has ranged from $18.05 per share to $40.83 per share. The trading price of our Class A common stock may continue to be volatile and could fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- price and volume fluctuations in the overall stock market from time to time;
- volatility in the trading prices and trading volumes of technology stocks;
- volatility in the trading volumes of our Class A common stock;

- changes in operating performance and stock market valuations of other technology companies generally, or those in our industry in particular;
- sales of shares of our Class A common stock by us or our stockholders;
- failure of securities analysts to maintain coverage of us, changes in financial estimates by securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- the financial projections we may provide to the public, any changes in those projections or our failure to meet those projections;
- announcements by us or our competitors of new products or services;
- the public's reaction to our press releases, other public announcements and filings with the SEC;
- rumors and market speculation involving us or other companies in our industry;
- actual or anticipated changes in our results of operations or fluctuations in our results of operations;
- actual or anticipated developments in our business, our competitors' businesses or the competitive landscape generally;
- litigation involving us, our industry or both;
- regulatory actions or developments affecting our operations, those of our competitors or our industry more broadly;
- developments or disputes concerning our intellectual property or other proprietary rights;
- announced or completed acquisitions of businesses, products, services or technologies by us or our competitors;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidelines, interpretations or principles;
- new rules adopted by certain index providers, such as S&P Dow Jones, that limit or preclude inclusion of companies with multi-class capital structures in certain of their indices;
- any significant change in our management; and
- general economic conditions and slow or negative growth of our markets.

In addition, in the past, securities class action litigation has often been instituted following periods of volatility in the overall market and the market price of a particular company's securities. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

Substantial future sales of shares of our Class A common stock could cause the market price of our Class A common stock to decline.

The market price of our Class A common stock could decline as a result of substantial sales of our Class A common stock, particularly sales by our directors, executive officers and significant stockholders, or the perception in the market that holders of a large number of shares intend to sell their shares.

Additionally, the shares of Class A common stock subject to outstanding options and restricted stock unit awards under our equity incentive plans and the shares reserved for future issuance under our equity incentive plans will become eligible for sale in the public market upon issuance. Certain holders of our Class A common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for our stockholders or ourselves.

The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the completion of our initial public offering, including our directors, executive officers and significant stockholders and their respective affiliates who held in the aggregate 62.4% of the voting power of our capital as of June 30, 2018. This limits or precludes your ability to influence corporate matters, including the election of directors, amendments to our organizational documents and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval.

Our Class A common stock has one vote per share, and our Class B common stock has ten votes per share. As of June 30, 2018, our directors, executive officers and holders of more than 5% of our common stock, and their respective affiliates, hold in the aggregate 62.4% of the voting power of our capital stock. Because of the ten-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively will continue to control a majority of the combined voting power of our common stock and therefore be able to control all matters submitted to our stockholders for approval. This concentrated control limits or precludes your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments to our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may feel are in your best interest as one of our stockholders.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term.

We may become controlled by David A. Morken, our Cofounder and Chief Executive Officer, whose interests may differ from other stockholders.

If all or substantially all of the holders of our Class B common stock who may convert their shares into Class A common stock voluntarily or otherwise prior to December 1, 2018 actually convert, David A. Morken, our Cofounder and Chief Executive Officer may control approximately 53% of the combined voting power of our outstanding capital stock. If, after December 1, 2018, all or substantially all of the holders of our Class B common stock convert their shares into Class A common stock voluntarily or otherwise, Mr. Morken may control approximately 63.1% of the combined voting power of our outstanding capital stock. As a result, Mr. Morken may have the ability to control the appointment of our management, the entering into of mergers, sales of substantially all or all of our assets and other extraordinary transactions and influence amendments to our certificate of incorporation and bylaws. If Mr. Morken controls a majority of the voting power of our outstanding capital stock, he would have the ability to control the vote in any election of directors and would have the ability to prevent any transaction that requires shareholder approval regardless of whether other shareholders believe the transaction is in our best interests. In any of these matters, the interests of Mr. Morken may differ from or conflict with your interests. Moreover, this concentration of ownership may also adversely affect the trading price for our Class A common stock to the extent investors perceive disadvantages in owning stock of a company with a controlling shareholder.

To the extent we become a "controlled company," we plan to take advantage of the applicable exemption to the corporate governance rules for NASDAQ-listed companies, which could make our Class A common stock less attractive to some investors or otherwise harm our stock price.

If all or substantially all of the holders of our Class B common stock convert their shares into Class A common stock voluntarily or otherwise, we may qualify as a "controlled company" under the corporate governance rules for NASDAQ-listed companies and expect to take advantage of related exemptions to the corporate governance rules. As a result, we will not be required to have a majority of our board of directors be independent, nor will we be required to have a compensation committee or an independent nominating function. Accordingly, should the interests of our controlling stockholder differ from those of other stockholders, the other stockholders may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance rules for NASDAQ-listed companies. Our status as a controlled company could make our Class A common stock less attractive to some investors or otherwise harm our stock price. If fewer shares of Class B common stock are converted into shares of Class A common stock than we expect, Mr. Morken may not control sufficient voting power of our outstanding capital stock for us to qualify as a “controlled company” under the corporate governance rules for NASDAQ-listed companies. If we are not a “controlled company” by the first anniversary of our listing on NASDAQ, we will have to comply with the corporate governance standards applicable to non-controlled companies, including with respect to independent directors, and we may not have a long-lead time to satisfy those standards.

We cannot predict the impact our capital structure may have on our stock price.

In July 2017, S&P Dow Jones, a provider of widely followed stock indices, announced that companies with multiple share classes, such as ours, will not be eligible for inclusion in certain of their indices. As a result, our Class A common stock will likely not be eligible for these stock indices. Additionally, FTSE Russell, another provider of widely followed stock indices, recently stated that it plans to require new constituents of its indices to have at least five percent of their voting rights in the hands of public stockholders. Many investment funds are precluded from investing in companies that are not included in such indices, and these funds would be unable to purchase our Class A common stock if we were not included in such indices. We cannot assure you that other stock indices will not take a similar approach to S&P Dow Jones or FTSE Russell in the future. Exclusion from indices could make our Class A common stock less attractive to investors and, as a result, the market price of our Class A common stock could be adversely affected.

If securities or industry analysts cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our Class A common stock adversely, the trading price of our Class A common stock and trading volume could decline.

The trading market for our Class A common stock is influenced by the research and reports that securities or industry analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us change their recommendation regarding our Class A common stock in an adverse manner, or provide more favorable recommendations about our competitors relative to us, the trading price of our Class A common stock would likely decline. If any analyst who covers us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price of our Class A common stock or trading volume to decline.

Anti-takeover provisions contained in our second amended and restated certificate of incorporation and second amended and restated bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our second amended and restated certificate of incorporation, second amended and restated bylaws and Delaware law contain provisions which could have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our board of directors. Among other things, our second amended and restated certificate of incorporation and second amended and restated bylaws include provisions:

- authorizing “blank check” preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our Class A and Class B common stock;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call and bring business before special meetings;

- providing for a dual class common stock structure in which holders of our Class B common stock have the ability to control the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the outstanding shares of our Class A and Class B common stock, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets;
- providing that our board of directors is classified into three classes of directors with staggered three-year terms;
- prohibiting stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- requiring super-majority voting to amend some provisions in our second amended and restated certificate of incorporation and second amended and restated bylaws;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our board of directors; and
- controlling the procedures for the conduct and scheduling of board of directors and stockholder meetings.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents certain stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of at least two-thirds of our outstanding common stock not held by such 15% or greater stockholder.

Any provision of our second amended and restated certificate of incorporation, second amended and restated bylaws or Delaware law that has the effect of delaying, preventing or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our Class A common stock and could also affect the price that some investors are willing to pay for our Class A common stock.

Our second amended and restated certificate of incorporation and our second amended and restated bylaws include super-majority voting provisions that will limit your ability to influence corporate matters.

Our second amended and restated certificate of incorporation and our second amended and restated bylaws include provisions that require the affirmative vote of two-thirds of all of the outstanding shares of our capital stock entitled to vote to effect certain changes. These changes include amending or repealing our second amended and restated bylaws or second amended and restated certificate of incorporation or removing a director from office for cause. If all or substantially all of the holders of our Class B common stock convert their shares into Class A common stock voluntarily or otherwise, Mr. Morken may control the majority of the voting power of our outstanding capital stock, and therefore he may have the ability to prevent any such changes, which will limit your ability to influence corporate matters.

Our amended and restated bylaws provide, subject to certain exceptions, that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or stockholders.

Our amended and restated bylaws provide, subject to limited exceptions, that the Court of Chancery of the State of Delaware will, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or stockholder to us or our stockholders; (iii) any action asserting a claim against us that is governed by the internal affairs doctrine; or (iv) any action arising pursuant to any provision of the Delaware General

Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws. If a stockholder files an action within the scope of the preceding sentence in any other court than a court located in Delaware, the stockholder shall be deemed to have consented to the provisions of our amended and restated bylaws described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could materially adversely affect our business, financial condition and results of operations.

We may need additional capital in the future and such capital may be limited or unavailable. Failure to raise capital when needed could prevent us from growing in accordance with our plans.

We may require more capital in the future from equity or debt financings to fund our operations, finance investments in equipment and infrastructure, acquire complementary businesses and technologies, and respond to competitive pressures and potential strategic opportunities. If we are required to raise additional funds through further issuances of equity or other securities convertible into equity, our existing stockholders could suffer significant dilution, and any new shares we issue could have rights, preferences or privileges senior to those of the holders of our Class A common stock. The additional capital we may seek may not be available on favorable terms or at all. In addition, our credit facility limits our ability to incur additional indebtedness under certain circumstances. If we are unable to obtain capital on favorable terms or at all, we may have to reduce our operations or forego opportunities, and this may have a material adverse effect on our business, financial condition and results of operations.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our Class A common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. In addition, the terms of our credit facility contain restrictions on our ability to declare and pay cash dividends on our capital stock. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

If a large number of shares of our Class A common stock is sold in the public market, the sales could reduce the trading price of our Class A common stock and impede our ability to raise future capital.

We cannot predict what effect, if any, future issuances by us of our Class A common stock will have on the market price of our Class A common stock. In addition, shares of our Class A common stock that we issue in connection with an acquisition may not be subject to resale restrictions. The market price of our Class A common stock could drop significantly if certain large holders of our Class A common stock, or recipients of our Class A common stock in connection with an acquisition, sell all or a significant portion of their shares of Class A common stock or are perceived by the market as intending to sell these shares other than in an orderly manner. In addition, these sales could impair our ability to raise capital through the sale of additional Class A common stock in the capital markets.

Item 2. Unregistered Sales of Equity Securities

Unregistered Sales of Equity Securities

None.

Use of Proceeds from Public Offering of Common Stock

In November 2017, we sold 4,000,000 shares of our Class A common stock at a public offering price of $20.00 per share, including shares sold in connection with the exercise of the underwriters' option to purchase additional shares. The offer and sale of all the shares in the initial public offering were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-220945), which was declared effective by the SEC on November 9, 2017. We received proceeds of $74.4 million, after deducting underwriting discounts and commissions of $5.6 million. In addition, we incurred expenses of approximately $5.4 million; thus, the net offering proceeds, after deducting underwriting discounts and offering expenses, were approximately $69.0 million. Upon the initial public offering and in accordance with David Morken's employment agreement, the Chief Executive Officer received a cash bonus of $750,000. No other payments were made to our directors or officers or their associates, holders of 10% or more of any class of our equity securities or any affiliates. We invested the funds received in accordance with our board-approved investment policy, which provides for investments in obligations of the U.S. government, money market instruments, registered money market funds and corporate bonds. The underwriters of our initial public offering were Morgan Stanley, KeyBank Capital Markets, Baird, Canaccord Genuity and JMP Securities.

There has been no material change in the planned use of proceeds from our initial public offering as described in our final prospectus filed with the SEC on November 13, 2017 pursuant to Rule 424(b) under the Securities Act.

Item 6. Exhibits

EXHIBIT INDEX

Exhibit number	Description of Exhibit	Form	File No.	Exhibit	Filing Date
3.1	Second Amended and Restated Certificate of Incorporation.	Q3 10-Q	001-38285	3.1	12/14/2017
3.2	Second Amended and Restated Bylaws.	Q3 10-Q	001-38285	3.2	12/14/2017
31.1	Certificate of the Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				Filed herewith
31.2	Certification of the Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				Filed herewith
32.1*	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act 2002.				Furnished herewith
101.INS	XBRL Instance Document.				Filed herewith
101.SCH	XBRL Taxonomy Schema Document.				Filed herewith
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				Filed herewith
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				Filed herewith
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.				Filed herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				Filed herewith

* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of the Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

BANDWIDTH INC.

Date:	August 3, 2018	By:	/s/ David A. Morken
			David A. Morken Chief Executive Officer *(Principal Executive Officer)*
Date:	August 3, 2018	By:	/s/ Jeffrey A. Hoffman
			Jeffrey A. Hoffman Chief Financial Officer *(Principal Accounting and Financial Officer)*

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, David A. Morken, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bandwidth 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(s) 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)) 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) 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

   (c) 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; and

5. The registrant's other certifying officer(s) 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.

Date: August 3, 2018

/s/ David A. Morken

David A. Morken
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Jeffrey A. Hoffman certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bandwidth 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(s) 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)) 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) 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

(c) 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; and

5. The registrant's other certifying officer(s) 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.

Date: August 3, 2018

/s/ Jeffrey A. Hoffman

Jeffrey A. Hoffman
Chief Financial Officer
(Principal Accounting and Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), David A. Morken, Chief Executive Officer of Bandwidth Inc. (the “Company”), and Jeffrey A. Hoffman, Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2018, to which this Certification is attached as Exhibit 32.1 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

Date: August 3, 2018

/s/ David A. Morken
David A. Morken
Chief Executive Officer
(Principal Executive Officer)

/s/ Jeffrey A. Hoffman
Jeffrey A. Hoffman
Chief Financial Officer
(Principal Accounting and Financial Officer)